Consolidated Edison

Distributed System Implementation Plan

June 30, 2025

conEdison, inc.

Table of Contents

List of Figures

List of Tables

LIST OF ACRONYMS

ABF – Alive-on-Backfeed
A/C – Air Conditioning
ADMS – Advanced Distribution Management System
AFDC – Alternative Fuels Data Center
AHJ – Authorities Having Jurisdiction
AI – Artificial Intelligence
AMEEP – Affordable Multifamily Energy Efficiency Program
AMI – Advanced Metering Infrastructure
API – Application Programming Interface
AREGCBA – Accelerated Renewable Energy Growth & Community Benefit Act
ASHP – Air Source Heat Pump
Auto-DLM – Auto Dynamic Load Management
AWHP – Air-to-Water Heat Pump
BBL – Borough Block and Lot
BCA – Benefit Cost Analysis
BE – Building Electrification
BESS – Battery Energy Storage System
BEUP – Building Energy Usage Portal
BIN – Building Identification Number
BQDM – Brooklyn Queens Demand Management
BTM – Behind-the-Meter
BYOT – Bring Your Own Thermostat
C&I – Commercial & Industrial
CAIDI – Customer Average Interruption Duration Index
CBO – Community-Based Organization
CC&B – Customer Care and Billing
ccASHP – Cold Climate Air Source Heat Pump
CCEP – Customer Clean Energy Programs
CCRP – Climate Change Resilience Plan
CCVS – Climate Change Vulnerability Study
CCWG – Customer Consent Working Group
CDG – Community Distributed Generation
CES – Customer Energy Solutions
CESIR – Coordinated Electric System Interconnection Review
CGPP – Coordinated Grid Planning Process
CHP – Combined Heat and Power
CLCPA – Climate Leadership and Community Protection Act
CMCP – Commercial Managed Charging Program
CPMS – Customer Project Management System
CRD – Certification Requirements Decision
CSRP – Commercial System Relief Program
CSS – Customer Service System
CUNY – City University New York
CVO – Conservation Voltage Optimization
DAC – Disadvantaged Community
DAF – Data Access Framework

DAR – DER Asset Repository
DCFC – Direct Current Fast Charging
DCR – Demand Charge Rebate
DEC – Department of Environmental Conservation
DER – Distributed Energy Resource
DERIM – Distributed Energy Resource Integration and Management
DERMS – Distributed Energy Resource Management System
DG – Distributed Generation
DLA – Distribution Load Analysis
DLM – Dynamic Load Management
DLRP – Distribution Load Relief Program
DMTS – Demand Management Tracking System
DOB – Department of Buildings
DOT – Department of Transportation
DPS – Department of Public Service
DR – Demand Response
DRC – Data Ready Certification
DRIVE – Distribution Resource Integration and Value Estimation
DRMS – Demand Response Management System
DRV – Demand Reduction Value
DSA – Data Security Agreement
DSIP – Distributed System Implementation Plan
DSM – Demand Side Management
DSP – Distributed System Platform
EAP – Energy Affordability Program
EDAP – Enterprise Data Analytics Platform
EDI – Electronic Data Interchange
EE – Energy Efficiency
EEB – Energy Efficiency Benchmarking
eGIS – Enterprise Geographic Information System
EIAT – Electronic Infrastructure Assessment Tool
EJ – Environmental Justice
EM&V – Evaluation Measurement & Verification
EPA – Environmental Protection Agency
EPPAC – Energy Policy Planning Advisory Council
EPRI – Electric Power Research Institute
EPSM – ENERGY STAR Portfolio Manager
ESCO – Energy Service Companies
ESE – Energy Service Entities
ESS – Energy Storage System
EV – Electric Vehicle
EVIIWG – Electric Vehicle Infrastructure Interconnection Working Group
EVSE – Electric Vehicle Supply Equipment
EVWG – EV Working Group
FDNY – New York City Fire Department
FERC – Federal Energy Regulatory Commission
FTM – Front-of-the-Meter
GBC – Green Button Connect

GDFT – Gas Distribution Forecast Tool
GERL – Grid Edge Renewable Laboratory
GHG – Greenhouse Gas
GIS – Geographic Information System
GOTF – Grid of the Future
GSHP – Ground Source Heat Pumps
HCA – Hosting Capacity Analysis
HER – Home Energy Reports
HES – Head End System
HPWH – Heat Pump Water Heaters
HVAC – Heating, Ventilation, and Air Conditioning
IEDR – Integrated Energy Data Resource
IEEE – Institute of Electrical and Electronics Engineers
IFPSM – Integrated Forecast Pathway Sensitivity Model
IGMVO – Integrated Grid Management and Visualization Optimization
IIJA – Infrastructure Investment and Jobs Act
ILRP – Integrated Long Range Plan
IOAP – Interconnection Online Application Portal
IOU – Investor-Owned Utilities
IPV – Initial Public Version
IPWG – Integrated Planning Working Group
ISWG – Information Sharing Working Group
ITWG – Interconnection Technical Working Group
KEDLI – KeySpan Energy Delivery Long Island
KEDNY – KeySpan Energy Delivery New York
L2 – Level 2
LDV – Light-Duty Vehicle
LFTF – Load Forecasting Task Force
LIPA – Long Island Power Authority
LL – Local Law
LMI – Low-and Moderate-Income
LMTIP – Load Management Technology Incentive Program
LSRV – Locational System Relief Value
LT&D – Local Transmission and Distribution
LWG – Legal Working Group
M&C – Monitoring & Control
M&S – Main & Service
MAMS – Meter Asset Management System
MAPE – Mean Absolute Percentage Error
MCOS – Marginal Cost of Service
MDMS – Meter Data Management System
MHD – Medium Heavy-Duty
MHDV-COFE – Medium- and Heavy-Duty Vehicle -Cost Optimization for Fleet Electrification
MNPR – Modernized Network Protector Relays
MRP – Make Ready Program
MUD – Multi-Unit Dwellings
MVP – Minimum Viable Product
NEM – Net Energy Metering

NENY – New Efficiency: New York
NEVI – National Electric Vehicle Infrastructure
NGD – Natural Gas Leak Detector
NREL – National Renewable Energy Laboratory
NRI – Network Resiliency Index
NWS – Non-Wires Solution
NY State – New York State
NY-BEST – New York Battery and Energy Storage Consortium
NYC – New York City
NYISO – New York Independent Service Operator
NYPA – New York Power Authority
NYSERDA – New York State Energy Research and Development Authority
OMS – Outage Management System
OT – Operational Technologies
PEI – Pump Energy Index
PII – Personally Identifiable Information
POC – Proof of Concept
PPI – Per-Plug Incentive
PQ – Power Quality
PSC – Public Service Commission
PV – Photovoltaic
QA – Quality Assurance
QC – Quality Control
RCC – Reliable Clean City
REACH – Renewable Energy Access and Community Help
REST API – Representational State Transfer Application Programming Interface
REV – Reforming the Energy Vision
RFP – Request for Proposal
RMS – Remote Monitoring System
RTEM – Real Time Energy Management
SAIDI – System Average Interruption Duration Index
SAIFI – System Average Interruption Frequency Index
SCADA – Supervisory Control and Data Acquisition
SCC – SmartCharge Commercial
SCNY – SmartCharge New York
SCT – Societal Cost Test
SD-WAN – Software Defined-Wide Area Network
SEEP – System Energy Efficiency Plan
SIR – Standardized Interconnection Requirements
S-SFA – Statewide Solar for All
SSO – Single Sign-On
T&C – Terms & Conditions
T&D – Transmission & Distribution
TCO – Total Cost of Ownership
TDM – Targeted Demand Management
Term-DLM – Term Dynamic Load Management
TOU – Time-of-Use
TRPA – Transmission Probabilistic Reliability Assessment

TV – Temperature Variable
UBP-DER – Uniform Business Practices for DER
UCG – Utility Coordination Group
UDR – Utility Dispatch Rights
UER – Utility Energy Registry
UIS – Utility Integrated Storage
UL – Underwriters Laboratories
UN – Utility Network
UTEN – Utility Thermal Energy Network
V2G – Vehicle-to-Grid
VDER – Value of Distributed Energy Resource
WDS – Wholesale Distribution Service
WVS – Wholesale Value Stack
ZEV – Zero-Emission Vehicle

EXECUTIVE SUMMARY

Consolidated Edison Company of New York, Inc. ("Con Edison" or "Company") is excited to present its fifth Distributed System Implementation Plan ("DSIP") that supports increased customer choice through enhanced information access and promotes a sustainable and clean energy future. This DSIP supports New York State's clean energy goals as outlined under the nation-leading 2019 Climate Leadership and Community Protection Act ("CLCPA") and further articulated in the 2022 Scoping Plan.[1] The CLCPA reflects the Company's commitment to furthering the State's vision by:

- Reducing customer energy usage by 185 trillion British thermal units ("TBtu") by 2025
- Transforming the energy supply to provide 100 percent zero-emissions electricity by 2040
- Leading New York to net-zero greenhouse gas ("GHG") emissions by 2050
- Electrifying the transportation sector and two million homes by 2030
- Installing 6,000 MW of distributed solar by 2025, 6,000 MW of energy storage by 2030, and 9,000 MW of offshore wind by 2035
- Delivering a just transition with clean energy benefits provided to low- and moderate-income ("LMI") and disadvantaged communities ("DAC")

As the planner, builder, and operator of an increasingly sophisticated and complex electric system, Con Edison is developing the people, processes, and systems necessary for a reliable, resilient, and increasingly dynamic grid. The Company's investments in recent years have provided the foundation for a more flexible system that can effectively integrate a significant increase in distributed energy resources ("DER") and renewable generating sources.[2] Many of these investments provide multiple values including increasing system reliability and resiliency, growing DER adoption, reducing emissions, and improving the customer experience while maintaining affordability. While the DSIP focuses on the electric distribution system, the Company also recognizes the role distribution planning plays in coordination with the bulk power system. The Company's focus on coordinated planning, through proceedings such as Proactive Planning and Grid of the Future, and facilitation of distribution-connected resources in support of wholesale market participation, is also detailed in this filing.

The plans detailed in this DSIP align with state policy goals, Public Service Commission ("PSC") orders and guidance on current proceedings, and the Company's Electric Long-Range Plan.[3] As a next-generation clean energy leader, Con Edison remains committed to working towards the achievement of the State's clean energy policy goals. The Company will continue to use the DSIP to engage the stakeholder community on the processes, programs, and utility capabilities that inevitably shape the Distributed System Platform ("DSP").

Building and Operating a Reliable & Resilient Energy Grid

Con Edison operates one of the most complex and reliable electric power systems in the world, serving 3.6 million electric customers. Rapid changes in electric supply (i.e., replacement of fossil-fuel generation with intermittent renewable energy resources) and rising demand (i.e., electrification of buildings and vehicles) require the Company to be more flexible in planning and forecasting future system needs. Climate change has further complicated planning, as the electric grid will need to be more resilient to withstand higher temperatures and more extreme weather events.

[1] New York State Climate Action Council, New York State Climate Action Council Scoping Plan (December 2022): https://climate.ny.gov/-/media/Project/Climate/Files/NYS-Climate-Action-Council-Final-Scoping-Plan-2022.pdf.

[2] For purposes of this filing, DER is defined as end-use energy efficiency ("EE"), demand response ("DR"), distributed storage, and distributed generation ("DG").

[3] Con Edison Electric Long Range Plan (January 2022): https://www.coned.com/en/our-energy-future/our-energy-vision/long-range-plans/.

In response to these challenges, the Company is constantly evaluating and modifying its planning practices to proactively plan for the needs of both the current grid and the future grid, which will include more distributed resources and calling on related flexible demand-side resources. Advancements in the Company's **integrated system planning** processes and **advanced forecasting** methodologies have contributed to deeper insights, which are leveraged to improve grid reliability. Furthermore, advancements in scenario modeling and load forecasting have enabled the Company to better anticipate and plan for increased demand, and pinpoint areas to develop system infrastructure before issues arise. This data-driven, forward-looking approach has enabled improved asset deployment and outage prevention and response practices, which has increased efficiency and enhanced overall system reliability.

The Company continues to invest in enhanced technologies such as **advanced metering infrastructure** ("AMI") and accompanying communications infrastructure to monitor system conditions in near real time. AMI data is increasingly being used to identify, evaluate, and tailor responses to potential system issues. As standard practice, the Company also regularly identifies and evaluates potential **non-wires solutions** ("NWS") and is now planning to integrate targeted **energy storage** deployments to increase system resiliency and support balancing of intermittent renewables. These assets are also able to provide backup power to customers and support faster recovery from service interruptions.

Maintaining Affordability and Managing Costs

Building and maintaining the electric system required to achieve New York's ambitious energy goals will require significant investment. As previously described, the Company utilizes data-driven planning processes to better understand the needs of the future grid and prudently build the system. Where economically and technically feasible, the Company also seeks more flexible solutions, such as DR, NWS, and storage, to provide reliability and other benefits to customers. Con Edison prioritizes **sharing data** that is easy to understand to enable customers to make decisions more confidently about how they use energy.

Recognizing that some customers have a higher energy burden than others, the Company is committed to maximizing the benefits of its programs tailored to LMI and DAC customers, and the Company's Energy Affordability Policy program provides monthly bill discounts to low-income electric and gas customers. Con Edison's integration of energy justice principles into its **clean heat** and **energy efficiency** programs has increased the number of opportunities available for these customers to reduce energy costs. Additionally, customers that qualify as LMI or that reside in a DAC can often receive higher levels of incentives, which makes program participation even more attractive. Ongoing engagement with LMI customers, DACs, the PSC, and other relevant stakeholders provides valuable feedback about program performance and identifies potential modifications to deliver more benefits to customers.

Enhancing the Customer Experience

Customers are at the heart of everything Con Edison does as an electric utility. As such, the Company is committed to continually improving the overall customer experience. The customer bill is one of the primary means of interacting with customers. To best leverage this channel, Con Edison continuously looks for ways to improve communications with customers about consumption, energy transactions, and regulatory changes through **billing and compensation** mechanisms. With the completion of the Customer Care and Billing system, the Company is enrolling and onboarding customers more quickly into programs and is providing more timely billing information.

The Company's recent accreditation by the Green Button Alliance validates years of work to increase data access and transparency for customers and third parties. To make additional energy data available, Con Edison actively works with a wide variety of stakeholders, including the New York State Energy Research and Development Authority ("NYSERDA"), to discuss data sharing use cases in ways that protect Company systems and customer privacy. The Company's work with NYSERDA and other stakeholders has and will continue to expand and enhance the Integrated Energy Data Resource platform.

The Company understands that the rapidly changing energy landscape in the state could create confusion for some customers. In response, the Company provides ongoing education via multiple channels to customers about the various billing and payment options, and services and programs available to help better manage energy usage and costs. Con Edison collects feedback from customers and other stakeholders to address topics where there appears to be confusion, and revise programs and communications accordingly.

Enabling DERs and other Market Services

Con Edison continues to make considerable strides in advancing the State's clean energy policy goals and developing capabilities that support greater DER adoption. Since 2016, the Company has actively worked with the Joint Utilities to develop, deploy, and enhance its **hosting capacity** capabilities to provide more accurate and granular data about system conditions to prospective interconnecting customers. The hosting capacity maps enable DER development by informing siting decisions. Con Edison has expanded the number of hosting capacity maps available and updated and added data to the maps to support these siting decisions. The Company will continue to work with the Joint Utilities and other stakeholders to advance hosting capacity capabilities.

Identifying potential locations for DER deployment is only one step in the process. As such, the Company has invested significant time and resources to remove barriers and streamline the **DER interconnection** process. Reducing the time and accompanying costs of the process will further facilitate increased DER deployment. To that end, the Company is continually identifying and evaluating opportunities to automate steps within the interconnection application review process to reduce the duration of project reviews. As the needs of the marketplace continue to evolve, Con Edison proactively engages with the Joint Utilities, PSC, developer community, and other relevant stakeholders to further refine screening methodologies, and explore technical and policy options to improve the cost-effectiveness and transparency associated with the DER interconnection process.

Though vital to achieving the State's clean energy goals, the increased penetration of DERs requires Con Edison to invest in new capabilities so the deployment of these resources does not negatively impact grid reliability. Further advancements in monitoring and management of flexible resources enabled through the development of **grid operations** systems, such as the Company's Distributed Energy Resource Management System ("DERMS"), will also facilitate greater DER proliferation. The Company has developed the foundational capacity for enabling DERs and is now working on integrating DERMS into other systems like the Interconnection Online Application Portal to drive further value. The Company is also working with the New York Independent System Operator ("NYISO") and aggregators to enable customer participation in wholesale energy market programs. As the Grid of the Future ("GOTF") proceeding continues to take shape, these systems and interfaces are likely to support new pilots to demonstrate flexibility-enabling capabilities.

Con Edison continues to make significant progress in supporting DER adoption across the Company's service territory by integrating lessons learned from pilots and demonstration projects. Projects such as the Community Power Reforming the Energy Vision Demonstration Project have helped the Company better understand how customer incentives impact the achievement of load management goals. Other notable projects that provide valuable learnings are the Company's three proposed utility thermal energy network projects that would connect multiple buildings via ground source heat pumps, geothermal infrastructure, waste heat energy, and utility-owned load balancing systems. Pilots and demonstration projects provide invaluable insights and operational experience otherwise not available into whether certain types of projects deliver the results needed to achieve the State's energy goals.

Progressing Towards New York's Clean Energy Goals

Con Edison supports and is actively engaged in efforts to help New York State achieve its clean energy goals. Achieving these goals, and accompanying interim targets, requires a focused approach to reduce emissions from multiple sectors of the economy, particularly buildings and vehicular transportation.

The Company has expanded its building electrification efforts by providing customers with the necessary data to better manage their energy usage. One such product, the Building Energy Usage Portal ("BEUP"), was developed to provide building owners with energy data needed to comply with local laws and identify opportunities to reduce emissions. The BEUP enables automatic uploading of aggregated building energy consumption data to the U.S. Environmental Protection Agency's ENERGY STAR Portfolio Manager® to track energy consumption trends and identify potential options to reduce energy usage and associated emissions. To further shift away from fossil-fuel based space heating and cooling infrastructure in buildings, the Company continues to encourage beneficial electrification through several programs, including clean heat incentives for the installation of air-, water-, or ground-sourced heat pumps. These efforts, in coordination with statewide programs like the NY State Clean Heat Program, have enabled the Company to realize significant energy savings while simultaneously reducing carbon emissions.

The electrification of the transportation sector is moving forward at a rapid pace. To serve these customers, the Company has expanded its **electric vehicle** ("EV") offerings and developed incentive programs such as SmartCharge New York and its EV Make-Ready Program. These programs work in conjunction to incentivize EV-adopting customers and charging station operators via price signals to shift load and engage in more grid-beneficial charging behaviors.

To further drive reductions in emissions, the Company will continue to support policies and programs that are 1) flexible and responsive to changes in technology and the broader energy marketplace, and 2) incentivize customers to both adopt specific technologies (e.g., heat pumps) and provide technology-agnostic flexibility to the grid.

Engaging with and Learning Alongside Our Stakeholders

Engaging with stakeholders – which includes customers, the PSC and other state agencies, the NYISO, NYSERDA, units of government, the Joint Utilities, developers, aggregators, and non-government organizations – is an important component in delivering New York's clean energy policy goals. Stakeholder engagement is a give-and-take process where both Con Edison and stakeholders share their perspectives on challenges and opportunities, existing and potential program offerings, and other topics, to work together to develop mutually beneficial solutions. Recognizing the diverse needs of its stakeholders, the Company uses multiple channels, such as technical conferences, newsletters, and webinars to communicate with and learn from stakeholders.

The 2025 DSIP includes numerous examples of the Company engaging with stakeholders to increase customer value and realize clean energy goals. Given the rapidly changing energy landscape driven by increased demand, technology advancements, and changing market dynamics, the Company is committed to expanding its relationships with existing stakeholders and building new ones to facilitate the continued exchange of information, and where possible, align with the needs of these groups.

Conclusion

New York State is transforming its energy sector. Electric utilities are being called on to deliver greater choice and value to customers through a cleaner, more modern grid that accommodates and leverages an increasingly diverse resource mix. Con Edison supports the State's ambitious clean energy goals and will continue to help lead this groundbreaking effort, including collaborating with stakeholders.

Con Edison's DSIP is a practical, actionable, and evolving plan to enhance existing capabilities and develop new tools and processes. The plan draws from ongoing collaboration with the Joint Utilities, including continued development of common standards, protocols, and processes that will support statewide markets and allow for greater convergence of capabilities over time. Con Edison welcomes the opportunity to share this plan with stakeholders, work collaboratively to implement it, and continue supporting the State's transition to a clean energy future.

1. PROGRESSING THE DSP

1.1. INTRODUCTION

This is Con Edison's fifth DSIP and the third following the passage of the CLCPA,[4] which represents a significant expansion and acceleration of New York State's clean energy goals. The CLCPA sets the vision of net zero GHG emissions across all sectors within the next thirty years, including a 100 percent carbon neutral electric system by 2040. While beyond the five-year horizon of the DSIP, these goals require a reassessment of current efforts to align with CLCPA goals. The Company's foresight, driven by its support of clean energy objectives in combination with efforts to develop DSP capabilities, position it well to integrate increasing amounts of DER and clean energy resources, operate a more dynamic and flexible grid dominated by renewable energy, and enhance the customer experience.

This DSIP highlights major accomplishments since the June 2023 DSIP and outlines the actions planned over the next five years to further develop the DSP in line with REV objectives and State policy goals. As discussed throughout the filing, the Company has sustained momentum and made additional progress in evolving the people, processes, and systems that underpin the DSP and adding new capabilities, particularly in DER integration. The Company will build on this progress over the next five years to further prepare for a decarbonized system that is resilient, reliable, and responsive to customer needs.

This filing presents Con Edison's overarching approach to enhancing DSP capabilities and responds to the DPS Staff whitepaper ("2023 DSIP Guidance"),[5] which clarifies the purpose of the DSIP filings and outlines the required contents. As stated in the 2023 DSIP Guidance, the purpose of the filing is to:

1. Report on the utility's DSP implementation progress.
2. Describe in detail the utility's plans for implementing DSP-related policies, processes, resources, and standards, including any plans from the CGPP that may be relevant to the DSP.
3. Identify and describe how to access the tools and information, including the new statewide Integrated Energy Data Resource ("IEDR") Platform, which can be used by DER developers and other third parties to help them understand utility system needs and potential business opportunities.
4. Describe how the utility's DSP implementation efforts are organized and managed.[6]

The Company developed this DSIP with these objectives in mind. Because previous DSIPs provided a significant amount of background information on current practices and capabilities, this DSIP focuses on subsequent actions and results, with the aim of creating a useful reference guide to ongoing and future utility actions.

The DSIP is organized around the topics and outline of the 2023 DSIP Guidance. For each topic section, the DSIP provides general context and background information to orient the reader and presents an overview of achievements since the Initial DSIP and planned future actions. Each topic section also discusses implementation risks and the interface with stakeholders. These introductory sections are followed by responses to the itemized questions in the 2023 DSIP Guidance. To support information sharing while managing the volume of information provided in this DSIP, Con Edison directs readers, where applicable, to resources for additional information in **Appendix C Tools and Information Sources**.

[4] New York State, Climate Leadership and Community Protection Act (July 2019): https://legislation.nysenate.gov/pdf/bills/2019/S6599.
[5] Case 16-M-0411, *In the Matter of Distributed System Implementation Plans*, DPS Staff Whitepaper: Proposed Commission Guidance for the Electric Utilities' 2023 DSIP Update Filings (issued January 10, 2023).
[6] *Ibid*, p. 5.

1.2. 2025 VISION – EVOLVING THE DISTRIBUTED SYSTEM PLATFORM

Consolidated Edison Company of New York ("CECONY") and Orange & Rockland ("O&R") (collectively, "the Companies") are committed to a "grid of the future" that results in a safe, reliable, efficient, and flexible electric grid through the energy transition. Achieving this will require encouraging adoption of and, subsequent, integration of DERs in order to achieve an orderly and cost-effective transition to best meet customers' and society's evolving needs. As envisioned by the New York State ("NY State") PSC early in the REV proceeding, the DSP "*fosters broad market activity that monetizes system and social values, by enabling active customer and third-party engagement that is aligned with the wholesale market and bulk power system.*"[7]

Informed by robust stakeholder engagement, the development of the GOTF has played a key role in supporting the State's policies driving the clean energy transition. The Companies have engaged with customers, DER developers, technology providers, research institutions, government agencies, environmental interest groups, and other stakeholders to facilitate the integration of DER and enable customer participation in clean energy programs.

State policy objectives have also advanced significantly since the first DSIP was filed in 2016. Subsequent laws and regulatory initiatives built upon the REV proceeding. The 2019 CLCPA and 2022 CLCPA Scoping Plan[8] target an 85 percent reduction in greenhouse gas emissions by 2050, 100 percent carbon-free electricity by 2040, and procurement of 6,000 MW of energy storage and 10,000 MW of solar.[9]

Several regulatory initiatives since 2020 have built upon the original REV goal of reducing carbon emissions by focusing on electrification. These include the New Efficiency: New York proceeding to drive energy efficiency and electric heating, various EV proceedings to support transportation electrification, the Proactive Planning proceeding to support rapid load growth, and most recently, the GOTF proceeding initiated in April 2024 to support an orderly and efficient clean energy transition. Notably, the GOTF proceeding expands upon the REV goals with a focus on flexibility, advancement of utility capabilities, and greater harmonization across programs.

The results of utility investments and regulatory action have resulted in significant progress in the adoption of flexible resources in the Companies' territories. Notable achievements for CECONY include:

- There have been approximately 96 MW of deployments, awards, and contracts of energy storage as of April 2025.
- Through the end of 2024, 44,042 heat pumps have been installed in Company programs, representing over 3,600 TBtu of annual energy savings.
- As of the end of 2024, 91,099 EVs have been registered in the Company's service territory, supported by 11,166 Level 2 charging stations and 527 direct current fast charging stations (completed or under construction) deployed through the PSC-authorized EV Make-Ready program.
- Approximately 998 MW of demand response ("DR") capability was enrolled in CECONY programs over the 2024 season.[10]

---

[7] Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015).

[8] Note 1, *supra.*

[9] The storage goal was updated to 6,000 MW (from its original target of 3,000 MW) after the June 20, 2024 Order Establishing Updated Energy Storage Goal and Deployment Policy, and the distributed solar goal was updated to 10,000 MW (from its original target of 6,000 MW) after Governor Kathy Hochul's announcement on April 14, 2022 that the Public Service Commission had approved a framework for the State to achieve at least 10,000 MW of distributed solar by 2030.

[10] This number is the sum of enrollments across CSRP, DLRP, Auto-DLM, Term-DLM, and BYOT in Con Edison's territory, noting that some participants may be dual enrolled in CSRP and DLRP or in DLRP and Term-DLM. This number captures total pledged MW in a network, without adjusting for performance factor.

- Solar installations have grown from 58 MW of installed capacity in 2014 to approximately 679 MW as of the end of 2024.

As DER growth continues and more end-uses in CECONY's service territories are electrifying (especially transportation and buildings), a greater share of energy use will become dependent on electricity, making it more important than ever to maintain the reliability of the electric grid. At the same time, the proliferation of DERs creates an opportunity, as flexible load can be leveraged to provide grid services in parallel with growth of intermittent large-scale renewables. The Company anticipates increasing value in the future by leveraging flexible resources to balance supply side (wholesale) renewable generation. To realize these benefits, however, requires a flexibility framework that balances dependability with market support to drive market maturity. The Company outlines below a set of balanced, key principles that can guide the implementation for flexibility in its service territories:

1. **Dependability of Flexible Resources:** For a grid resource to be valuable, it must be dependable. To verify dependability of flexible resources, the Company is currently taking and will continue to take a data-driven approach, collecting performance data from different customer segments and technologies. The GOTF proceeding offers the opportunity to gather additional data through programs, pilots, and studies to better understand the performance of these resources and in turn, realize their system value while avoiding negative impacts to affordability.
2. **Scalable Market Participation through Aggregation:** An aggregation model enables market participation to scale efficiently and supports the balancing of renewables by facilitating participation of aggregations in wholesale markets. Aggregators of flexible resources play an important role in the market by translating price signals into simplified customer incentives and rewards, as they often specialize in distinct customer segments and technologies and bring that specialized expertise to bear alongside the utility and its customers. The utility, as the entity responsible for maintaining reliability, should serve as an aggregator of aggregators to facilitate inclusion of these resources in wholesale markets. As most of the benefits from grid flexibility will come from wholesale value, aggregation will be an important tool to leverage in capturing that value.
3. **Value-based and Predictable Compensation:** Fair compensation for flexible grid services needs to strike a balance between upfront deployment incentives based on market needs and ongoing performance incentives in programs based on services delivered reliably. Considerations for compensation levels should include (i) the costs and economics of adoption of different technologies by customers, (ii) the business model(s) of developers, aggregators, and customers, and (iii) the benefits each flexible resource (or combination of resources) provides to the overall energy system and customers while balancing the impacts on all utility customers. Compensation mechanisms in programs should provide a base level of stability to encourage the adoption of flexible resources while allowing a level of adaptability to adjust to changing grid needs. CECONY is eager to support the unlocking of new use cases at the wholesale level for flexible resources to facilitate an orderly and efficient energy transition and determine appropriate value(s) for compensation through pilots and market development.
4. **Harmonized and Growing Customer Programs:** Increasing customer enrollment and participation in programs brings flexible resources together to serve grid needs while providing benefits to customers. The Company has already made great strides in this direction through programs such as EV managed charging and various DR programs. In the case of customer-facing or aggregator-based programs, a harmonized suite of programs with clear and aligned price signals, such as for balancing large-scale renewables, can increase enrollment, enhance the participant experience, and facilitate the development of innovative business cases for both utilities and third parties. Programs offer a greater level of adaptability to evolving market needs over more rigid rate- and/or tariff-based approaches. As electric grid needs change over the course of the clean energy transition, programs must evolve as well. For instance, different peaks may shift or lengthen, changing the value that flexibility could provide. Additionally, as technology adoption increases, the change in the cost maturity curve may necessitate the need for different incentive levels over time. Through the GOTF proceeding, CECONY will

work to simplify and streamline program enrollment and design, allowing for adaptability and scale to match market and grid needs.

5. **Advanced Utility Capabilities:** CECONY has been making foundational investments to advance its utility capabilities, as documented in this DSIP filing and prior iterations. This includes efforts such as working towards increased monitoring and visibility through the ongoing development of a DERMS, and improved visibility for DER siting through building and enhancing the Companies' hosting capacity maps. Looking forward, the Company will continue to develop capabilities including planning and forecasting, hosting and registration, interconnection, monitoring and visibility, customer enrollment, dispatch, and market participation in incentive programs. Other cross-cutting capabilities being further developed are cybersecurity, data management, and advanced metering infrastructure ("AMI"). The Company will continue the development of utility capabilities in coordination with the GOTF's efforts to unlock the potential of flexible resources. Further detail on these capabilities can be found at the start of each *Current Progress* section in Chapter 2, in a summary box that outlines key accomplishments for that topic. These highlight the relevant capabilities and link them to supporting CECONY programs and initiatives. **Table 1** serves as a guide to the capabilities featured in each topical section.[11]

Table 1: Capabilities Highlighted in Each Topical Section

Capability	Description	Highlighted Sections (not exhaustive)	
Planning and Forecasting	*Ability to develop long-term planning scenarios based on adoption of flexible resources and impact on both the system and individual networks*	• Integrated Planning • Advanced Forecasting • Energy Storage • EV Integration	• Clean Heat • EE Integration and Innovation • Beneficial Locations for DERs and NWAs
Hosting and Registration	*Ability to maintain a registry of flexible resources and their data attributes as well as process and manage interconnection requests*	• Integrated Planning • Grid Operations	• Data Sharing • Hosting Capacity • DER Interconnection
Monitoring and Visibility	*Ability to receive and store real-time data from specific assets (e.g., solar, batteries, EVs, smart buildings) and to monitor their operational status*	• Advanced Forecasting • Grid Operations	• DER Interconnection • Advanced Metering Infrastructure
Dispatch[12]	*Ability to dispatch assets and modify grid settings (e.g., programmable logic) to perform actions in line with grid needs (e.g., load shifting, peak reduction)*	• Grid Operations • Energy Storage	• Advanced Metering Infrastructure • Beneficial Locations for DERs and NWAs

[11] The capabilities described are non-exhaustive and continue to be developed and refined through the Phase 3 work of the GOTF proceeding. Sections highlighted that correspond to capabilities are also non-exhaustive but provide examples of capability enablement.

[12] This capability will need to be developed by the utility and market aggregators. Con Edison does not intend to control DERs directly unless there is a need due to system reliability and instead, would rely on aggregators to manage control of customer devices.

Customer Programs	*Ability to design a program with incentives and pricing levels best suited to specific customer groups and technologies, and increase customer awareness and understanding of existing programs to drive enrollment*	• EV Integration • Clean Heat • EE Integration and Innovation	• Data Sharing • Billing and Compensation • Advanced Metering Infrastructure
Market Participation	*Ability to align incentives for customers and third parties with CECONY's evolving needs, while providing long-term revenue certainty for customers*	• Grid Operations • Energy Storage • EV Integration • Clean Heat • Data Sharing	• Hosting Capacity • Billing and Compensation • DER Interconnection • Advanced Metering Infrastructure

Cross-Cutting Capabilities

These capabilities support multiple areas and are reflected either directly or thematically throughout this DSIP. While they may not be explicitly highlighted in the key accomplishments of each topic, they play a critical role in advancing utility programs and initiatives.

Capability	Description	Highlighted Sections (not exhaustive)
Cybersecurity	*Ability to prevent cyber-attacks, detect threats in real-time, and adhere to the highest security standards*	• Grid Operations • Data Sharing
Data Management and Infrastructure	*Ability to ingest, clean and aggregate data, process high velocity data, and store data securely*	• Grid Operations • Energy Storage • EV Integration • DER Interconnections • Advanced Metering Infrastructure
AMI Capabilities	*Ability to utilize data gathered through CECONY's AMI systems to develop and improve programs and initiatives across the utility*	• Integrated Planning • Advanced Forecasting • Grid Operations • Energy Storage • EV Integration • EE Integration and Innovation

The goals of the GOTF proceeding are clearly aligned with both the enablement of various capabilities that the Company has achieved thus far and the Company' longstanding DSP vision.[13] In past DSIPs, CECONY and the Joint Utilities[14] have organized the development of this vision into three core overlapping functions: DER integration, market services, and information sharing. These core functions map closely into subsets of the architectural framework presented in the First

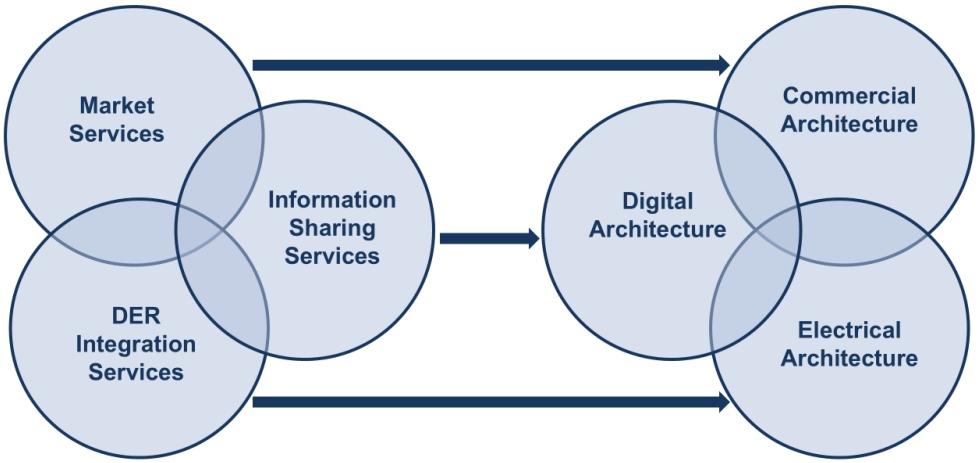
[13] As outlined in prior DSIPs.

[14] The Joint Utilities are Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Inc., New York State Electric & Gas Corporation, Niagara Mohawk Power Corporation d/b/a National Grid, Orange and Rockland Utilities, Inc., and Rochester Gas and Electric Corporation.

Iteration of the Grid of the Future Plan and this mapping is shown in Figure 1.[15] These three architectures are interlinked and will work in tandem with one another to enable the benefits of grid flexibility:

- **Market services are a subset of the commercial architecture:** The commercial architecture encourages flexible resource adoption, deployment, and ongoing operations using targeted, sensible price signals through a harmonized suite of programs to facilitate an orderly and efficient energy system transition. This generally aligns with the market services described in prior DSIPs.
- **Information sharing services are a subset of the digital architecture:** The digital architecture allows utilities to access and leverage demand-side data for grid planning and operational purposes and serves as a platform to enable customer programs. This aligns with the information sharing services and the digital aspects of DER integration services described in prior DSIPs.
- **DER integration services are a subset of the electrical architecture:** The electrical architecture allows utilities to support integration of flexible resources onto the grid and operate them for grid and customer benefit. This aligns with physical infrastructure aspects of DER integration services described in prior DSIPs.

Figure 1: Prior DSP Functions Mapping as Subsets to the Architectural Framework of GOTF



The architectures are still being developed in the GOTF proceeding and will be further described in subsequent DSIPs. The Company's initial vision of how to further develop these architectures and the capabilities that they encompass is summarized below. This recognizes that the achievement of the vision will also be driven in large part by customer and market engagement. The Company is looking forward to engaging with policymakers and stakeholders to further define this vision and inform future priorities.

[15] Case 24-E-0165, *Proceeding on Motion of the Commission Regarding the Grid of the Future*, First Iteration of the Grid of the Future Plan (filed March 31, 2025).

Electrical Architecture

The electrical architecture describes the physical grid infrastructure, including customer-sided DERs, that enable reliable delivery of electricity in a bidirectional energy system and facilitate grid services, including meeting the operational needs of grid operators, grid service providers, utility business managers, and customers.

Elements of the electrical architecture that CECONY has developed and invested in include:

- The recently completed rollout of AMI meters
- Installation of grid sensors
- Installation of protective equipment on the distribution grid that enables two-way power flows
- Standards that require smart inverters for DERs

Going forward, safety and reliability will remain paramount priorities for CECONY, particularly as customers rely on the electric grid for more of their essential services. Enhancements to the electrical architecture that the Company will pursue to mature its capabilities include:

- Continued operation of programs that encourage adoption of EVs, heat pumps, and battery storage
- Deployment of modernized network protector relays
- Standardization of technology, where applicable, to increase interoperability
- Automation of device setting updates
- Flexible interconnection

Digital Architecture

The digital architecture layer includes the business information technology ("IT") and operations management systems that enable the utility to implement and advance key capabilities.

Elements of the digital architecture that CECONY has developed and invested in include:

- Ongoing development of systems that provide operational management, such as the demand response management system ("DRMS") or DERMS
- Enhancements to corporate IT systems to support grid modeling or programmatic billing
- Customer-facing portals to exchange information between the utility and customers or developers
- Buildout of internal system interfaces within the utility or external interfaces between utility systems and the NYISO

Enhancements to the digital architecture that CECONY will pursue to mature its capabilities include:

- Expanded functionality of key grid management systems, including DRMS, DERMS, and geographic information system, to integrate and digitally manage DERs and DER programs
- Automated, technology-enabled functionality for:
  - DER interconnection
  - DER data integration and sharing
  - Granular grid modeling

Commercial Architecture

The commercial architecture includes an integrated set of commercial and regulatory mechanisms that enable the business and grid operations for customers, DER operators and aggregators, the utility, and the wholesale market.

Elements of the commercial architecture that CECONY has developed and invested in include:

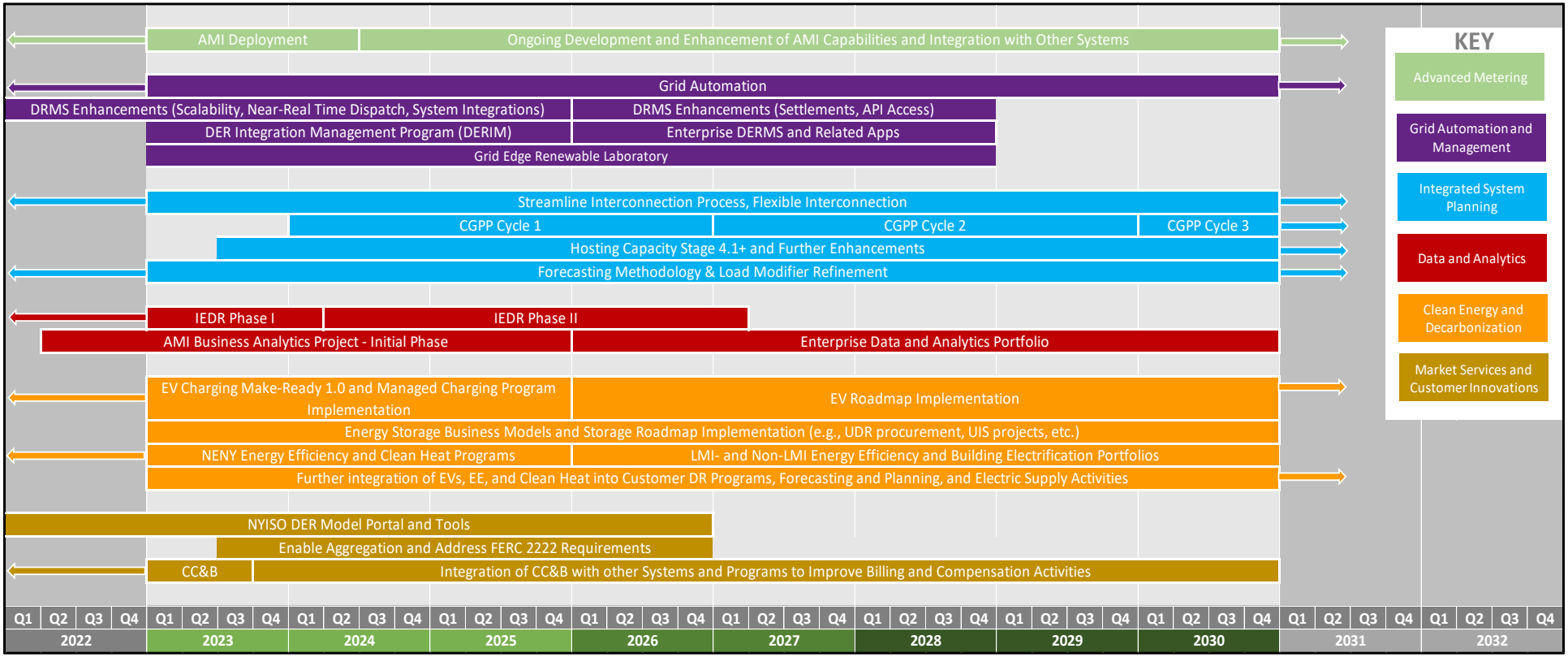
- Programmatic upfront incentives for technology installations and ongoing performance-based incentives
- Contracts for dispatch rights of flexible resources
- Solicitations for grid solutions through requests for proposals in the non-wires-solutions program

Enhancements to the commercial architecture that CECONY will pursue to mature its capabilities include:

- Continuation of programs that compensate resources that meet grid needs and enable participation in the wholesale market
- Continued targeting of resources or locational solicitations as dictated by planning needs
- A harmonized programs portfolio to offer incentives for various resources that may be leveraged for flexibility in the future

In conclusion, CECONY will continue evolving key grid functionalities over time to align with customer needs and NY State policy goals and will refine this vision through the GOTF proceeding as the capabilities and architectures are further defined.

Figure 2: Integrated Timeline of Activity and Investments



2. TOPICAL SECTIONS

The 2023 DSIP Guidance directed the utilities to provide "planning and implementation details which will help the utilities and stakeholders align their respective needs and capabilities as the electric system evolves."[16] Staff outlined basic requirements common to each topic and specified detailed questions for each topic. For the 2025 DSIP filing, Con Edison followed Staff's guidance to replicate the structure of the 2023 DSIP in 2025. Where relevant and feasible, the Company also incorporated feedback from the First Iteration of the Grid of the Future Plan.[17] In the following sections, the Company provides the common information and responds to the detailed questions, recognizing that there are some cases where detailed implementation plans are not yet fully developed or where planning efforts are in early stages due to ongoing related proceedings and policy development. In such cases, the Company describes its current status and planned next steps.

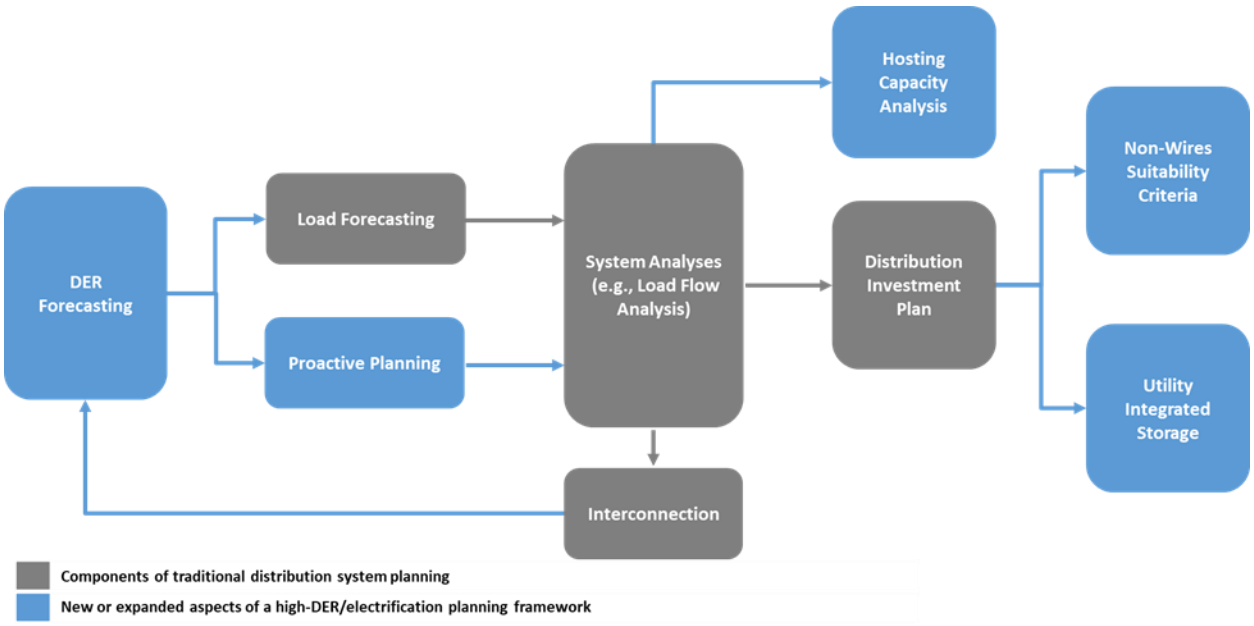
[16] Note 5, *supra*.
[17] Note 12, *supra*.

2.1. INTEGRATED SYSTEM PLANNING

Context and Background

Con Edisons's integrated planning process, as illustrated in Figure 3 below, identifies current and future operating risks and incorporates potential solutions to maintain a safe and reliable electric system while enabling the State's Climate Leadership and Community Protection Act ("CLCPA") goals and supporting the implementation of the Distributed System Platform ("DSP"). As described in previous versions of the Distributed System Implementation Plan ("DSIP"), Con Edison has expanded aspects of its planning framework to incorporate a broader range of data drivers, additional sources of uncertainty, and a more diverse resource mix. These changes are brought about as the Company and New York State ("NY State") move toward a future of cleaner energy with greater reliance on distributed energy resources ("DER").

Figure 3: Integrated Distribution System Planning Process[18]



The Company's integrated planning process is designed to maintain and enhance safety, reliability, and operation of Con Edison's transmission and distribution ("T&D") system, while maintaining system performance within defined and acceptable design and operating risk tolerances. Further, as discussed below and throughout this filing, Con Edison has integrated DERs into its planning and operations to support DER growth, including directing DERs to areas of the grid where they can provide the greatest system value. This includes non-wires-solutions ("NWS") and demand response ("DR"), which are covered in greater detail in Section 2.13 Beneficial Locations for DERs and Non-Wires Alternatives and Section 2.3 Grid Operations, respectively. The Company has implemented changes to the interconnection processes for DERs with a focus on greater efficiency and timeliness through automation of key review and approval steps. These improvements are described in Section 2.11 DER Interconnections. Finally, Con Edison continues to improve its hosting capacity maps with more granular data and expanded features, which is driving improved customer and developer satisfaction and facilitating greater DER deployment. Updates to the Company's hosting capacity maps are found in Section 2.9 Hosting Capacity.

[18] Case 16-M-0411, *In the Matter of Distributed System Implementation Plans*, Joint Utilities Supplemental Distributed System Implementation Plan (filed November 1, 2016), p. 28.

Additionally, policies have been established at the state level which are fundamentally transforming the energy supply mix, load growth, and consumption patterns. These policies and the accompanying changes are driving ongoing and planned enhancements to integrated system planning. Key activities include continued development of local transmission and distribution ("LT&D") projects to support CLCPA goals, support for the Coordinated Grid Planning Process ("CGPP"), and coordination with the Joint Utilities on a Long-Term Proactive Planning Framework to prepare for greater electrification of vehicle transportation and buildings (e.g., heat pumps).

Regulatory Drivers

In May 2020, the Public Service Commission ("PSC") issued its Order on Transmission Planning Pursuant to recently enacted state law,[19] establishing two key proceedings: (i) one with a focus on establishing a LT&D capital plan for each utility necessary to achieve CLCPA targets and (ii) another with a statewide plan to identify and implement transmission-level investments that are "necessary or appropriate to achieve CLCPA targets."[20] That November, Con Edison and the other Joint Utilities established an LT&D capital plan for each utility by identifying two types of proposals and recommendations to support the LT&D investment planning process.[21] Phase 1 projects were identified as immediately actionable and satisfying reliability, safety, and compliance needs. Phase 2 projects were identified as potentially increasing capacity on the LT&D system to allow for interconnection and delivery of new renewable energy generation resources within the utility's system.

In September 2021, the PSC directed the utilities to develop new coordinated grid planning procedures to identify and incorporate key transmission expansion into the long-term grid system planning process that can aid in unlocking renewable generation capacity and provide energy headroom in support of the objectives of the CLCPA. The Joint Utilities filed the initial CGPP framework on December 17, 2021,[22] which was refined through technical conferences and stakeholder engagement to the comprehensive CGPP Proposal of December 27, 2022.[23] On August 17, 2023, the PSC issued the Order Approving a Coordinated Grid Planning Process[24] which is a six-stage planning process to be conducted collaboratively among the Joint Utilities. This process is envisioned as a repeating three-year process with approximately two years for a local transmission system study followed by PSC review. The overall process is designed to provide an assessment of NY State's electric grid using a 20-year planning horizon.

To gather additional feedback on the CGPP process and help garner broad engagement by stakeholders, the PSC established the Energy Policy Planning Advisory Council ("EPPAC")[25] which is comprised of a diverse set of stakeholders that provide expertise into input assumptions for the CGPP planning scenarios to optimize investments in the State's bulk transmission system.

---

[19] New York State, Accelerated Renewable Energy Growth and Community Benefit Act (enacted April 3, 2020).
[20] Case 20-E-0197, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, Order on Transmission Planning Pursuant to the AREGCBA (issued May 14, 2020).
[21] Case 20-E-0197*, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, Utility Transmission and Distribution Investment Working Group – Group Report (filed November 2, 2020).
[22] Case 20-E-0197, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, The Utilities' Coordinated Grid Planning Process and Revised Benefit-Cost Analysis Proposal (filed on December 17, 2021).
[23] Case 20-E-0197, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, Coordinated Grid Planning Process Proposal (filed December 27, 2022).
[24] Case 20-E-0197*, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, Order Approving a Coordinated Grid Planning Process (filed August 17, 2023).
[25] New York State Department of Public Service Energy Policy Planning Advisory Council: https://dps.ny.gov/energy-policy-planning-advisory-council.

In an effort to have utilities more proactively identify and address the potential impact that transportation and building electrification ("BE") will have on localized portions of the grid, the PSC issued the Order Establishing Proactive Planning Proceeding[26] on August 15, 2024. This order directed each utility to propose urgent infrastructure upgrade projects, and the Joint Utilities to propose a framework for proactive planning that will allow utilities to propose infrastructure upgrades driven by electrification in the future.

On June 12, 2025, the PSC issued the Order Addressing Urgent Upgrade Filings[27] in which it approved five of Con Edison's nine proposed urgent upgrade projects. These were the Zerega Avenue, Hunts Point, Parkchester No. 1, Parkchester No.2, and Mott Haven projects which account for 380 MW of new capacity on the system.

The PSC has initiated multiple regulatory proceedings related to grid planning, including those outlined above and the Grid of the Future Proceeding[28] ("GOTF"). While each proceeding is not directly focused on integrated planning in the context of enabling a DSP, Con Edison is coordinating how each affects the other. For example, load flexibility from aggregations of DER achieved through the GOTF will appear in the assumptions of future CGPP cycles. Similarly, urgent projects approved through proactive planning, or substation upgrades related to CGPP, will be incorporated as inputs and outputs into the Company's planning practices.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Continued development of LT&D Phase 1 and 2 projects to allow for interconnection and delivery of new renewable energy generation resources in support of the State's CLCPA goals.
- Continued coordination efforts with the Joint Utilities, Department of Public Service ("DPS") Staff, New York State Energy Research and Development Authority ("NYSERDA"), and the New York Independent System Operator ("NYISO") in the LT&D planning process, including identifying and developing Phase 1 and Phase 2 projects and developing headroom capacity analysis.
- Initiated work with the Joint Utilities on the CGPP. Proceeded through early stages including development of key assumptions and scenarios and power flow modeling.
- Identified and proposed to the PSC nine urgent projects that the Company needs to proactively prepare the grid for electrified transportation and BE.
- Worked with the Joint Utilities to develop the Long-Term Proactive Planning Framework that was submitted to the PSC for approval.
- Filed an updated Climate Change Resilience Plan ("CCRP") in February 2025 that outlines proposed investments to enhance climate resilience of the electric system.

[26] Case 24-E-0364, *In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure*, Order Establishing Proactive Planning Proceeding (filed August 15, 2024).
[27] Case 24-E-0364, *In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure*, Order Addressing Urgent Upgrade Filings (issued June 12, 2025).
[28] Case 24-E-0165, *Proceeding on Motion of the Commission Regarding the Grid of the* Future, Matter Master

Utility Capabilities Demonstrated (non-exhaustive)

Planning & Forecasting: Con Edison has enhanced its system *planning* approach to integrate a wider range of inputs, additional sources of potential uncertainty, and a more varied mix of DERs.

Hosting & Registration: Con Edison has integrated information and data regarding DERs into its planning and operations to support further DER growth, including updating its *hosting* capacity maps to better direct DERs to areas of the grid where they can provide the greatest system value.

Outlined below are Con Edison's key efforts to enhance integrated planning to support achievement of the State's CLCPA goals.

LT&D Phase 1 and 2 Projects

As the system planner and operator with accountability for providing service to all customers in its service territory, Con Edison is responsible for safe and reliable operation of a resilient and clean distribution system. To meet these objectives, the Company looks holistically at projects that can solve multiple challenges (e.g., bolster reliability and resiliency while simultaneously expanding capacity to host clean energy). As noted above, the Company proposed Phase 1 and Phase 2 LT&D projects.

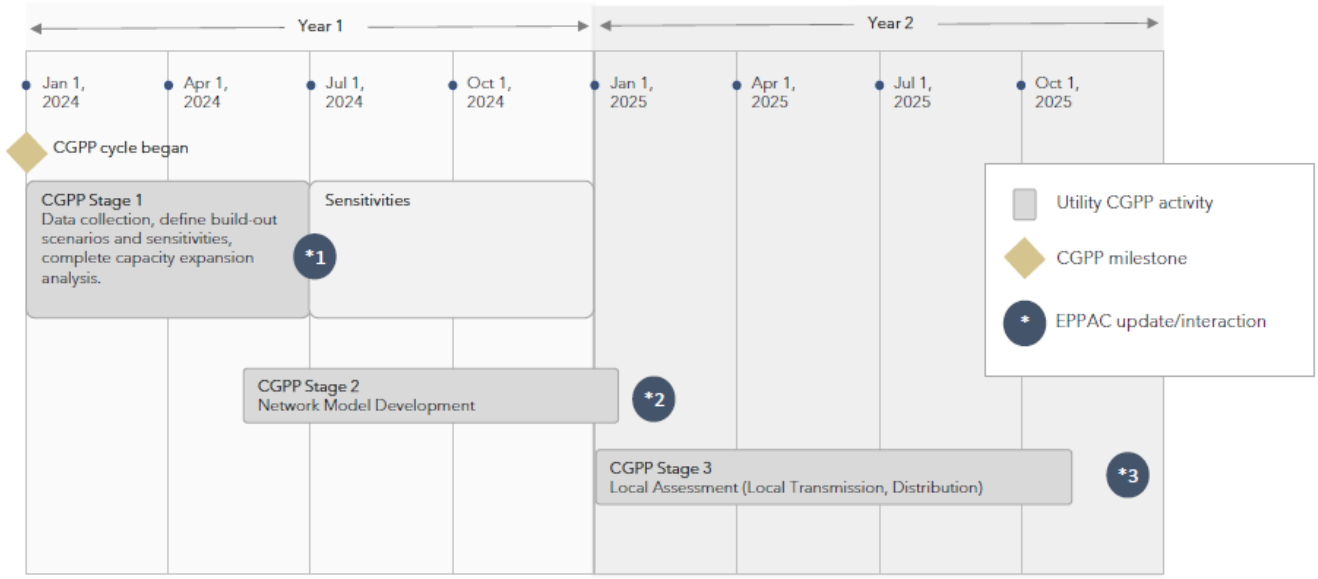
Three major in-city 345/138 kV phase angle regulated feeders have been completed and placed into service, the most recent of which was in May 2025. Con Edison is also advancing development of the Brooklyn Clean Energy Hub, which was originally proposed as a Phase 2 multi-value project but was approved as a reliability (i.e., Phase 1) project. The potential hub expansion could support meeting offshore wind targets and CLCPA requirements, including accommodating future points of interconnection for up to 6,000 MW of offshore wind. The Brooklyn Clean Energy Hub will deliver immediate reliability benefits in Brooklyn and Queens and will stand as a unique, potential make-ready interconnection option that can feed directly into the Company's grid. By developing points of interconnection at load-serving substations, this approach leverages Con Edison's role as the owner and operator of the high-voltage transmission system needed in load-dense New York City. It also enables the retirement of downstate fossil fuel-fired "peaking" generation units and opens pathways or off-ramps into constrained transmission load areas. Initial engineering design and construction work began on this project in 2022, as did demolition and site preparation work on the Company-owned property where the station is being constructed.

Coordinated Grid Planning Process

The Joint Utilities are partially through the first six-stage CGPP "cycle" (currently a three-year duration with two years of analysis and one year of PSC review). During Stage 1, the Joint Utilities completed a capacity expansion modeling exercise, including the development of three key scenarios and ten sensitivities, in collaboration with the NYISO. Stage 2 involved power flow modeling exercises to identify and evaluate constraints and system needs based on the generation buildout scenarios. As part of Stage 3, the Joint Utilities are currently developing and analyzing preliminary project solutions. These efforts will culminate in a set of new LT&D project proposals from the Joint Utilities planned to be released in the first half of 2026.

The timeline for the implementation of the first three stages of CGPP Cycle is show Figure 4 below.

Figure 4: Timeline and Implementation of First CGPP Cycle[29]



Though the CGPP is not used as a direct input to the Company's distribution system planning, Con Edison's work to coordinate the CGPP with proactive planning provides a model for how other planning efforts can be integrated moving forward.

Climate Change Vulnerability Study and Resilience Plan

Building on the Company's Climate Change Vulnerability Study ("CCVS")[30] (originally conducted in 2019 and updated in 2023) and 2020 Climate Change and Resilience and Adaptation Plan,[31] the Company released a new Climate Change Resilience Plan[32] ("CCRP") in February 2025. The CCRP is a comprehensive, long-term roadmap of adaptation measures for each identified climate vulnerability (e.g., temperature rise, extreme weather events, flooding) that includes steps the Company will take to address the potential impacts of these hazards on the electric system and Company operations.

CLCPA goals, policy objectives, and considerations from the CCVS are incorporated as inputs to demand and sales forecasts. The CCVS is based on a probabilistic, risk-based approach that considers the likelihood and consequence of potential changes in the climate, including assessing the probability of plausible future climate outcomes and the associated impact on Con Edison's service territory. For example, Con Edison has developed its own customized temperature and humidity indicator, temperature variable ("TV"), for peak forecasting purposes. TV is correlated with demand for power and uses cooling degree days[33] to evaluate volumetric forecasts. Con Edison's electric peak demand forecasts were previously calculated based on historical data and applied a fixed design TV.

[29] Slides and materials for the February 10, 2025, meeting of the EPPAC, Case 20-E-0197, *Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act*, (filed Feb. 7, 2025).
[30] Con Edison Climate Change Vulnerability Study (September 2023).
[31] Con Edison Climate Change Resilience and Adaptation: Overview of the Summary of 2020 Activities (December 2020).
[32] Case 22-E-0222, *Proceeding on Motion of the Commission Concerning Electric Utility Climate Vulnerability Studies and Plans*, Climate Change Resilience Plan (filed February 18, 2025).
[33] A measure of how long the outside air temperature exceeds 65°F, used to estimate energy consumption required to cool buildings.

Information from the CCRP is being used to prioritize operations, support planning processes, and identify asset types for further analysis and potential remediation. The Company has updated its planning framework to account for impacts to equipment ratings and substation capabilities due to projected ambient temperature increases. In addition, the Company may use outputs of these efforts to identify areas that may be more likely to experience load growth based on projected climatic risks and impacts. The Company will continue to update the planning process as science around climate change continues to evolve.

Proactive Planning Framework

In addition to planning for bulk transmission system improvements needed to achieve the goals of the CLCPA, the PSC also directs policy that recognizes the impact that the electrification of transportation and buildings will have on localized portions of the grid. In August 2024,[34] the PSC directed the Joint Utilities to propose a framework for proactive planning that will address these electrification needs. The order noted a distinction between the "higher voltage infrastructure investments" being contemplated by the CGPP process and the "bottom-up modeling that is necessary to forecast granular electric vehicle ("EV") and BE load-driven upgrades."

In accordance with the order, the Joint Utilities submitted its proposed Long-Term Proactive Planning Framework to the PSC on December 13, 2024. The framework proposed by the Joint Utilities for the PSC's approval is guided by five principles:

1. Support customer needs in a timely manner without adverse impacts: Utilities must manage the challenge of serving new electrification loads quickly, despite long grid expansion timelines, by using proactive planning to bridge the gap between rapidly changing customer demands and the slower pace of infrastructure development, while maintaining grid reliability and resiliency.
2. Support achievement of objectives in policies, laws, and regulations: The framework should support faster customer adoption of electrification to meet ambitious state and local policy objectives and enable regulatory compliance.
3. Cost efficiency: Planning approaches and solution designs should focus on maximizing grid investment value and managing build risks by prioritizing long-term needs with high forecast confidence, using expandable designs, integrating advanced technologies, and accounting for long-term cost savings and grid resilience benefits.
4. Flexible planning and authorization: Planning and regulatory processes should accommodate fast-evolving markets and policies by balancing a nimble and agile process with appropriate guardrails.
5. Complement other regulatory processes: A proactive planning process must coordinate with other regulatory proceedings to support them, or at least not disrupt them, while still advancing its own objectives.

The proposed Proactive Planning Framework includes four stages:

1. Load Assessment: Application of analytical methodologies to identify areas with the potential for clustered electrification to develop rapidly.
2. Planning and Solution Design: Assessment of infrastructure needs by considering output of load assessments and existing grid conditions to develop potential projects.
3. Project Eligibility and Prioritization Criteria: Application of defined criteria to each individual project to determine eligibility and prioritization.
4. Proposal and Authorization of Eligible Projects: Identification of projects to be proposed. These are to be separated into large and small project categories.

The development of the proposed Long-Term Proactive Planning Framework, as prepared by Con Edison and other members of the Joint Utilities, represents a key step in enabling NY State to maintain the reliability and resilience of the

[34] Note 26, *supra.*

electrical grid while progressing toward the clean energy objectives of the CLCPA. This framework will guide the utilities through a detailed analysis to identify areas of future load growth, so needed infrastructure is in place in advance of growing demand.

In addition to the Long-Term Framework, Con Edison proposed nine urgent projects[35] for PSC approval in a filing made on November 13, 2024. In this filing, the Company proposed four projects to upgrade the primary distribution feeders to bring power to areas identified as future EV charging hotspots, three projects to upgrade the sub-transmission feeders and area substation equipment that support the EV charging hotspots, and two distribution system programs that require additional funding to accommodate existing customer demand for electrification of heating.

As previously described, the PSC recently issued the Order Addressing Urgent Upgrade Filings[36] in which it approved five of Con Edison's nine proposed urgent upgrade projects. These five projects unlock a cumulative 380 MW of additional capacity for electric vehicles and building electrification in Con Edison territory.

Future Implementation and Planning

Summary of Future Actions

- Continue work on the CGPP process and report to the PSC. Advance CGPP analysis through later stages including preferred solution evaluation, least cost analysis, and recommendations development.
- Initiate work on the five urgent projects recently approved by the PSC.
- Pending action from the PSC, initiate work with the Joint Utilities on the Long-Term Proactive Planning Framework.
- Continue development of LT&D Phase 1 and 2 projects to support the State's CLCPA goals.

To meet the CLCPA goals within timeframes established by NY State policy, Con Edison, in collaboration with the Joint Utilities, will continue to implement multiple enhancements to integrated planning. Some key planned efforts are discussed below.

Coordinated Grid Planning Process

As previously described, the Joint Utilities are working through the first CGPP exercise that will culminate in a set of new LT&D project proposals planned to be released in the first half of 2026. The remaining CGPP stages will involve evaluating the portfolios of solutions, comprising both generation and transmission build, based on their ability to reduce total system cost. Recommended LT&D solutions under each scenario will then be developed along with associated risks and benefits.

In addition to the planning processes, the CGPP Order established the EPPAC, a stakeholder group and advisory council created to inform the planning process, including development of key assumptions and scenarios. More information on the EPPAC is included in the *Stakeholder Interface* section below.

[35] Case 24-E-0364, *In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure*, Con Edison Urgent Projects Proposal (filed November 13, 2024).
[36] Note 27, *supra.*

Proactive Planning Framework

The Company will move forward with the development of the five urgent projects recently approved by the PSC and is awaiting action on the Joint Utilities proposed framework. Although the long-term framework is yet to be approved, the Joint Utilities have already begun and expect to continue coordinating the inputs and outputs of proactive planning with other major proceedings, such as CGPP.

LT&D Phase 1 and 2 Projects

In the future, Con Edison will continue to advance development of the Phase 1 Brooklyn Clean Energy Hub which is expected to be in service in early 2028. The Company will also be looking to identify, plan, and develop projects on the LT&D system to allow for interconnection and delivery of new renewable energy generation resources within the utility's system.

Other Future Actions

The improvements and future actions referenced above are preparing the Company for the challenges and opportunities of further integration of DER on the system and the anticipated load growth from electrification. As the energy landscape in the state continues to evolve, the Company's integrated system planning efforts will also evolve to enable greater distribution level flexibility in the future.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Higher reliance on electric system due to beneficial electrification requires more accurate planning to maintain reliability and meet growing demand	• Coordinate with the Joint Utilities and other stakeholders to discuss best practices around planning approaches and, where appropriate, incorporate lessons learned to increase reliability of the grid while accommodating growing electric demand. • Continue to evolve and refine planning practices to improve the accuracy of forecasting modifiers (e.g., EVs, heat pumps, and other forms of electrification) and the impacts of DERs.
Uncertainty in long-term demand forecasts driven by electrification and DER adoption	• Engage market participants (e.g., EV fleets, developers, original equipment manufacturers, large customers) to better understand long-term plans and the potential impacts on demand. • Incorporate feedback into planning processes and continually update based on new information.
Challenges related to renewables integration	• Engage in the CGPP process to identify key electric grid expansions that can aid in unlocking renewable generation capacity.
Increasing incidents of extreme weather events and other climate change impacts	• Utilize specific actions identified in the CCVS and CCRP to mitigate these impacts.
Not having sufficient resources to support changes to planning processes	• Continue to identify, evaluate, and where it makes sense, invest in enabling technologies, staff, and/or other resources required to support changes in planning processes.

Stakeholder Interface

As noted above, the Company is evolving the distribution planning process to integrate DER and support DER market growth. The additional value provided to stakeholders is most evident in the externally facing elements of distribution planning, namely the sharing of system data and hosting capacity analysis, identifying NWS opportunities, and reducing the length and complexity of the DER interconnection process. Many of these elements are described further in other topical sections of this document.

As previously described, the EPPAC stakeholder group has been established to provide guidance and address the interests of stakeholders in the CGPP planning process. EPPAC is composed of representatives from the utilities, the NYISO, NYSERDA, DPS Staff, generation and storage associations, the New York Power Authority, the Long Island Power Authority, the Office of Renewable Energy Siting, the New York Department of State Utility Intervention Unit, the City of New York, and environmental justice organizations. This extensive representation will help incorporate stakeholder needs when seeking to optimize investments in the State's bulk transmission system.

Further, the Proactive Planning Proceeding has seen robust stakeholder participation from various nonprofit environmental organizations, EV charging station developers, and original equipment manufacturers among others, seeking to represent stakeholder interests in electrification of vehicles and buildings. These stakeholders include the Alliance for Transportation Electrification, the Environmental Defense Fund, Tesla, the City of New York, the Port Authority of New York and New Jersey, Advanced Energy United, the Sierra Club, the Natural Resources Defense Council, CALSTART, and Earthjustice. The Company is working closely with these stakeholders as well as the other utilities to establish a coordinated planning process, share data and best practices to inform granular load studies and optimize electrification-enabling investments across the state.

Additional Detail

This section responds to the questions in the DPS guidance specific to integrated system planning.

1) The means and methods used for integrated distribution system planning.

Distribution system planning focuses on forecasting load, identifying system needs, identifying potential solutions to those needs, and selecting and implementing the preferred solution.

Load forecasting is a central component of the distribution system planning process and informs many other planning analyses. Development of the load forecast enables distribution system planners to identify a range of system needs to maintain reliability and resiliency. Planners use load flow modeling, network reliability modeling, and modeling of system performance to assess the current capability of existing distribution and substation assets to meet the forecasted load based on the design criteria, type of asset, thermal ratings, and power factors. These analyses determine which, if any, assets are at risk of becoming overloaded during system peak conditions and under various contingencies. Other system areas of need identified through distribution modeling include:

- Risk reduction programs: to perform necessary inspections, replace components with known performance issues, install sectionalizing devices, and/or establish new circuits in order to enhance network reliability.
- New business projects: to interconnect new customers or expand service for existing customers.
- Storm hardening or resiliency projects: to strengthen the electric grid.

As part of the planning process, the Company evaluates the risk of failure to supply safe and reliable electricity to customers. This includes the risks of customers experiencing outages and of not being able to serve new customer loads. The Company performs studies to understand the current state of equipment and any changes planned or forecasted on both the supply and demand sides. Analysts forecast load on a network-by-network basis, which is then applied to

determine constraints on equipment and identify system needs. System needs may involve station modifications, development of supply-side resources, upgrades to distribution systems, or NWS.

In addition to the areas of need listed above, the Company budgets for emergency response and equipment replacement, information technology solutions to meet strategic business needs, and public works projects to re-route Company equipment in the municipal right-of-way.

Once a list of system needs is compiled, Con Edison planners identify potential solutions to address the issues. The capital projects are scored and ranked through an optimization process that seeks to reduce operating risks and efficiently meet strategic objectives. Additionally, Company planners review the projects in the 10-year load relief program[37] and determine on a project-by-project basis if the project meets the NWS suitability criteria. The suitability criteria identify projects that: (1) are for load relief, (2) have enough lead time to pursue an NWS without foreclosing the opportunity to install a traditional solution if needed, and (3) offer enough capital deferral or displacement to overcome transaction costs and issues of scale. Suitable projects are assessed for feasibility, then advanced to the solicitation process, where the need is defined in terms of the total MW of load relief required to replace the traditional capacity, the applicable time of day the load relief must be available, and the in-service date(s). This information, along with additional demographic information and project-specific detail, is included in the NWS solicitation. Based on responses, the Company evaluates the viability of implementing an NWS portfolio to meet the MW needs within the required timeframe and conducts an analysis informed by the Benefit-Cost Analysis Handbook. Several iterations may occur until an optimized portfolio is submitted and approved. More information on NWS can also be found in **Section 2.13 Beneficial Locations for DERs and Non-Wires Alternatives.**

In addition to traditional means and methods used in distribution system planning, the Company is currently undertaking the CGPP. Earlier stages of CGPP involved coordination and determination for capacity expansion build-out scenarios using data inputs, such as CLCPA objectives, load forecasts and shapes, publicly available NYSERDA procurement data, forecasted amounts and locations of DER, and any supplementary information used to inform model results. The remaining CGPP stages will involve evaluating the portfolios of solutions, comprising both generation and transmission build, based on their ability to reduce total system cost.

Though the CGPP is not used as a direct input to the Company's distribution system planning, Con Edison continues to coordinate with the CGPP to identify opportunities to further integrate planning efforts moving forward.

2) **How the utility's means and methods enable probabilistic planning which effectively anticipates the inter-related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency.**

Starting in May 2017, the Company modified its process of evaluating overloads on 13, 27, and 33 kV distribution feeders to incorporate probabilistic planning, as well as DER. The probabilistic approach allows the Company to lengthen the load relief timeline, which increases the likelihood that DER could be deployed to meet the load relief need. When evaluating overloads, if the Network Resiliency Index is less than 0.2, the Company will defer resolving distribution feeder overloads of up to 10 percent by three years. In the past, the Company would relieve the overload for the following summer.

Because of the intermittent nature of the DERs, specifically DG, the Company uses scenario analysis to consider additional factors to assess reliability under peak load conditions for normal and contingency conditions. The planning process requires two design requirements to be satisfied:

[37] This summarizes the work that the Company needs to perform in the next 10 years in order to prevent any overload(s) identified and mitigate risk at a sub-transmission feeder and area substation level.

1. Traditional Baked-in model,[38] which uses the net load of a peak day, factoring in DER output, and scales to the forecasted load of the network at the design temperature variable.
2. DER Backed-out model (or worst-case DER scenario),[39] which assumes DERs are unavailable on a peak day.

If both of these requirements are met, meaning the poly-voltage load flow model runs show no overload under these scenarios, there is no further analysis required. Where one or both of these requirements are unmet, further analysis is required to determine if DER operations can adequately meet the peak load requirements.

Additionally, DERs are analyzed for thermal and voltage impacts at an area substation level during minimum and peak load periods.

3) How the utility ensures that the information needed for integrated system planning is timely acquired and properly evaluated.

The Company has established processes for collecting and evaluating data required for system planning. The load forecast is developed internally using a range of inputs including customer data, economic indices, and new business jobs in the queue. DER forecasts are an increasingly important input to the system, and network forecasts are informed by data from the interconnection queue, as well as known program activity, such as approved energy efficiency ("EE") programs. Additionally, the Company has visibility into new business jobs, typically extending over five years. Significant jobs within the electric service territory are evaluated to determine the total load (and appropriate phasing-in), the network location, and when it will come online. Further detail on load and DER forecasting is included in **Appendix A Peak Load and DER Forecast Details.** Further, the Company's investments in advanced metering infrastructure and grid modernization technologies, such as Geographic Information System and Distributed Energy Resources Management System, are already increasing the information available to system planners, particularly at the grid edge.

4) The types of sensitivity analyses performed and how those analyses are applied as part of the integrated planning process.

The Company's asset management lifecycle models include sensitivity analyses as part of the modeling. These models, used in the electric long-range plan for asset management, simulate the behavior of the asset fleet under various conditions, enabling what-if analysis across multiple scenarios. The models incorporate three distinct components: (1) the characteristics of the asset fleet, (2) the effectiveness of proactive replacement and maintenance, and (3) the asset management actions needed to achieve the desired service level.

Model development began in 2016 with the separation of major assets into 12 asset groups and selection of three assets to model in 2016: wood poles, underground distribution cable, and 4 kV unit substation transformers. Two additional assets were added in 2017: network transformers and network protectors. An asset management life-cycle model is created for each asset group to provide decision-making and scenario planning, including sensitivity analyses. The model uses sensitivity analyses to evaluate a replacement strategy, such as replacing a certain percent of the poorest performing assets each year for the next 10 years. The model predicts asset failure rate trends and how the failure rate is influenced by variations in key parameters, such as inherent asset deterioration with age and use, unit cost, and the likely condition of the assets renewed. Scenario planning will address future asset performance based on an asset maintenance strategy and renewal factoring in historical data and performance.

[38] The term "baked-in" as used as this model evaluates the "net" load, and is confirming whether the system, with load and DER output at the time of the previous peak, is adequate for the level of contingency needed.
[39] The model takes the nameplate or maximum value of the DER and adds it as load to the baked-in model.

The capacity expansion modeling simulations created during Stage 1 of the CGPP included existing limits on the bulk system's capability to transfer power between the New York Control Area zones.[40] To the extent that the bulk system transfer limits appear to be restricting the economic build-out of renewable generation, the Company may need to perform sensitivity analyses to evaluate the effect of relaxing the bulk transfer limit. The results of the sensitivity analyses, holding constant the modeling input assumptions used to develop the generation build-out scenarios in the initial stage of the CGPP planning cycle, could potentially inform the need to consider expansion on the bulk system.

5) **How the utility will timely adjust its integrated system plan if future trends differ significantly with predictions, both in the short-term and in the long-term beyond the DSIP timeline.**

The Company updates its 20-year load forecasts on an annual basis as part of the capital planning process. In developing the forecast, the Company incorporates the best information available at the time, extending over the 20-year period. To the extent that future trends differ from past assumptions, such as increased load from electrification efforts or ramp-up of EE efforts, the Company incorporates the new information into the forecast, which flows into the system planning process. As such, the system plan evolves in line with trends as well as unforeseen developments. The integrated system plan will also be informed and adjusted as required by the inputs from the CGPP.

Additionally, the Company's integrated system plan has evolved from what was once a capacity-centric expansion program to one that favors distribution level flexibility and optionality. While the rates of load growth and DER penetration may change over time, Con Edison aims to advance the grid's ability to move from a static system to a more modern system capable of adapting to changes in trends with operational flexibility.

6) **The factors unrelated to DERs – such as aging infrastructure, electric vehicles, and beneficial electrification – which significantly affect the utility's integrated plan and describe how the utility's planning process addresses each of those factors.**

As noted above, Company planners use load flow modeling, network reliability modeling, and modeling of system performance to assess the current capability of existing distribution and substation assets to meet the forecasted load, based on the design criteria, type of asset, thermal ratings, and power factors. This process identifies a range of system needs, including risk reduction programs to address asset health (of which equipment age is one factor), along with maintenance history, performance, and other factors. Several assets have replacement and/or renewal strategies based upon calculated Asset Health Indexes. For example, the unit substation transformer health index calculation uses Dissolved Gas in Oil Analysis, Furan test results, transformer loading, apparent corrosion, oil leaks, load tap changer functionality, environmental impact, proximity to the public, and age as factors.

Recent policy changes represent a significant departure from past EV and electrification trends. As noted in **Section 2.5 EV Integration**, the PSC issued an order in July 2020 authorizing an EV Make Ready Program ("EV MRP").[41] The EV MRP aims to accelerate the development of EV charging infrastructure by reducing the upfront costs associated with building EV charging stations.

The PSC has also directed Con Edison and the other utilities to undertake a proactive planning process for transportation and BE load, moving away from a just-in-time approach given the fast ramp up of large, concentrated EV and building loads expected. In accordance with the order, the Joint Utilities submitted its proposed Long-Term Proactive Planning Framework to the PSC on December 13, 2024. As described previously, the proposed framework includes four stages: load assessment, planning and solution design, project prioritization and eligibility criteria, and proposal and

[40] The New York wholesale electricity market is divided into eleven pricing or load zones. Load zones are utilized to define pricing zones for the wholesale electricity market.

[41] Case 18-E-1038, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure,* Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 16, 2020).

authorization of eligible projects. Within the order, Con Edison and the utilities were further directed to propose a set of urgent projects on an earlier timeframe. These are projects that cannot wait for development and implementation of the Long-Term Proactive Planning Framework as assessed by each utility. On June 12, 2025, the PSC approved five of Con Edison's nine proposed urgent projects. These five projects unlock a cumulative 380 MW of additional capacity for electric vehicles and building electrification in Con Edison territory.

Similarly, the discussion around heating electrification is continuing to evolve. For example, the PSC established a statewide minimum heat pump reduction target of 3.6 trillion British thermal units by 2025 at a total cost of approximately $454 million. This included a Con Edison-specific target for a reduction of 1 trillion British thermal units at a total cost of approximately $227 million, with a requirement that utilities serve as the primary administrators of heat pump programs. The added load from heat pumps is captured in a load modifier for heating electrification and is applied in the winter peak forecast. Distribution system planners will continue to plan for and accommodate the projected increase in load from this electrification.

7) **How the means and methods for integrated electric system planning evaluate the effects of potential energy efficiency measures.**

The Company has a long-standing practice of incorporating EE and DR as load modifiers that reduce the total forecasted load (or gross load). The Company added organic, or naturally occurring EE as load modifiers in the fall 2017 forecast to further refine the forecasting process. **Appendix A Peak Load and DER Forecast Details** includes a detailed discussion of how EE and DR forecasts are developed and applied in the Company's forecasts.

8) **How the utility will inform the development of its integrated planning through best practices and lessons learned from other jurisdictions.**

In addition to collaboration with the Joint Utilities, the Company coordinates through the Electric Power Research Institute, the Institute of Electrical and Electronics Engineers, and other industry forums to exchange information and stay informed on best practices and lessons learned from other jurisdictions. Company planners have developed relationships through those forums with other utility peers, who are a resource for questions and discussion.

2.2. ADVANCED FORECASTING

Context and Background

The development of long-term load forecasts is a central function of distribution system planning and a key input to the Company's strategic and long-range planning processes. Electric system and network independent peak demand forecasts guide infrastructure investment decisions and, direct investment to areas of the grid with the greatest need, which sets the stage for identification of non-wires solutions ("NWS") and location-specific pricing. Additionally, peak demand forecasts serve as an input to the bulk system planning process, while energy forecasts determine the revenue forecast and become inputs to the ratemaking process. Both peak and energy forecasts are utilized in electricity supply plans in the long-term and short-term.

The considerable shifts underway in the energy industry, such as growth in electrification and distributed energy resources ("DER") penetration, driven in large part by the Climate Leadership and Community Protection Act ("CLCPA") and other clean energy policy actions, increase the importance of developing forecasts that accurately represent future load and support sound decision-making on future investments. The possible outcomes of these shifts add to the complexity of predicting how consumption will change over time. The Company has continued to refine its forecasting processes year over year, including more granular DER forecasts, and the addition of load modifiers for the electrification of buildings and transportation. Various studies, and forecasting models, and tools have been recently deployed or are under development to help adapt and predict customer demand and energy requirements.

The Company has worked with industry experts to develop the Reforming the Energy Vision ("REV")/DER forecasting model with five DER forecasting modules: (i) electric vehicles ("EV"), (ii) building electrification ("BE"), (iii) solar photovoltaics ("PV"), (iv) distributed generation/combined heat and power ("DG"/ "CHP"), and (v) battery energy storage systems ("BESS"). All five modules are fully functional and are being utilized by the Company.

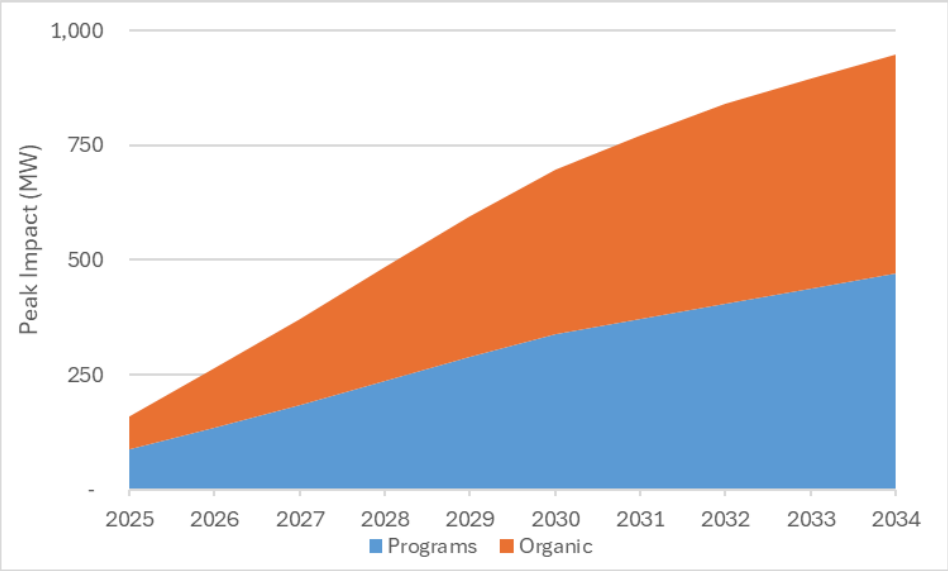
Con Edison's 2025 electric system forecast projects an increase in overall electric system load, with a compound annual growth rate of 1.0 percent over the 5-year period and 1.3 percent over the 10-year period, resulting in a 2034 system coincident peak of 14,200 MW compared to the weather-adjusted peak of 12,540 MW in 2024. The increase in the later years is due to projected demand growth and an increase in EVs, while demand side management ("DSM"), such as energy efficiency ("EE") (through the Company, New York State Energy Research and Development Authority ("NYSERDA"), and the New York Power Authority) and demand response ("DR"), is projected to level off. Table 2 displays the load modifiers that offset peak load in the five-year system peak forecast, while the detailed peak demand forecast information is included in Appendix A Peak Load and DER Forecast Details.

Table 2: Summary of Forecasted Demand Reduction (MW) from Load Modifiers on Peak Forecast

Negative Load Modifier	2025	2026	2027	2028	2029
Photovoltaics/Solar (PVs)	-63	-121	-162	-196	-224
DG/CHP	-16	-25	-31	-33	-38
BESS	-17	-46	-85	-120	-145
Organic EE / Codes and Standards	-71	-131	-185	-247	-307
Coincident DSM	-87	-135	-185	-237	-288
Total Rolling Incremental MW Reduction	**-254**	**-458**	**-648**	**-833**	**-1,002**

The Company incorporates the most current information available when producing the forecast, and updates trends and assumptions accordingly. For example, as shown in Figure 5, the service territory's EE savings as applied to the ten-year peak demand forecast are displayed. Both EE savings from programmatic EE and naturally occurring, or organic, EE have been updated to reflect the increased policy focus and continuing market trends.

Figure 5: 10-Year Forecast for EE During System Peak (Rolling Incremental)



As DER penetration grows, forecasting DER at more granular levels becomes increasingly important. More robust and granular DER forecasts should improve the Company's forecasting accuracy capability. At the same time, increased adoption of DER introduces new challenges for maintaining forecasting accuracy due to uncertainties associated with the variability of DER output, DER's evolving correlation with net load, and the impact of geographic diversity on aggregate DER output. The Company is currently implementing use cases leveraging advanced metering infrastructure ("AMI") through a data analytics project to analyze these nascent phenomena, gain valuable insights into customer behavior, identify emerging trends, and better understand technology adoption. This project has led to the development of several impactful use cases, including analyzing the ramp rates of new business, assessing the impact of heat pumps on gas and electric peak loads and volumes, and understanding the adoption of EV chargers and associated charging behavior.

Leveraging AMI data has enabled the Company to improve both the reconciliation and accuracy of forecasting inputs. It also helps enhance a variety of functions, including integration of AMI data into the existing forecasting process flow, consolidation of data sources into a single platform, planning for future needs that support clean energy targets, and continued pursuit of automation tools and advanced analytics. Future use cases will enhance the calibration of clean energy technology adoption, which will subsequently improve locational load forecasting and insights into the breakdown for disadvantaged communities. The Company will continue to develop sophisticated models with future use cases to capture emerging load impacts and incorporate weather information to normalize the load. This will provide a clearer understanding of the impact of clean energy adoption on electric and gas demands.

Enhancing both near-term and long-term forecasting for potentially flexible resources is becoming increasingly important as Con Edison continues to advance progress toward meeting the State's CLCPA goals. In the near-term, the Company is focused on improving the accuracy of forecasting for DERs already included in the forecast. Before including flexible resources in long-term system planning efforts, however, it will be important to understand and have data to support their dependability.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Refined and enhanced forecasting methodology, including improved accuracy in load modifiers.
- Completed the development of the REV/DER forecasting integrated tool by adding three new modules to forecast EVs, PV, and DG/CHP. These modules produce 20-year electric and gas load modifiers, complementing the existing modules for BESS and BE. Continued work on leveraging AMI data to enhance reporting, analytics, and forecasting for customer behavior and load-modifying technology.
- Continued collaboration with the New York Independent System Operator ("NYISO"), various consultants, and other internal company subject matter experts on an in-depth evaluation of the economic and technical potential for electrification statewide and implications for the bulk power system.
- Continued collaboration with the NYISO's Load Forecasting Task Force ("LFTF") and the Joint Utilities to share best practices and align forecasting approaches.
- Updated 8,760 forecast at the network level.
- Began initial stages of investigating potential implementation of more comprehensive 24-hour network-level peak forecasts to assess the potential of shifting peak hours and changing peak durations.
- Established a new Section (Forecast Reconciliation, Improvement and Data Control) to oversee reconciliation of peak demand modifiers and implement a robust data governance system.
- Initiated development of Integrated Forecast Pathway Sensitivity Model ("IFPSM").
- Completed development of the Gas Distribution Forecast Tool ("GDFT") in May 2025, which is used to determine local gas distribution districts that would benefit from non-pipes solutions (e.g. heat pumps).

Utility Capabilities Demonstrated (non-exhaustive)

Planning & Forecasting: Con Edison has significantly improved *forecasting* through refinement of methodologies and greater precision of load modifiers.

Monitoring & Visibility: To improve *visibility* into its system, Con Edison is piloting software as part of the wider distributed energy resource management system ("DERMS") enterprise platform to generate an operational near-term forecast, with the goal of producing a 24-hour non-network forecast as granular as 15-minute intervals and hourly intervals for beyond 24 hours.

Further refinement and greater precision of load modifiers since the 2023 Distributed System Implementation Plan ("DSIP") filing has significantly improved forecasts. Expanded development of analysis utilizing AMI and other data sources has provided a more holistic view of consumption trends and the associated impacts on grid operations. The Company is continually refining its forecasting assumptions regarding EV charging behavior, the load impact of customers transitioning from fossil fuel to electric heating, and the methodologies for assessing the load impact of solar generation. These enhancements are informed by both internal and external studies which provide the Company with a more comprehensive look at location-specific factors driving the need for grid planning.

Con Edison also implemented enhancements to its primary near-term forecasting tool, MetrixIDR, and to ad-hoc Python scripts. These tools provide 82 electric network hourly forecasts, 13 radial feeder hourly forecasts, and forecasts for the relevant area stations. These enhancements included a mechanism to estimate and record DER load reductions needed to derive the weather-adjusted peak on a system-wide basis and by electric networks, and to adjust the hourly load forecasts for DER. Additionally, the Company developed feeder-specific, five-minute interval forecasting models that are being used to enhance forecasting capabilities.

Given the importance of daily electric, gas, and steam hourly load forecasts for system operations and energy purchases, there are planned investments to further upgrade MetrixIDR to utilize all available features. The upgrades are expected to provide the necessary updates, integrations, and configurations to the software such that forecasts remain up to date with the rapidly changing landscape around renewable energy. Specific updates include integrating future renewable energy technology data with MetrixIDR and leveraging this data to enhance solar models. These enhancements will enable more accurate forecasting of intermittent renewable resources, thereby supporting the state's goals of reducing fossil fuel emissions.

The Company recently completed development of the GDFT in Q2 2025. The tool is an advanced gas distribution forecasting model designed to estimate firm gas peak demand under design weather conditions with enhanced granularity. By incorporating historical meter-level consumption data alongside variables such as new business developments, construction projects, DR, EE initiatives, customer conversions (steam-to-gas and oil-to-gas), and BE efforts, the GDFT enables the Company to forecast firm gas peak day demand at the distribution level across districts and regulators with a 20-year horizon. Additionally, the tool enhances the feasibility of non-pipeline alternatives by supporting the process of identifying possible project areas.

Con Edison is also piloting new software to generate an operational near-term forecast. This software is part of the larger DERMS enterprise platform and will produce a 24-hour forecast as granular as 15-minute intervals with hourly intervals for beyond 24 hours of data. Initial stages will focus on PV generation utilizing irradiance data and the physical components of a PV installation (tilt, azimuth, etc.). Additionally, the platform will be evaluated for its ability to forecast at substation and non-network configurations or individual non-network circuits. Combined with existing load forecasting mechanisms, the goal will be to generate both true load and net load forecasts. All operational forecasts would be prospective inputs to future additional components of the DERMS platform that will help provide situational awareness capabilities and identify constraints. It will also enable optimization and coordination of flexible DER dispatch to resolve constraints or to improve reliability or operational costs.

Future Implementation and Planning

Summary of Future Actions

- Continue to refine the forecasting methodology and existing load modifiers to enhance grid planning.
- Continue to support the Proactive Planning proceeding and understand impacts to forecasting.
- Expand analysis of electrification impacts on Con Edison distribution system.
- Continue to develop AMI uses cases to employ customer consumption and demand data to improve granularity of customer trends for forecasting.
- Continue analysis of potential use cases for implementing 24-hour network forecasting.
- Expand and enhance capabilities of Forecast Reconciliation, Improvement and Data Control Section to better inform forecasting process (2026 forecast as target for initial implementation).
- Implement and deploy Integrated IFPSM which has an expected completion by 2025 Q4.

The Company will continue to refine its forecasting methods in support of greater accuracy, recognizing that some degree of statistical error is inherent in the process. Aspects of these refinements, as well as new capabilities, will be enabled by the planned enhancements to MetrixIDR.

On August 15, 2024, the Public Service Commission ("PSC") issued the Order Establishing Proactive Planning Proceeding[42] to address the anticipated increase in electricity demand due to the electrification of transportation and buildings. The main objectives of this order were, (i) to direct utilities to develop a long-term framework to identify and plan for necessary infrastructure upgrades and ensure that the electric grid can support future electrification needs, and (ii) for utilities to propose immediate infrastructure projects that are critical to meet near-term electrification leads.

Con Edison is supporting the Proactive Planning Proceeding including developing electrification forecasts for transportation and building loads as detailed in the establishing Order.[43] Through this proceeding, the Company has conducted an in-depth analysis of medium- and heavy-duty EVs that are both registered and domiciled within Con Edison's service territory. This analysis includes examining their duty cycles, charging profiles, and various technical assumptions that have informed EV forecasting inputs. This proceeding relies, in part, on the Company's forecast and identifies urgent projects such as future EV charging "hotspots". On June 12, 2025, the PSC approved five of Con Edison's nine proposed urgent projects which will unlock a cumulative 380 MW of additional capacity for electric vehicles and building electrification in Con Edison territory. For additional information on this proceeding, please see **Section 2.1 Integrated System Planning**.

Con Edison has begun development of the IFPSM which employs a sensitivity module containing new forecasting functionality and integration with the existing REV/DER forecasting tool. The IFPSM will aid the Company in its holistic analysis of the electric, gas, and steam systems under various pathway scenarios in realizing CLCPA goals. The outputs from the IFPSM will also be leveraged in developing the Company's Long-Range Plans. The development and implementation of the model will be important in optimizing the achievement of Con Edison's Clean Energy Commitment.[44]

Though no additional load modifiers have been added since the 2023 DSIP period, the Company continues to refine and improve its existing load modifiers and explore potentially adding new modifiers as DER technologies proliferate.

AMI data is essential to advancing the integration of DER into system planning, load forecasting, and grid operations. With the completion of the AMI implementation plan and in order to perform more granular analysis of customer behaviors to identify potential trends, the Company is developing use cases that utilize AMI consumption and demand data. With access to near real-time consumption and generation data, AMI also enables a more precise evaluation of load displacement patterns, supporting informed decisions on optimal DER siting. The Company will leverage these insights to improve forecast methodologies around new technology uptake and better model customer behavior with service-territory specific load curves. As Con Edison continues to refine its load forecasting capabilities through deeper AMI integration, the Company will be well positioned to support broader DER adoption across its service territory. Additional information on the AMI use cases under evaluation can be found in **Section 2.12 Advanced Metering Infrastructure**.

Con Edison continues to refine forecasting methodologies and technologies as part of the Company's transition to a holistic Distributed System Platform. This includes further development of advanced systems, techniques, and models to forecast future electricity demand and the output of DERs. Incorporating learnings from use cases and continuing to

[42] Note 26, *supra.*
[43] *Ibid.*
[44] Case 22-E-0064, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric* Service, Con Edison Report on 2024 Second Quarter Capital Expenditures (filed August 15, 2024): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={50685691-0000-CA11-BA06-C7FD228E2648}.

participate in the Joint Utilities' working sessions will further support Con Edison's continued focus on developing advanced forecasting capabilities and progressing system maturity.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
As forecasting becomes more complex and the demand for additional and more granular forecasts increases, such as forecasts at the circuit level, the Company may require additional resources, including personnel	• Modify implementation timelines and prioritize key components of forecasts that can be addressed with existing resources.
Uncertainty in forecasts driven by electrification and DER adoption	• Continue to refine forecasting load modifiers and validate assumptions and adopt proactive planning framework. • Create additional electrification scenarios applicable to networks with substations at risk of overload for engineering and planning teams.
Increasing incidents of extreme weather events and other climate change impacts	• Take action on strategies identified in the Climate Change Vulnerability Study and Climate Change Resilience Plan to mitigate these impacts.

Stakeholder Interface

In its forecasting initiatives, Con Edison maintains regular stakeholder engagement through coordination with the Joint Utilities and the NYISO, including the LFTF. The Company and the Joint Utilities work closely with the NYISO to identify forecasting scenarios, evaluate underlying assumptions, and compare output results to enable alignment. These discussion forums also enable updates to methodologies and forecasting methods and help to spread awareness of best practices.

Con Edison will continue to coordinate with the NYISO and its LFTF members on the forecasting of load and DER modifiers, incorporating lessons learned, and best practices related to methodology.

The Joint Utilities will continue discussing forecasting items and hold technical workshops as needed on topics such as:

- Locational value/marginal cost of service studies
- Advanced load/DER forecasting
- AMI application
- Applying probabilistic forecasting to transmission, substation, and distribution planning models
- Developments from other jurisdictions to identify relevant lessons for the Joint Utilities' forecasting efforts

Additional Detail

This section responds to the questions in the DPS guidance specific to advanced forecasting.

1) **Identify where and how DER developers and other stakeholders can readily access, navigate, view, sort, filter, and download up-to-date load and supply forecasts.**

The Company provides extensive system data, including load and energy forecasts, through the Company's Hosting Capacity Platform available through an online data portal.[45] The data portal and hosting capacity maps are accessible through the Digital Customer Experience web interface, linked from the Joint Utilities website,[46] and easily found via internet searches. Within the hosting capacity maps, developers and other stakeholders can view and download network-level 8,760 hourly load forecasts and network-level 24-hour peak load and minimum load duration curves. More information about hosting capacity maps can be found in **Section 2.9 Hosting Capacity**.

Appendix A Peak Load and DER Forecast Details includes the most current system peak load forecast and DER forecasts.

2) **Identify and characterize each load and supply forecasting requirement identified from stakeholder inputs.**

The Joint Utilities host stakeholder engagement sessions twice a year. Through these forums, the Joint Utilities solicit stakeholder feedback and participate in discussions on several forecasting topics of interest to stakeholders, including forecasting use cases and the role of 8,760 forecasts in addressing those use cases, incorporation of additional external inputs to utility forecasts such as public policy and developer forecasts, and the evolution of forecasting to incorporate more probabilistic methods and scenario analysis.

In response to stakeholder interest and PSC guidance, in 2018, Con Edison developed and published its first 8,760 hourly load forecasts at the network level, consistent with methodologies discussed with the Joint Utilities. The development of 8,760 forecasts included internal discussions among the Joint Utilities on topics like data resources, treatment of interconnection queue data, and policy issues. For this DSIP cycle, the Company adapted its refresh of the 8,760 forecasts, which are available as part of the network data provided on the Company's hosting capacity maps.

As of the 2025 DSIP cycle, the Con Edison service territory has reached a steady state of load and consumption performance in regard to impacts associated with COVID-19. These impacts are still considered and incorporated in forecasting methods but no longer have the level of significance or uncertainty as experienced during the 2020 or 2023 DSIP periods.

3) **Describe in detail the existing and/or planned forecasts produced for third-party use and explain how those forecasts fulfill each identified stakeholder requirement for load and supply forecasts.**

See response to "2)" above.

4) **Describe the spatial and temporal granularity of the system-level and local-level load and supply forecasts produced.**

At the system level, the Company produces a 20-year electric peak demand forecast and a 10-year energy forecast. At the network level, the Company produces a 20-year independent peak demand forecast and 8,760 hourly load forecasts extending three years (see response about 8,760 hourly load forecasts in "2)" above).

[45] Con Edison hosting capacity website: https://www.coned.com/en/business-partners/hosting-capacity.
[46] Joint Utilities hosting capacity website: https://jointutilitiesofny.org/utility-specific-pages/hosting-capacity.

5) **Describe the forecasts provided separately for key areas including but not limited to photovoltaics, energy storage, electric vehicles, and energy efficiency.**

The Company has a long-standing practice of incorporating EE and DR as load modifiers that reduce the total forecast system load (or gross load). The Company has expanded its forecasting methodologies to specifically include PV, DG/CHP, EVs, BE, and BESS. The Company added organic, or naturally occurring, EE and Conservation Voltage Optimization load modifiers in the fall 2017 forecast and a BE load modifier to the fall 2019 winter peak forecast. Though no additional load modifiers have been added since the 2023 DSIP period, the Company continues to refine and improve its existing load modifiers and potentially adding new modifiers as DER technologies proliferate.

Appendix A Peak Load and DER Forecast Details includes a detailed description of the DER forecasts, including methodology and the latest forecasts.

6) **Describe the advanced forecasting capabilities which are/will be implemented to enable effective probabilistic planning methods.**

The Company has discussed opportunities to advance forecasting capabilities to better reflect the impacts of DERs on system needs, including developing draft forecast methodologies related to:

- Dispatching DER (five-minute intervals)
- Committing DER (hourly to day-ahead or two days ahead)
- Scheduling work on the network (weekly)
- Scheduling DER maintenance (monthly)

For example, to build a forecast for dispatching DERs, the Company would use the probabilistic output from multiple weather service models to blend weather temperatures and other variables with their corresponding probability of occurrence. To do this, the Company would need a short-term, local, and refined weather forecast that uses data from high-quality local weather radars, such as a high-frequency S-band dual pol radar, short-term solar radiance and wind forecast models based on satellite imagery from GOES-16, and National Aeronautics Space Administration solar flare models. The Company would incorporate feedback from DER set-points to produce and forecast the next five-minute setpoints.

The Company also plans to use actual customer hourly load data from AMI to help determine customer contribution to peaks and is continually refining load modifiers to better capture exogenous factors influencing peak load.

7) **Describe how the utility's existing/planned advanced forecasting capabilities anticipate the inter-related effects of distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency. In particular, describe how electric vehicle and energy efficiency forecasts are reflected in utility forecasts.**

See response to "5)" above.

8) **Describe in detail the forecasts produced for utility use and explain how those forecasts fulfill the evolving utility requirements for load and supply forecasts.**

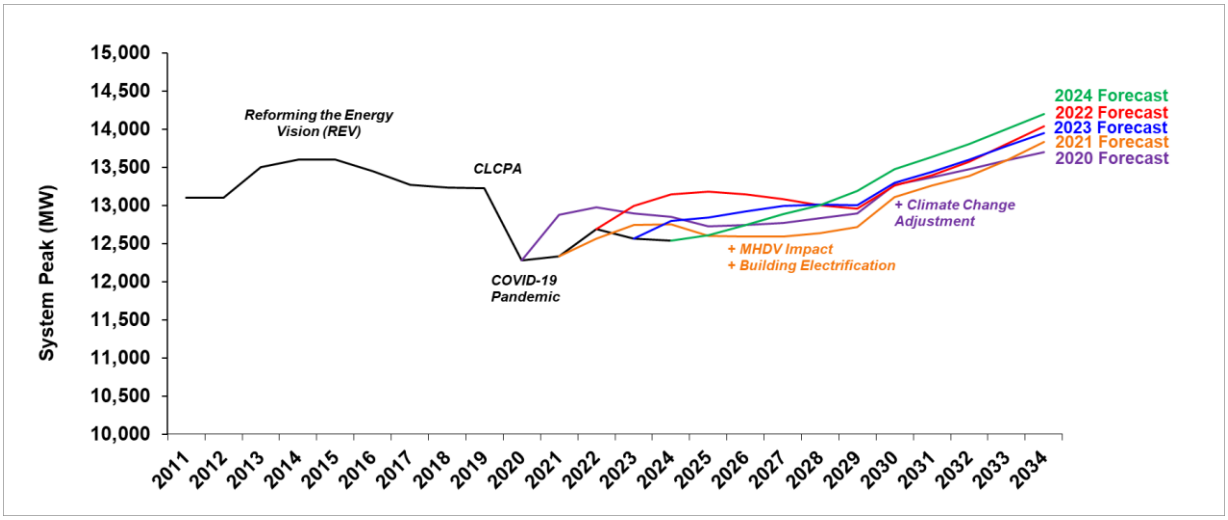
System and network peak demand forecasts guide infrastructure investment decisions, directing capital to the areas of greatest need and setting the stage for identification of NWS and location-specific pricing. Additionally, bulk level system planners use peak demand forecasts as an input to their planning process. Separately, Con Edison uses energy forecasts to determine the revenue forecast and set rates.

DER forecasting becomes increasingly important as DER penetration grows, requiring more granular load forecasts and a

better understanding of DER performance. As peak demand forecasts incorporate these improvements, Con Edison expects forecast accuracy to improve and the impact of DER growth on system planning to be clearer and more actionable. At the same time, increased adoption of DER introduces new challenges for maintaining forecasting accuracy due to uncertainties associated with the variability of DER output, its evolving correlation with net load, and the impact of geographic diversity on aggregate DER output.

The Company continues to refine its forecasting process, including methods for calculating load modifiers to provide a more complete assessment of the factors affecting the forecasts, thus supporting greater accuracy. Figure 6 shows the Company's five most recent system peak forecasts.

Figure 6: Historical 10-Year System Peak Forecasts



The increase in the later years is due to projected demand growth and an increase in EVs and BE, while savings growth from DSM levels off.

The Company treats resources capable of exporting energy to the grid, such as PV, as load modifiers in the forecasts. Separating onsite consumption from exported energy (i.e., supply) would require a level of disaggregation and granularity that remains challenging. However, as part of the aforementioned AMI project, the Company aims to leverage data from dedicated panel telemetry of certain DER units. This method allows the Company to obtain useful information about panel production, which can be applied to the broader population.

9) Describe the utility's specific objectives, means, and methods for acquiring and managing the data needed for its advanced forecasting methodologies.

Con Edison uses a range of data inputs to produce its forecasts, including but not limited to meter data, queued projects, technology-specific growth forecasts, and macro-economic trends. To support more advanced forecasting methodologies, the Company started leveraging more granular and accurate meter data available through AMI. Actual customer hourly load data from AMI coincident with system, network, or substation peaks will help determine customer contribution to these peaks by customer type. The Company is working on extrapolating this information to the queue of customers connecting to the system to determine short- and long-term (one-year) growth. With AMI data, the Company is also working on calculating a customer's load with DR and DER reductions to determine, by customer type, the reductions at the time of system peak.

The Company is also interested in evaluating the benefit of acquiring more meteorological data, such as high-frequency

S-band dual pol radar data, to enable more granular DER forecasting and dispatch as described in "6)" above.

10) Describe the means and methods used to produce substation-level load and supply forecasts.

Please refer to **Appendix A Peak Load and DER Forecast Details** for detailed information regarding the weather adjustment process and associated forecasting process.

The Company's 8,760 hourly forecasts in this DSIP are based on the consumption patterns from 2024. The hourly loads for the forecasted years have been adjusted to match the load forecasts produced in 2024. The most up to date 8,760 hourly forecasts can be accessed on the Company's Hosting Capacity Platform and is available with data through 2027.

11) Describe the levels of accuracy achieved in the substation-level forecasts produced to date for load and supply.

The system peak forecast has an average 5-year mean absolute percentage error ("MAPE") of approximately 3.5 percent. The network independent peak forecast for individual networks and radial systems has an average 5-year MAPE of approximately 9.1 percent. These forecast variances still reflect error driven by impacts from the COVID-19 pandemic. These values were 2.4 percent and 8.6 percent, respectively, in the 2023 DSIP filing.

12) Describe the substation-level load forecasts provided to support analyses by DER developers and operators and explain why the forecasts are sufficient for supporting those analyses.

The Company's Hosting Capacity Platform includes 8,760 hourly forecasts at the network level. Stakeholders originally requested the 8,760 forecasts to provide an indication of the duration of peak and off-peak periods, which might be useful for evaluating energy storage opportunities.

13) Provide sensitivity analyses which explain how the accuracy of substation-level forecasts is affected by distributed generation, energy storage, electric vehicles, beneficial electrification, and energy efficiency measures.

The Company will continue to assess the impact of DERs on network and system-level forecast accuracy and refine methodologies, as appropriate. The Company updates its assumptions each year. For example, the Company collects detailed outage information from DG/CHP customers seeking reliability credits and uses the information to develop metrics that analyze outage frequency, duration, causes, and many other factors related to outages. The Company will also issue an annual public report showing aggregate metrics for each network.

14) Identify and characterize the tools and methods the utility is using/will use to acquire and apply useful forecast input data from DER developers and other third-parties.

To build the forecast, the Company relies on actual impacts from installed DER technologies and programs, as well as data from government and industry sources. The Company believes the current practice of using actual performance data and data from trusted academic sources results in a more accurate forecast and prevents potential market manipulation. Additionally, some DER developers may consider information about forecasted installations and market activities to be sensitive, competitive information.

15) Describe how the utility will inform its forecasting processes through best practices and lessons learned from other jurisdictions.

Con Edison occasionally benchmarks with other utilities both independently and through the NYISO's LFTF. In this forum, the Company collaborates with the Joint Utilities to share internally developed best practices, discuss best practices from industry leaders, and align possible forecasting approaches with the NYISO.

16) **Describe new methodologies to improve overall accuracy of forecasts for demand and energy reductions that derive from EE programs and increased penetration of DER. In particular, discuss how the increased potential for inaccurate load and energy forecasts associated with out-of-model EE and DER adjustments will be minimized or eliminated.**

As discussed above in the responses to Questions "5)", "6)", "8)", and "13)", the Company has taken several steps, including investment in forecast-related capital projects to improve forecast accuracy by better capturing the impacts of DERs on load, particularly through the addition and refinement of load modifiers. The Company will continue to refine its forecasting methods in support of greater forecasting accuracy, recognizing that it cannot eliminate statistical errors and weather uncertainty inherent in the process.

17) **Describe where CGPP forecast information can be found.**

The PSC issued an Order Approving a Coordinated Grid Planning Process in August 2023.[47] The Company will work with the Joint Utilities, Department of Public Service Staff, NYSERDA, and members of the Energy Policy Planning Advisory Council to develop generation build-out scenarios, including assumptions for yearly load forecasts and shapes in accordance with the order. Below are links to the following forecast-related information:

- Description of Energy Forecasts: https://dps.ny.gov/system/files/documents/2025/02/capacity-expansion-model-assumptions-matrix.pdf
- 8,760 Profiles in the State Scenario: https://dps.ny.gov/cgpp-state-scenario-hourly-electricity-demand-wy2018
- Modifiers in the State Scenario: https://dps.ny.gov/system/files/documents/2025/02/integrated-analysis-state-case-proposal.pdf

[47] Note 24, *supra.*

2.3. GRID OPERATIONS

Context and Background

The future electric grid will need to support real-time operations across an electric power system that includes traditional assets, distributed energy resources ("DER"), and large-scale intermittent renewable generation. On the distribution system, the Company is already seeing a rise in energy produced by customers through rooftop solar and energy storage installations and expects that trend to continue. As a result, the local distribution system will need to be increasingly flexible to support the two-way flow of energy. Remote, digital sensors throughout the system and smart meters at customer premises provide a continuous flow of digital intelligence to inform grid system planning and daily operations. Through advanced analytics, this data will be transformed into actionable intelligence to support key use cases, like outage restoration. Managing a grid with these elements will require increasingly sophisticated tools, solutions, and capabilities that will enable visibility and flexible dispatch of DER.[48]

Con Edison continues to make investments, build capabilities, and execute strategies to deliver safe and reliable electric service, while supporting the State's clean energy policy goals. Through State policies, such as the Climate Leadership and Community Protection Act ("CLCPA"), New York is targeting an energy supply mix that is 100 percent renewable by 2040.[49] Resource-specific interim targets from CLCPA and other policies[50] include 6 GW of distributed solar by 2025, 6 GW of energy storage by 2030, 9 GW of offshore wind by 2035, 1-2 million electrified homes by 2030, 850,000 zero-emission vehicles ("ZEVs") by 2025, and all new passenger vehicles being ZEVs by 2035. To achieve these ambitious policy targets, the Company recognizes the importance of investing in new capabilities and continues to upgrade existing systems and infrastructure that support the operation of a more distributed grid.

In parallel with State policy goals that will drive the proliferation of clean energy technologies, federal policy has created the opportunity for many of these resources to participate in organized markets. To enable participation and realize the value of DERs, the Federal Energy Regulatory Commission ("FERC") has passed orders to integrate DERs into the wholesale markets in the last several years. With Order 841, issued in 2018, FERC required each Independent System Operator ("ISO") to revise its tariffs to facilitate the participation of electric storage resources in established capacity, energy, and ancillary services markets.[51] The order specified that the storage could be of any technology and could be interconnected at the transmission level, distribution level, or behind-the-meter ("BTM"), with a minimum size of 100 kW. Additionally, it required that the resource could be dispatched at the wholesale market clearing price as both a wholesale seller and buyer. Order 2222, passed in 2020, effectively removed barriers to participation in ISO markets.[52] Aggregated DERs can satisfy size and performance requirements that they may not meet on a standalone basis and can benefit from sharing market participation costs (e.g., metering, telemetry, and communication equipment). As a distribution utility, Con Edison is well positioned to serve as an aggregator of aggregators and is a critical interface to coordinate activity between aggregators and the New York Independent Service Operator ("NYISO"). This coordinating function will be increasingly important as the markets mature and wholesale prices drive the value provided by flexibility.

---

[48] The dispatch of resources may be done directly from the utility to the resource or from the utility to behind the meter ("BTM") aggregators that interface directly with customer resources.

[49] Note 1, *supra*.

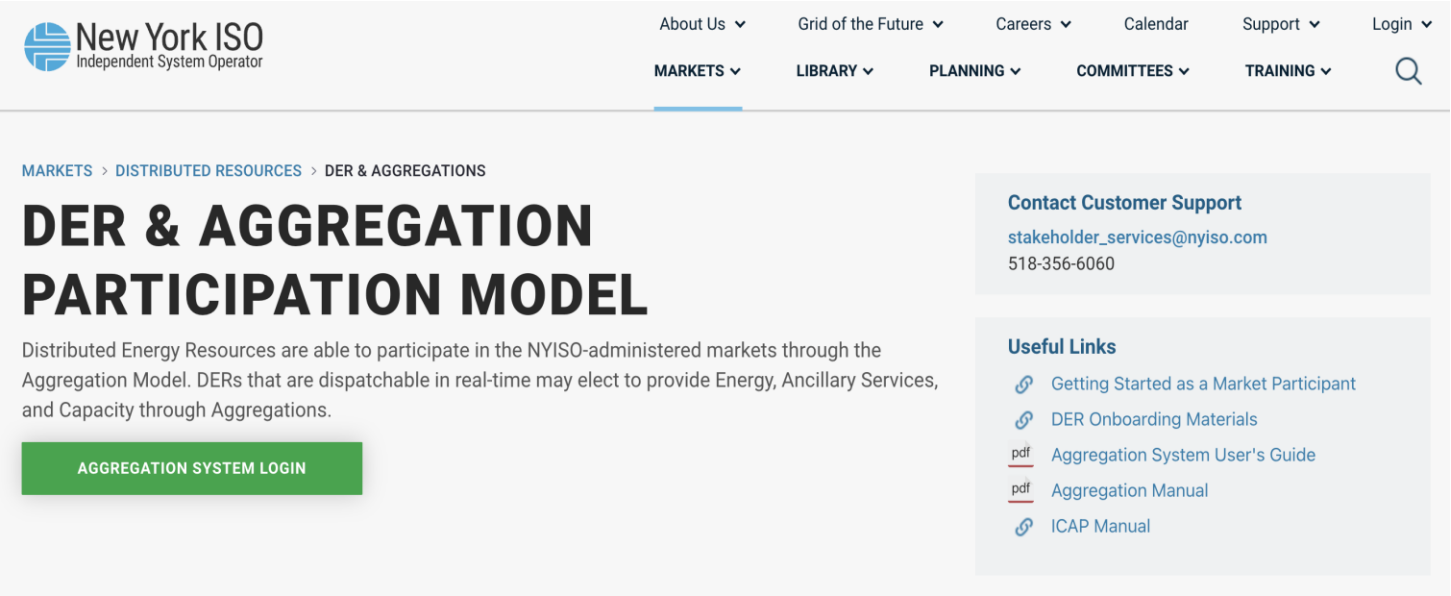
[50] Other policies include New Efficiency: New York ("NENY"), Local Laws 84 and 97 ("LL84" & "LL97"), Grid of the Future ("GOTF"), and ZEV targets set through NY State Senate Bill 2758/Assembly Bill 4302.

[51] Federal Energy Regulatory Commission (FERC), *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators* (RM16-23-000; AD16-20-000; Order No. 841) (issued February 15, 2018).

[52] FERC, *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators* (RM18-9-000; Order No. 2222) (issued September 17, 2020).

The NYISO is the FERC-jurisdictional system operator for New York utilities, responsible for adjusting market participation rules and operational processes to comply with these FERC Orders. Since 2017, the Joint Utilities have collaborated with the NYISO to develop operational coordination requirements and processes to provide greater opportunities to realize DER value. The NYISO's DER participation model, launched in April 2023, defines the rules through which DERs or aggregated DERs may provide and be compensated for market services. As shown in **Figure 7** below, the NYISO hosts an Aggregator Portal, onboarding resources, and contact information for distribution utilities like Con Edison on its website.[53] Con Edison has also developed portals and tools to support participation of aggregated resources in the NYISO's market, described below in the *Current Progress* section.

Figure 7: Screenshot of the NYISO DER and Aggregation Participation Model Website[54]



Discussions between the Joint Utilities and the NYISO have centered on developing processes to enroll, assess, track, monitor, and compensate DER aggregations participating in the market. Through these discussions, the Company has continued to evolve internal processes, including those related to compensation and billing systems administration, discussed further in this section and **Section 2.10 Billing and Compensation**.

Con Edison has also reviewed and identified tariff changes that will be necessary to enable the NYISO's market launch and future expansion. The Company received approval for its proposed retail tariff changes on a permanent basis in November 2023.[55] The changes are intended to preclude dual-market participants from receiving duplicative compensation in both wholesale and retail markets.

[53] The NYISO's DER Aggregation and Participation Model (accessed May 6, 2025): https://www.nyiso.com/der-aggregations.
[54] *Ibid.*
[55] Case 22-E-0549, *In the Matter of the Federal Energy Regulatory Commission (FERC) Order Nos. 2222 and 841, to Modify Rules Related to Distributed Energy Resources*, Order Approving Tariff Amendments on a Permanent Basis (issued and effective November 21, 2023).

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Established the foundation for the development of the enterprise Distributed Energy Resource Management System ("DERMS").
- Developed the company's enterprise repository for all DER assets through the DER Asset Repository ("DAR").
- Enhanced the Demand Response Management System ("DRMS") to support day-ahead and near real-time DR dispatch, including the testing of industry data standards.
- Grew participation in Demand Response ("DR") programs by 157 percent between 2022 and 2024.
- Integrated DRMS with other systems to facilitate compensation to program participants.
- Launched and developed tools to support DER aggregator participation in the NYISO's wholesale and retail markets and programs.
- Collaborated with NYISO on a Software Defined-Wide Area Network ("SD-WAN") to pioneer and implement a low-cost telemetry solution for DER aggregator market participants.
- Advanced the Company's Enterprise Geographical Information System ("eGIS") platform development, supporting network connectivity modeling and DER asset hierarchies.
- Updated standards for smart inverters to adhere to the Institute of Electrical and Electronics Engineers ("IEEE") 1547-2018 specification to support advanced inverter functionality (e.g., voltage regulation, frequency response, disturbance ride through).
- Deployed 2,581 Modernized Network Protector Relays ("MNPRs") to expand hosting capacity and provide system protection.
- Deployed foundational elements of the Grid Edge Renewable Laboratory ("GERL") to provide hands-on experience with new technology.

Utility Capabilities Demonstrated (non-exhaustive)

Hosting & Registration: DER-enabling systems provide a trusted source of high-quality data to support processes for *DER interconnection, DER registration*, and *hosting capacity* analysis, while modernized field equipment expands available *hosting capacity* for DERs connecting in constrained areas.

Monitoring & Visibility: Con Edison's SCADA-enabled equipment and management systems have increased *visibility* into system performance.

Dispatch: Con Edison leverages diverse system data and advanced software applications to better *dispatch* resources to more reliably manage the distribution system. DERMS, network modeling, and a consolidated system of record will provide short-term forecasting information to operators about the availability of flexible resources and expected impact based on resource profiles.

Market Participation: DER Integration and Management ("DERIM") work supported the launch of the NYISO's DER participation model, enabling aggregators to enroll resources and estimate the situational impacts for wholesale *market-participating* resources.

To meet the targets set in the CLCPA, Con Edison continues to accelerate its grid modernization efforts and invest in technologies that support the expansion of DERs and large-scale renewable resources. As of the end of 2024, Con Edison's customers have installed more than 75,100 solar photovoltaic ("PV") systems, totaling more than 679 MW of capacity in its service territory. Customers have also installed more than 91 MW of customer-owned battery storage, nearly doubling in capacity between 2023 and 2024. The adoption of DERs is critical to meet New York's carbon reduction goals. DERs also provide direct benefits to the public, including greater customer choices for energy supply, reductions in energy losses, decreased reliance on local gas generation, reductions in energy congestion, and contributions to local economic development.

Alignment across electric, digital (e.g. data management and telecommunication networks), and commercial systems (e.g. business processes and market rules) is required to fulfill the objectives of the Distributed System Platform ("DSP") and unlock the grid flexibility envisioned through the Grid of the Future ("GOTF") proceeding. Con Edison has been investing in modernizing its capabilities to exchange information from the grid edge back to utility operation and IT systems. These capabilities are being developed in a phased approach that focuses on foundational systems and data and will eventually extend to more advanced real-time operations. Collectively, these capabilities will position Con Edison to successfully navigate the energy transition and integrate DER while maintaining the highest levels of system reliability for its customers. The sections below summarizing Con Edison's achievements and future plans are organized into three categories: (1) the electric operations and IT systems that manage DER and the distribution system, (2) the field devices with which these systems interface to manage the flow of electricity, and (3) a grid edge technical environment that enables Company personnel to test and train on cutting-edge technology.

DER-Enabling Systems

Con Edison's investment in DER-enabling systems coordinates DERs with traditional grid assets, maximizing value to the grid by using DERs when needed and facilitating compensation to DER owners commensurate with the grid value they provide. DER enablement supports various distribution benefits, such as peak load management and increased grid flexibility. With continued deployment of renewable supply resources, DERs will also provide increasing wholesale benefits as they facilitate renewables balancing. Additionally, DERs support the Company's work in refining and automating manual processes for interconnection, registration, and management, and provide planning and analytical capabilities to expand hosting capacity limits, allowing more DERs to interconnect in constrained areas. To enable these capabilities, Con Edison has made investments in the following systems in recent years:

- Distributed Energy Resource Management System
- Demand Response Management System
- System Interfaces with NYISO
- Enterprise Geographic Information System

Distributed Energy Resource Management System

The Company has begun work on an Enterprise DERMS, built on its prior work on a proof of concept ("POC") in 2021 and foundational data integration, operational technology integration, and enterprise partnerships undertaken through its DERIM program. Through the POC and DERIM, the Company enhanced the accuracy and quality of DER data, consolidated it into a system of record (DAR), established a foundation for reporting automation, and made the data available to internal Company users. Additionally, the DERIM work supported the launch of the NYISO's DER participation model with Company-hosted tools that enable aggregators to enroll resources and estimate the situational impacts for market-participating resources. Additional work is underway through 2025 to test the suitability of commercially available distribution planning software with DER-inclusive load flow models for the unique scale and complexity of Con Edison's network and non-network topologies.

The Company incorporated lessons learned from the POC and DERIM and launched a request for proposals ("RFP") for an enterprise solution in 2023. As a result of the RFP, Con Edison established a partnership with an industry-leading company to develop a DERMS software. Work is underway to transition data and integrate systems to establish base functionality in this enterprise platform, with a plan to scale as use cases become more complex. The foundational DERMS work – creating DAR as a consolidated source of high-quality DER data, creating the aggregator enrollment tools, establishing communication capabilities with smart inverters, and building DER-inclusive load flow models in Con Edison's unique network system design – begin to address key operational challenges. There are four primary opportunities for growth the Company's DERMS work is addressing:

1. DER Visibility and Monitoring: Expanding the ability to observe or coordinate DER activity is key to managing a more distributed and flexible grid. Currently, the Company is unable to separate DER generation production and load, as sensors and Supervisory Control and Data Acquisition ("SCADA")[56] only measure net load (gross load minus DER generation). The Company's efforts to build capabilities through systems such as DERMS aim to develop near-term operational forecasts that account for DER activity on a given circuit and automatically trace circuits to identify DER impacts of operator actions. Accurate and DER-inclusive operational forecasts are increasing in importance as the aggregate DER activity on the distribution system begins to have noticeable impacts on the bulk power system. The visibility enabled through advanced systems and sensors is a necessary precursor to maintain grid reliability while supporting the scale and diversity of flexible resources envisioned through the GOTF proceeding. Operational and market needs will continue to dictate the level of granularity and latency needed for these functions.
2. DER Coordination and Scalability: Harmonizing the various programs and technologies is necessary to coordinate the operations of DER with traditional grid assets. Coordination should be scalable and automated where possible. Currently, the Company defines customized operating parameters for controllable resources (primarily energy storage) through the interconnection process, which are then managed as individual SCADA points. This approach provides localized management and protection; however, coordinating across all resources (or defined subsets of localized resources) presents an opportunity for a scalable and orchestrated response based on changing grid needs. The current SCADA system was originally designed to monitor breakers and switches, not batteries and generators. This mismatch adds computational burdens that the system wasn't built to handle, leading to performance degradation. In addition, the operational use cases for DERs are different than other SCADA devices, making it inefficient to manage DERs through the SCADA system. These distinctions have guided the Company's approach to selecting a scalable platform for developing DER management capabilities. DERMS provides capabilities to establish operating parameters and setpoints at scale and builds an interface between aggregators and utility control systems to more efficiently manage and harmonize programs.
3. Leveraging Smart Inverters: Con Edison has developed the capability to interact with smart inverters because of recent changes to the Standardized Interconnection Requirements ("SIR") that mandate their use. To fully utilize resources with smart inverters, the Company aims to move beyond static inverter configurations through targeted use cases to provide grid services. Through testing, the Company has determined that in dense urban environments with many older buildings, like Con Edison's service territory, inverter response can be lost in the building impedance, meaning building impedance must be accounted for in these use cases. Standardized inverters enable Con Edison to design programs and system use cases that best leverage these resources.

[56] Computerized system that is capable of gathering and processing data and applying operational controls over long distances.

4. Operationalizing DER Programs: DER programs are currently designed as either behavioral or active management programs. In behavioral programs, customers act based on defined incentive structures intended to influence their electricity usage and incentives provide greater flexibility to adapt as grid needs evolve over time. For programs that are actively dispatched, the dispatch signal is initiated by a program team that coordinates with, but sits outside of, a utility control center. This poses a potential hurdle in fully operationalizing programs and integrating them into core utility operations. Managing the scale of the envisioned DER buildout and fully operationalizing DER programs to harness their potential grid value requires bringing DERs into the control room. The current aggregator-based programs support harnessing this value at the network level and harmonization of future programs along with the ability to adapt programs to changing market conditions will support optimizing DER adoption for being able to capture both distribution and wholesale value.

The Company's ongoing efforts to build the Enterprise DERMS, described below, aim to address these challenges and develop more sophisticated operating approaches.

Demand Response Management System

Con Edison's DR programs are a long-standing and growing source of grid flexibility that allow the Company to shift resources and promote the stability of the electric system. The breadth of the Company's DR program offerings enables resources to participate regardless of which type of technology they use, including building loads and energy storage systems. The technology-agnostic incentives provided through DR programs complement the Company's Energy Efficiency ("EE") programs (described further in section **2.7 Energy Efficiency Integration and Innovation**). These DR programs have also tested a scalable approach to enrollment, dispatch, and performance validation capabilities through Con Edison's interface with aggregators.

The Company currently offers the following DR programs:

- Commercial System Relief Program ("CSRP"): CSRP aims to reduce peak demand at the network level by calling on customers to reduce energy use during their respective assigned call window. Planned CSRP events are called with a day-ahead advisory notice and a day-of notification sent at least two hours ahead of the assigned call window. Unplanned CSRP events can also be called with less than 21 hours of notice with voluntary participation. CSRP events are typically called system-wide (i.e., all enrolled customers).
- Distribution Load Relief Program ("DLRP"): DLRP provides network-level support through load relief in contingency or emergency situations. DLRP can be requested at any time during the capability period, with event notice provided at least two hours in advance for contingency events and less than two hours for immediate events. DLRP events are typically called at the network level (i.e., targeting only customers that are enrolled within a specific network).
- Term Dynamic Load Management ("Term-DLM"): Con Edison solicits DR resources for three-to-five-year contracts through a competitive solicitation process. The Term DLM program offers day-ahead peak shaving benefits, similar to CSRP, and is activated on a system-wide basis with advanced notification of 21 hours or more.
- Auto Dynamic Load Management ("Auto-DLM"): Con Edison also solicits resources to participate in its near real-time Auto DLM Program using the same competitive solicitation process used for Term-DLM. Auto-DLM is used for both peak shaving and reliability events and is called on a system-wide or network basis, with up to ten minutes of notification.

- Bring Your Own Thermostat ("BYOT"): The BYOT program is Con Edison's only Direct Load Control program, which manages central and room air conditioning loads through an installed, Wi-Fi-enabled control device at the customer's premises. The BYOT program offers residential customers an initial rebate to enroll their thermostat and ongoing incentives for continued participation, with the goal of reducing strain on the electric grid during the summer. Con Edison customers can select from a range of eligible devices and maintain override controls at any time.

Con Edison's DRMS manages enrollment, event initiation, performance monitoring and/or settlement of CSRP, DLRP, Term-DLM, Auto-DLM, and the non-wires solutions ("NWS") program. The system enables Con Edison to efficiently interact with aggregators and customers enrolled in these programs, manage peak demand, and support emergency events. More broadly, it helps the Company manage the operational tools available for a more flexible grid on a system-wide or localized basis.

The portfolio of DR programs has grown by 157 percent in customer enrollment from 2022 to 2024. These programs have increased in complexity, requiring more sophisticated systems to manage them. The development and launch of customer-facing application programming interfaces ("API") communications to provide automated enrollment options, day-ahead and near real-time dispatch has led to additional ways for aggregators to automate and simplify portfolio management. The Company has also implemented payment and settlement modules to automate manual workflows and integrated OpenADR standards into DRMS to provide secure communications that enhance grid modernization efforts.

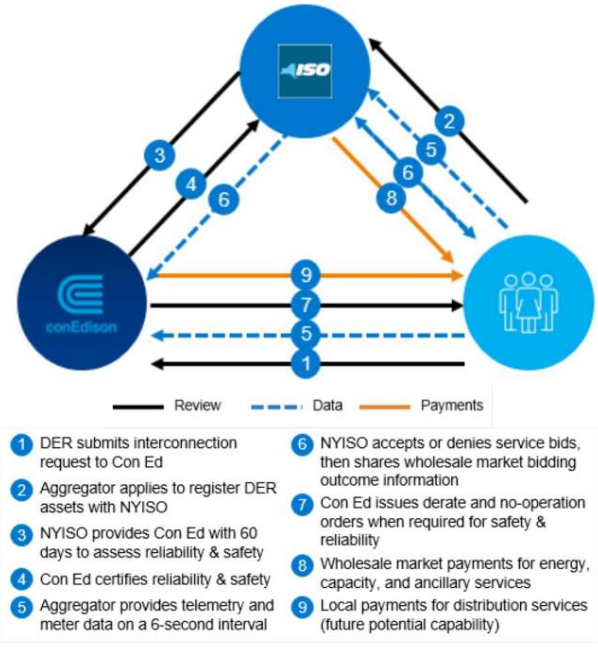
In 2024, Con Edison made several system enhancements to DRMS. It successfully integrated the DRMS with the Demand Management Tracking System ("DMTS") to facilitate easier settlements distribution as DMTS enables automatic calculation of incentive payments and sends the settlement payments directly to the aggregator for review. Additionally, the Company made scalability enhancements to DRMS to support the rapid growth of enrollments. Advanced Metering Infrastructure ("AMI") enables residential customer participation in programs that have traditionally relied upon commercial customers and these enhancements will prepare the Company for the potential millions of customers who may enroll in future years. Finally, Con Edison undertook a significant integration to make the DRMS compatible with changes in the Customer Care and Billing ("CC&B") system.

System Interfaces with the NYISO

Establishing telemetry and telecommunications links between the utility, aggregators, and the NYISO is a foundational need for coordinated grid and market operations. Con Edison continues its work with the NYISO on its DER aggregation model and open market services as required by FERC Orders 841 and 2222. This work began as a pilot between 2018 and 2020 and is currently deployed at scale in the NYISO's market services. Through the pilot and lead-up to market launch, the Company has examined the interoperability of jointly operated storage assets, tested the DSP/NYISO coordination manual, and piloted new SD-WAN technologies that will be used as a lower-cost alternative for base pointing aggregations and routing telemetry.

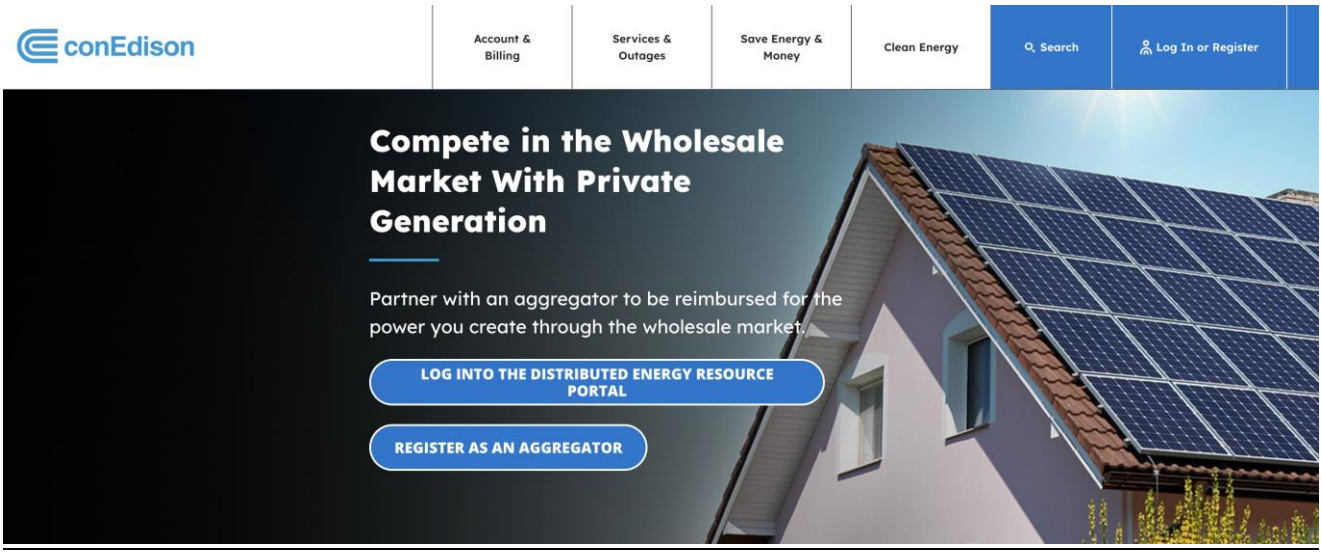
The SD-WAN technology retains a Distributed Network Protocol 3, while providing cost savings to and reducing installation, testing, and commissioning time for market participants (aggregator to utility control center). The Company began offering the SD-WAN solution in 2023. This solution provides benefits including affordability, scalability, and flexibility, and will enable seamless participation for those outside of Con Edison's service territory. The SD-WAN technology supports the three-way exchange of services, information, and payments between Con Edison, the NYISO, and aggregators, as shown in **Figure 8**.

Figure 8: DER Aggregation Review, Data, and Payment Interactions[57]



To complement the NYISO's aggregator portal, Con Edison has developed its own aggregator portal, as shown in Figure 9 below, to support participation in wholesale markets by distribution-connected resources. Data collected through this portal informs the Company's operating parameters and can be used in operational planning. Through this mechanism, Con Edison can coordinate with both the NYISO and the aggregator or customer to identify any distribution issues that would modify whether, or the extent to which, a resource could provide wholesale services (e.g., an outage that derates or takes a resource offline).

Figure 9: Con Edison's Aggregator Portal to Facilitate DSP-NYISO Coordination



[57] The Joint Utilities of New York, Draft Joint Utilities DSP Communications and Coordination Manual (updated July 2018): https://jointutilitiesofny.org/sites/default/files/JU_DSP_Comms_Coordination_Manual_DRAFT_2.pdf.

Enterprise Geographic Information System

In 2019, the company launched the eGIS project to unify legacy mapping systems into a new, comprehensive tool aimed at supporting the customer-centric, clean energy future envisioned by both New York State ("NY State") and Con Edison. The project is being rolled out in three phases. The Company submitted a business plan in 2019, with an updated version in 2022, and received approval from the Public Service Commission ("PSC") to proceed with all three phases of the project as shown in **Table 3** below.

Table 3: eGIS Phased Development

Phase	Timeline	Focus	Status
Phase 1	2019-2022	Replacing VISION system for low-tension electric and gas customer maps	Completed in 2022
Phase 2	2020-2024	Electric primary feeders, high-tension maps, Staten Island Mapping System	Completed in 2024
Phase 3	2023-2026	Updating electrical conduits mapping system	In progress

Upon completion of all phases, the eGIS will consolidate all mapping systems for various commodities onto a single platform. Operating and maintaining a detailed and accurate mapping system is foundational to Con Edison's ability to manage and operate its extensive electric and gas network safely, reliably, and efficiently. This need is heightened as these systems become more complex in the future. Con Edison's maps are used to catalog millions of assets in every street within its service territory, and are critical to plan, maintain, repair, and operate the system. An eGIS has become standard technology for large utilities. For companies that have adopted it, eGIS has evolved from being a "mapping system" to an interconnected visualization platform that is a central component of both operations and asset management.

Field Devices that Control Power Flows or Enable DER Connections

Modernized field equipment can sense and respond to localized or centralized control signals in order to isolate or restore outages or manage voltage levels and power quality. The ability to coordinate action across these numerous and diverse field devices is a key facet of Con Edison's grid modernization strategy. The Company has made progress in the following areas:

- Smart Inverters
- Multi-Purpose DER Solution (Collar + Panel) and Pilot Program
- MNPRs
- Conservation Voltage Optimization ("CVO")

Smart Inverters

Con Edison has continued to engage with the Joint Utilities and DER stakeholders to develop advanced monitoring and control ("M&C") capabilities and expand these requirements to additional technologies.

Advanced M&C of DERs provides operational situational awareness and allows the utility to dispatch and optimize resources based on current or forecasted system conditions. Currently, the Company uses M&C capabilities to manage the operation of DERs within allowable system parameters. The Company can also use data generated by M&C for long-term purposes, such as understanding the dependability of these assets to both provide grid functions and support

distribution planning. Additional studies and pilots will inform the Company's approach to using flexible inverter-based resources as grid assets.

Generally, smart inverters provide an economical solution to interconnection, particularly through voltage impacts. Distributed generation ("DG") and other DERs can increase local voltages on distribution systems, which can impact utility voltage regulators and capacitor banks and can complicate utility programs that control voltage profiles on circuits. Smart inverters help manage voltage by dynamically regulating the power factor, which helps to maintain line voltage and increase hosting capacity for future projects.

Standards provide important guidelines for smart inverter M&C development. Con Edison participated in the Joint Utilities' Smart Inverter Strategic Initiative, which built a shared understanding of smart inverter capabilities and use cases, examined potential value propositions for smart inverter implementation, and outlined a collective approach to smart inverter integration leveraging IEEE 1547-2018. Con Edison is currently phasing in the implementation of IEEE 1547-2018 and 1547a-2020. Since June 1, 2023, the default settings will be input on Underwriters Laboratory ("UL") 1741-SB certified smart inverters interconnecting to the Con Edison electric system. Following extensive discussions with UL, the Joint Utilities decided to adopt the UL 1741 Certification Requirements Decision ("CRD") for Multimode systems. The Joint Utilities have engaged in discussions with industry and the PSC on this topic and have arrived at a compliance date of June 30, 2025, for the implementation of the requirement. The Joint Utilities are also making edits to the SIR to accommodate relevant facets of the CRD.

Meter Collar Programs

Meter collar adapters serve as a versatile and cost-effective solution for integrating various energy sources into residential power systems. They offer a standardized connection point allowing customers to easily integrate PV systems, battery, and Electric Vehicle ("EV") chargers. This versatility simplifies the installation process and reduces cost and compatibility issues.

Starting in 2017, Con Edison worked collaboratively with New York State Energy Research and Development Authority ("NYSERDA") and ConnectDER to install over 1,200 devices in its service territory. The objective of the project was to enhance solar forecasting within the Company's service territory. These meter collars provided valuable data on solar production, which was processed with solar forecasts and irradiance measurements to make hourly corrections to the system forecast. Though the program is no longer active, Con Edison will apply lessons learned to streamline device installation and improve customer engagement strategies in a new multi-purpose solution, described in the *Future Implementation and Planning* section below.

Modernized Network Protector Relays and SCADA

MNPR and SCADA are high-impact, multi-value investments that offer significant benefits to the distribution system. MNPRs enable DG or energy storage discharge to flow in the reverse direction through the network protector and allow for bi-directional communication with SCADA systems. As a result, the Company can monitor two-way power flow with greater certainty and can offer greater flexibility for hosting DERs.

The Company has prioritized certain locations for SCADA-enabled communications, which provides control centers the ability to remotely monitor and operate network protector relays. This enables a more dynamic ability to load and reload specific feeders as well as remote operation and control to eliminate alive-on-backfeed ("ABF") conditions where a network protector relay failing to open could affect the efficiency of the local network. As of the end of 2024, the Company has replaced 5,674 relays with 2,581 of these equipped with SCADA capability out of approximately 27,000 network protectors in the secondary grid. The Company plans to continue this program to address locations that are or become DG-constrained as well as locations with persistent ABF issues.

Conservation Voltage Optimization

The primary purpose of CVO is to reduce energy costs and environmental impacts while maintaining acceptable voltage at all points along the distribution feeder under all loading conditions. Based on the Company's ongoing efforts implementing CVO technologies to date, the Company will continue to optimize its energy savings goals. Operating the system at optimal voltages reduces total energy consumption and associated power generation emissions, resulting in significant energy savings for customers and a reduced carbon footprint.

Grid Edge Renewable Laboratory

Building experience with new technologies before they are launched at scale is a key enabler of the transition to a more distributed and flexible grid. Con Edison is in the process of deploying a grid edge technical environment that will enable testing in a simulated environment without impacting operations. This work is proceeding in parallel with the Company's DERMS development. Work to date has focused on foundational elements, such as engineering design, equipment identification, architectural design, and pre-development activities. Further development of the GERL is discussed below in the *Future Implementation and Planning*.

Future Implementation and Planning

Summary of Future Actions

- Deploy the enterprise DERMS solution in phased modules to deliver new capabilities in data and program management, DER modeling and simulation, DER monitoring, grid operations in coordination with DERs, and market coordination dispatch.
- Enhance DRMS to accommodate new programs, expand customer access and participation, and look for opportunities to use Artificial Intelligence ("AI") tools and APIs to improve the customer experience.
- Build GERL to test and certify solutions in a safe environment before deploying in operational settings.
- Complete implementation of eGIS and begin the upgrade to the Utility Network ("UN") to take advantage of new features.
- Engage with aggregators and the NYISO to monitor the DER Aggregator model and adjust requirements/systems accordingly.
- Continue deploying field devices like MNPRs and CVO to optimize grid performance.
- Launch a pilot for multi-solution meter collars to help homeowners reduce installation and maintenance costs.

Con Edison will continue to support the clean energy transition by expanding its operational capabilities through investments in grid modernizing technologies. The Company's plans include continued scaling and enhancement of systems that support increasingly complex use cases, continued deployment of field devices that extend visibility capabilities further into the distribution system, and training lab environments that verify the cybersecurity and safety of new technology integrated to the grid and train Con Edison operators on functionality. These investments provide value to customers and the grid today, while also preparing the Company for future deployment of flexible resources through the GOTF proceeding or further FERC/NYISO activity. For instance, both DERMS and DRMS provide capabilities to enroll customers, manage DER-owner accounts, and support program and incentive design. DERMS will use this information, plus network connectivity and DAR, to provide short-term forecasting information to operators about the availability of flexible resources and expected impact based on resource profiles. Operators may use those forecasts to call upon resources in constrained areas or at times of system need using enhanced monitoring and visibility tools. This type of

coordination across programs and between program managers and control room operators helps mature the Company's flexible grid capabilities as envisioned in the GOTF proceeding.

DER-Enabling Systems

Distributed Energy Resource Management System

Con Edison plans to continue expanding the functionality of the DERMS system with the development and implementation of the enterprise DERMS solution. As noted previously, the foundation for this development was set through the DERIM project and is now planned to continue with the Integrated Grid Management and Visualization Optimization ("IGMVO"), proposed in the Company's pending rate case filing. This platform, including the development and integration of the enterprise DERMS solution and related tools for DER-inclusive load flow and market-facing interfaces, is foundational to realizing the full benefits of energy storage, flexible resources, and other clean energy technologies. The enterprise solution enables efficient DER connection to the grid and supports the Company's goal of reducing greenhouse gas emissions by replacing energy purchased from carbon-emitting resources.

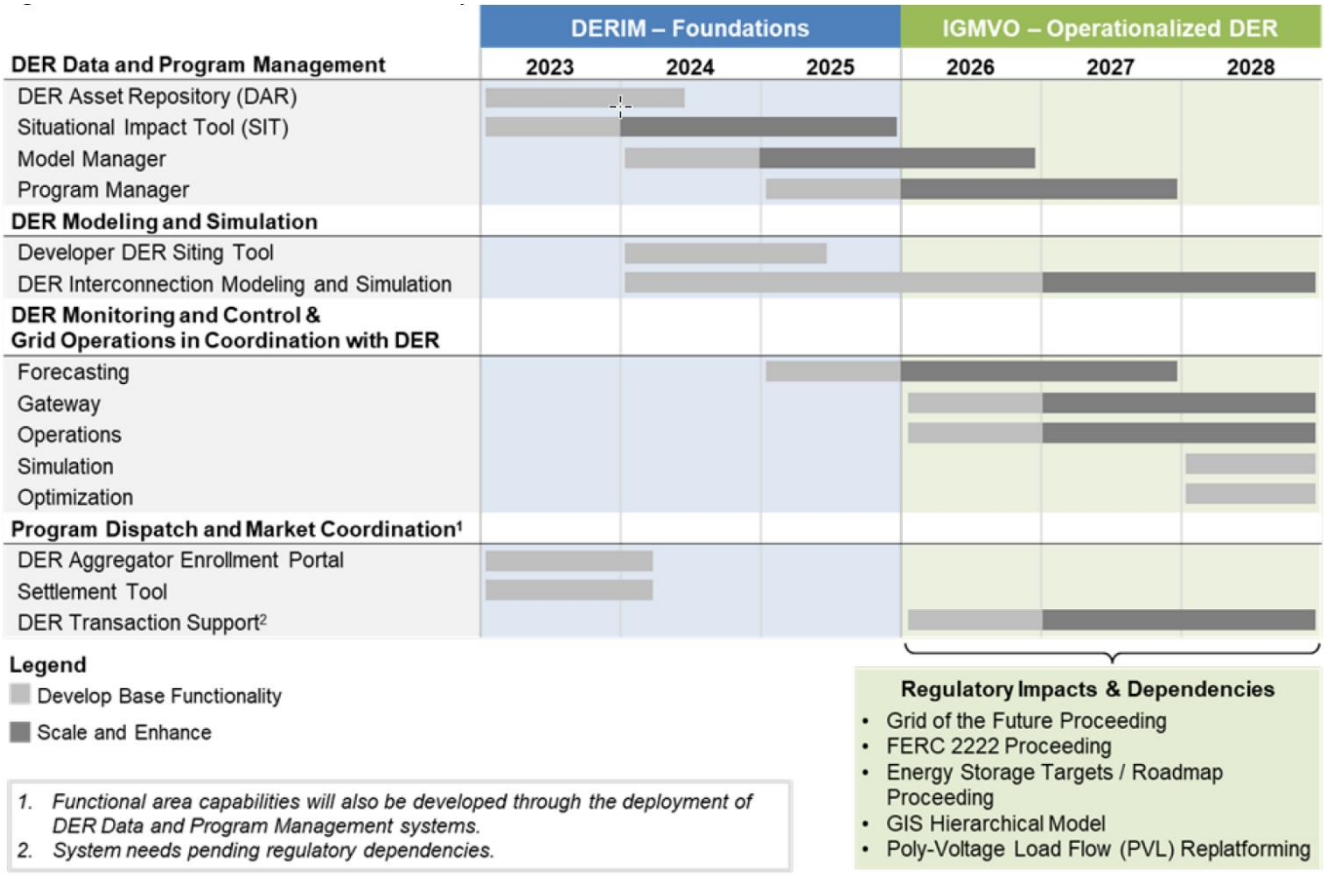
The enterprise DERMS platform of systems is a key enabler of NY State's clean energy objectives. It provides a suite of tools that will (1) enable greater connection of DER, (2) provide operational capabilities to manage a more distributed grid, and (3) facilitate DER value pathways for customers, aggregators and developers to be compensated for the grid services these resources provide.

It is expected to scale existing utility capabilities in the following functional areas:

- DER data and program management
- DER modeling and simulation
- DER monitoring
- Grid operations in coordination with DER
- Program dispatch and market coordination

The capabilities in each of these functional areas will be built in a phased manner through interrelated modules and systems. A visual representation of the modules and relationship between them along with a preliminary work schedule is shown in **Figure 10**.

Figure 10: DERMS Functional Area System Timeline



Demand Response Management System

Continued evolution of DR and NWS programs will require flexibility to adapt to changes in program rules. Enhancements will include expanded enrollment capabilities as more residential and small commercial customers participate in aggregator enrollments, enabling year-round enrollments, allowing enrollments to roll-over from year-to-year, modifying the software for changes in tariff and program rules, confirming event results, and improving system performance. The DRMS team will continue to deploy enhancements to the settlement systems through 2028.

Looking forward, DRMS development will focus on expanded integration with internal systems and software development geared toward new program accommodation, as the company looks to expand how customers can participate in and access DR Programs. Improved API access will make customer experiences with the DR portal more seamless, which should subsequently drive an increase in enrollment. Reintroduction of gas-based programs will also represent a significant portion of DR software work between 2025 and 2028.

System Interfaces with the NYISO

Con Edison will continue to participate in the Joint Utilities discussions on low-cost M&C of DERs as well as M&C solutions that are harmonized with the NYISO requirements and individual utility requirements. The Company will work with the NYISO to transition customers who were participating in the Demand Side Ancillary Services Program and the Day-Ahead DR Program to the DER Participation Model by October 2025. Additionally, the Joint Utilities anticipate continued collaboration with the NYISO on issues relevant to the implementation of FERC Order 2222 in 2026, including refining processes and data exchange mechanisms.

Enterprise Geographical Information System

The Company is currently completing the phase 3 conduit mapping, which will be completed by 2026. This is the most technically demanding and labor-intensive phase of the implementation given the complexity and scale of the Company's underground infrastructure. The completion of the eGIS project in 2026 will provide additional data sets that can be consumed by the enterprise DERMS to establish hierarchical relationships between DERs and grid assets.

Once the eGIS is complete, Con Edison plans to upgrade it to the UN model. The upgrade to the UN model provides the only channel for ongoing vendor support and continues building foundational system capabilities that facilitate the clean energy transition and manage regulatory requirements. Con Edison will implement the Clean Energy Mapping Platform upgrade to the UN across the enterprise, providing enhanced functionality to all parts of the business. With improved tools to monitor network performance, the system allows for enhanced ability to access data in the field and the ability to display assets in 3D.

A primary enhancement of the UN upgrade is to fully develop the connectivity model of all company and customer assets into the GIS and ease the consumption of that connectivity model into other operational technologies ("OT"). An accurate, up-to-date, and dynamically updated network connectivity model is foundational to enable the OT needed to successfully operationalize DER programs and operate a more flexible grid. This augments the capabilities of the DERMS and sets the stage for advanced distribution management of grid equipment by:

- Extending the network model to BTM[58] resources, and consuming and manipulating the model in control systems like DERMS to leverage advanced distribution management functionalities is necessary for advanced DER operations. Information about asset availability, specific location, and connection points of DERs, along with a complete connectivity model are necessary to make operational decisions regarding dispatch and outages. Presenting and updating DERs and connectivity information in operational systems enables operators to leverage these resources during periods of grid constraint through aggregators or, for some resources, on an individual resource basis.
- Integrating the modern architecture of the UN with other enterprise applications, like DERMS and Work Management Systems. With application interfaces and out-of-the-box configurability, systems integrations are more efficient and geospatial asset data is more readily available to other systems and analytics platforms.
- Combining information about utility and customer-resource attributes in a consumable format enables related analysis, like hosting capacity, to be shared both internally and externally. The layering feature lets users turn layers on and off to update and share only the necessary information desired by the user. For example, in order to produce the hosting capacity maps and system data required by the Integrated Energy Data Resource to share with NYSERDA and developer stakeholders, the Company currently expends significant resources to manually combine and clean data across several sources; this tool will increase efficiency by eliminating manual processes.

Field Devices that Control Power Flows

Meter Collar Programs

Con Edison has partnered with an industry solution provider to create a collar and panel system designed to facilitate the interconnection of solar energy, battery storage, and EV charging. The Company will offer this solution to interested customers through a pilot program. This program will allow participants to experience cutting-edge technologies and services firsthand, which will provide valuable feedback to shape the final offering. Customers will be able to engage with the solution in a real-world setting, enabling them to understand its benefits and functionalities.

[58] Note 48, *supra.*

Modernized Network Protector Relays

The Company will continue its annual deployment of MNPRs in areas where they offer multiple values, such as reliability and increased hosting capacity. These relays provide two-way power flow monitoring capabilities, which expand hosting capacity, enable lower-cost interconnection, and reduce the need for crews to visit locations physically.

Conservation Voltage Optimization

Con Edison is continuing CVO efforts as part of the Smart Grid Optimization program. In 2026-2028, the CVO efforts will be two-fold; (1) to maintain the energy savings achieved and (2) to develop a 4kV automated voltage schedule for unit substations using AMI voltage and SCADA data.

The Company will develop a 4kV automated voltage schedule for 217 unit substations. Currently, all substations provide three fixed steps to control voltage and lack the capability to automatically adjust voltage based on system load. With the enhancement, the substations will be remotely controlled via tap adjustments. This eliminates the previously used restrictive three-step process and allows for more optimal voltage limits for 4kV customers, ultimately leading to greater energy savings. Due to this change, reinforcement of the grid will be required to support an increase in CVO on the 4kV grid. Investments in these areas will allow for the requisite equipment and system upgrades needed to perform these optimized voltage operations.

Grid Edge Renewable Laboratory

To expand Con Edison's building, testing, and training capabilities, the Company will use software and computer hardware for monitoring, adjusting operational parameters, process management, and data analytics applications. The project will help deploy capabilities for the current and future operations of DERs. Through the GERL, Con Edison will engage with DER solution providers to test, certify, and develop solutions in a safe, simulated environment without impacting grid operations. The GERL serves multiple functions: a physically and digitally cyber secure location to test DERMS solutions and clean energy technologies, a partnership mechanism with third parties in the clean energy space, and a training facility to introduce Company operations personnel to new technologies. The lab is envisioned as an asset to support and advance NY State's ambitious energy and electrification goals as outlined in the CLCPA.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Climate change-driven risk to customer reliability	• Apply the Company's Prevent, Mitigate, and Respond framework to invest in programs that strengthen the electric grid as outlined in the Climate Change Resiliency Plan.[59]
Cybersecurity risk with increasing telemetry and software deployment	• Maintain the Company's commitment to adequate cybersecurity precautions and standards, as per IT and OT procedures. • Continue to engage with industry working groups that will be responsible for defining these standards in the future.

[59] Note 32, *supra.*

Risk of skill or resource shortages given that the future smart grid will require evolving skills to plan, build, and operate it, demanding highly skilled workers such as system architects, data scientists, modeling and simulation experts, cybersecurity specialists, communications engineers, and digital control engineers	• Continue to expand investment in workforce development initiatives and continue commitment to developing a skilled workforce. • Strengthen partnerships with federal and state entities, nonprofits, customers, universities, and research institutes to develop a modernized grid and a clean energy future.
Insufficient funding for grid modernization technologies	• Sustain investment in grid modernization technologies at a pace that balances attainment of policy goals, customer affordability, and the pace of adoption of customer technologies. The amount of available funding will influence the timing and extent of implementation. • Address financial risks through detailed analysis, evaluating the economic value of DER investments, operations, and maintenance alongside projected savings and revenues under different market, regulatory, and environmental scenarios. • Utilize established budgeting strategies will enable flexible tracking and allocation of expenditures. The GERL initiative will play a key role in identifying and mitigating implementation risks without disrupting day-to-day operations. Shared across service territories, the GERL will test and certify emerging technologies in a secure environment to detect obstacles before wide-scale deployment and publish results to support other utilities nationwide.

Stakeholder Interface

As noted above, the Joint Utilities worked with stakeholders to align on M&C requirements and potential lower-cost M&C solutions. The Joint Utilities continue to work with the DER community through the Information Technology Working Group and other venues to find mutually satisfactory solutions and maintain the transparency of M&C requirements. Con Edison has also partnered with industry solution providers, both software and hardware, to connect grid assets and customer resources to digital control systems.

Con Edison will continue working with the Joint Utilities and the NYISO to develop operational coordination requirements that maintain reliability of the bulk electric system, the wholesale market, and the distribution system while providing greater opportunities to realize DER value. The Company has continued to participate in the Joint Utilities Independent System Operator Distributed System Platform Coordination Working Group, which primarily focuses on the DSP operational requirements. Additionally, the Company has collaborated with the Joint Utilities and the NYISO on the following:

1. The Joint Utilities and the NYISO initiated a series of workshops with New York Transmission Owners, and PSC Staff to document the processes and procedures required within existing and new NYISO guidelines. These workshops were held regularly between 2021 and 2024.
2. The Joint Utilities held bilateral discussions with the NYISO to resolve implementation issues associated with the DER Participation Model and the FERC Order 2222 model.
3. The Joint Utilities remain active participants in the NYISO's stakeholder forums, including the Installed Capacity Working Group and Market Issues Working Group.

Con Edison also works with aggregators to hold stakeholder sessions before and after the summer season to discuss opportunities to improve its DR programs. Feedback from these sessions has directly led to improved features in the aggregator facing portal, as well as program changes that encourage increased enrollment and more efficient program operation. The DR program team also conducts marketing campaigns and expos to raise awareness of programs and encourage enrollment. These marketing campaigns allow co-branding opportunities for aggregators and provide aggregator contact information on Company webpages to facilitate direct communication with prospective customers. To align Con Edison's marketing and growth strategies with the needs of each market segment, the DR program team actively engages with aggregators through interviews and surveys to foster more open communication and gather valuable insights for program planning. Key enhancements approved by the PSC in 2025 include rolling enrollments and adjustments to sub-aggregation processes.

Additional Detail

This section responds to the questions in the DPS guidance specific to grid operations.

1) **Describe in detail the roles and responsibilities of the utility and other parties involved in planning and executing grid operations which accommodate and productively employ DERs.**

The utility's primary responsibility is to preserve distribution system safety and reliability, with a growing focus on creating a flexible system that is resilient to disruptions. To preserve reliability, it's important to understand the level of dependability that flexible resources can provide. Con Edison has coordinated with DER aggregators and the NYISO to define operational coordination requirements, including specific roles and responsibilities for each party, in order to preserve safety and reliability for a system characterized by increasing amounts of DER. As part of distribution system programs (e.g., DR) and procurements (e.g., NWS), the utility requires participants (e.g., DER aggregators) to sign a contractual agreement that defines the roles and responsibilities for both the utility and the DER aggregator. For example, contracts typically specify the amount of advanced notification the utility will provide the DER aggregator prior to an event and define reporting and settlement requirements for the DER aggregator.

In addition to operational coordination for DERs participating as part of utility programs and procurements, the Joint Utilities have developed and refined a Draft DSP Communications and Coordination Manual to define the roles and responsibilities among the DSP, the NYISO, DER aggregators, and individual DERs to enable DER wholesale market participation while preserving system safety and reliability.[60] Continued collaboration between the NYISO, DER Aggregators, and the Joint Utilities will help unlock the wholesale value of DER in the future.

2) **Describe other role and responsibility models considered and explain the reasons for choosing the planned model.**

Con Edison's programs and procurements define the types of roles and responsibilities the Company, in coordination with third parties, determines necessary for effectively addressing utility needs while providing actionable information to DER aggregators and individual DER operators to preserve distribution system safety and reliability. With respect to DER wholesale market participation, the Joint Utilities coordinate with the NYISO on an ongoing basis to define the roles and responsibilities for relevant parties to facilitate DER wholesale market participation in a safe and reliable manner. Similarly, input received through the NYISO stakeholder process has informed the development of these currently defined roles and responsibilities. As New York's electric supply mix transitions increasingly to cleaner, but more intermittent sources of energy, the value and importance of DER participation in the NYISO programs becomes more important. Con Edison continually evaluates its organizational alignment and responsibilities to align DER-related activities with the appropriate operational or programmatic team.

[60] Note 57, *supra.*

3) **Describe how roles and responsibilities have been/will be developed, documented, and managed for each party involved in the planning and execution of grid operations.**

For distribution-related programs and procurements, Con Edison will continue to capture all roles and responsibilities in accordance with the electric tariff and within contractual agreements with relevant parties. The Joint Utilities continue to coordinate on opportunities to align the procurement process, which may help inform a more standardized set of roles and responsibilities across the utilities. While the high-level roles and responsibilities will generally be consistent across the different utilities' programs and procurements, the unique nature of each system need may result in differences (e.g., pre-defined time periods in which the DER portfolio is required to be available for performance).

With respect to operational coordination for DER wholesale market participation, the Joint Utilities have developed a Draft DSP Communications and Coordination Manual to define the coordination requirements between the DSP, the NYISO, DER aggregator, and individual DER.[61] As DERs increase participation in the wholesale market, there may need to be enhanced coordination across four major functions: (1) registration, (2) planning, (3) operations, and (4) settlement. The Joint Utilities have also developed a Draft DSP-Aggregator Agreement to: (1) close the operating and communication gap between the utility interconnection agreements or tariffs and the NYISO tariffs, and (2) provide DER aggregators with transparency regarding how to coordinate with the DSP to maximize the ability of DER aggregations to deliver value across different services.[62]

4) **Describe in detail how the utilities and other parties will provide processes, resources, and standards to support planning and execution of advanced grid operations which accommodate and extensively employ DER services. The information provided should address:**

   a. **organizations;**

As discussed above, Con Edison coordinates with DER aggregators and the NYISO to define operational coordination requirements, including specific roles and responsibilities for each party, to preserve safety and reliability for a system characterized by increasing amounts of DERs.

Internally, the Company maintains an extensive collection of standard operating procedures and specifications for electric system planning and operations that incorporate DERs as appropriate. Con Edison is also modernizing its control centers to proactively manage a more complex distribution grid. Modernizing the control centers will bring significant enabling benefits for integrating the latest technology, resiliency, and standardization of processes, including establishing a centralized area to deploy advanced distribution management functionalities.

   b. **operating policies and processes;**

The Company develops and maintains operating guides for Company personnel that describe the policies and procedures for performing a range of operational functions. As the Company implements new processes and functionalities, such as the Interconnection Online Application Portal and hosting capacity maps, the Company integrates lessons learned from early stages of deployment into the relevant policies and procedures, as appropriate. Con Edison has established cross-functional steering committees and project teams, representative of the organizations involved in DSP activities and inclusive of the executive levels, to facilitate the governance structures necessary to institutionalize, monitor, and enforce operating policies and processes.

[61] *Ibid.*

[62] Joint Utilities of New York, Draft Joint Utilities DSP-Aggregator Agreement for NYISO Pilot Program (updated July 2018): https://jointutilitiesofny.org/sites/default/files/Draft_JU_DSP_Aggregator_Agreement_NYISO_Pilot_Program.pdf.

c. information systems for system modeling, data acquisition and management, situational awareness, resource optimization, dispatch and control, etc.;

Con Edison is committed to building the systems and functionality that maximize the integration of DERs into utility operations. For example, as part of the DERMS POC, the Company built out communications functionality in its common information model, which provided a uniform interface definition language to communicate with internal and external resources. Bringing in additional grid endpoints will require further investment in SCADA technologies and communication infrastructure to maximize the value of the investment. The Company maintains an overall strategy to meet communication requirements across multiple criteria. This communications strategy delivers sufficient capacity and diversity of communication channels in advance of planned device deployment, while also addressing cybersecurity and other operational requirements.

To accommodate future systems, applications, and devices, the Company will expand or enhance existing communications infrastructure to meet the needs of each asset. This infrastructure expansion will span a 20-year horizon in alignment with Con Edison's Grid Modernization Plan.[63] The Company's efforts to gather system, application, and device requirements informed the determination of optimal communications solutions.

The need to incorporate DERs into traditional operations will necessitate the integration of new DERMS and advanced distribution management functionality in more modern control center environments. Additionally, GIS is foundational to DERMS and advanced distribution management and helps provide a holistic view of how DERs fit into the overall system. Modernized control centers will require a suite of situational awareness tools to allow operators to analyze and react to inputs from both utility-owned assets and third-party equipment. The Company has built a solid foundation for modern control centers, with SCADA-enabled network protectors and fault-interrupting switches, which will support DERMS and advanced distribution management systems ("ADMS") functionality. However, the unique characteristics of Con Edison's system, particularly the secondary mesh networks serving New York City, present challenges to fully preparing the control centers for DERMS, potentially requiring significant additional evaluation and resources. For example, grid-level solutions that leverage distributed intelligence may assist operators when system issues cascade rapidly. Con Edison has made further progress on integrating DERs and functionality into utility operations through the IGMVO. The IGMVO will enable enhanced DER data and program management, modeling and simulation, monitoring and DER management.

d. data communications infrastructure;

The Company understands that streamlined data management and optimization will underpin the future of utility operations. Thus, the Company has procedures and roadmaps in place to layer these needs into a corporate repository that can serve as a single source of data and reporting. For example, as part of AMI deployment, Con Edison established data governance teams and structures to facilitate an enterprise-wide approach to data management and the creation of an Enterprise Data Analytics Platform. The Company has also developed a hierarchical approach to data management and communications to facilitate decisions regarding the safe and reliable transfer of data assets for a wide range of use cases. The Company is committed to working with the Joint Utilities and the NYISO on the development of advanced information and data portals that will continue to streamline the coordination process.

[63] The Grid Modernization Plan refers to a set of important initiatives (collectively known as "Grid Innovation") involving the use of advanced technologies – some which may be considered Distributed System Platform enabling – that develop or enhance capabilities that improve safety, reliability, resiliency, efficiency, and automation of the electric distribution system. Case 19-E-0065, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Electric Infrastructure and Operations Panel Testimony, p.p. 47-53.

e. grid sensors and control devices; and

As technological advances bring new sensing and communication capabilities, Con Edison will leverage these advancements to support the integration of the higher penetrations of customer-owned and operated assets. The Company has and will continue to deploy smart sensors throughout the system. These sensors have already led to the detection and correction of numerous defects on the electrical distribution system, resulting in improved employee and public safety. In the years ahead, the diversity and volume of sensors will only compound this benefit. These data points will allow Con Edison to remotely perform many activities that currently require onsite labor, a capability that will provide greater workforce flexibility and lower costs over time. As DER penetration levels continue to increase, grid sensing equipment will offer a more complete look at the impact customers will have on the grid, allowing the Company to continue to incentivize electric generation and demand in a way that brings the highest value with the greatest reliability. Additionally, investment in SCADA communications and technology will offer operators a wider range of control that will lead to faster system response times and a wider range of operational flexibility.

f. grid infrastructure components such as switches, power flow controllers, and solid-state transformers.

As noted in the responses to "4c)" and "6c)" in this section, the Company is investing in equipment that supports system reliability in a high DER environment. These investments build on ongoing efforts to reduce the impact of storms, including installing additional automatic devices, such as reclosers or gang switches, fuses, fuse bypass switches, and automatic sectionalizing switches on the overhead system.

Investments in network protectors with communicating relays (modernized network protector relays, or MNPRs) that are capable of two-way wireless communication allow for SCADA, which provide control centers the ability to remotely monitor and operate the network protectors. This in turn enables a more dynamic ability to load and de-load specific feeders. In addition to timelier fault identification, the MNPRs also enable soft transfer trips in which, upon a feeder fault, a customer breaker or network protector is opened. Soft transfer trips, executed automatically and in near real-time, de-energize the back feed on feeders to protect both customer and utility equipment and the safety of Con Edison field workers. As DER penetration increases, the risk to worker safety and equipment damage due to back feed increases, and more granular distribution management becomes a priority. By modernizing the network protective relays in prioritized areas (e.g., where DER penetration is greatest or the system is most constrained) and in a pre-emptive manner, the Company is maintaining system reliability and resiliency while integrating more DERs into the electric system.

Power flow controllers and solid-state transformers are emerging technologies currently in the research and development phase. As such, these technologies are not part of the current investment plan. The Company continues to explore new technologies in a demonstration project or research and development capacity, as appropriate.

5) Describe the utility's approach and ability to implement advanced capabilities:

a. Identify the existing level of system monitoring and distribution automation.

Con Edison currently has a significant level of monitoring for utility-owned assets on the distribution system. Con Edison monitors approximately 27,000 distribution transformers on the network system via the Net Remote Monitoring System ("RMS"), along with SCADA communications for area substation circuit breaker and transformer equipment. The Company uses these data streams for both real-time monitoring and as historical input to circuit models for load flow and planning cases.

In addition to the RMS on the distribution network transformers, Con Edison monitors the network protectors on the secondary side of these units. The Company can remotely control a portion of these locations through the SCADA

system and plans to increase this capacity over time through capital investment that will be strategically located in areas where the Company implements NWS projects or DG penetration levels exceed network thresholds.

Additionally, the installation of AMI infrastructure throughout the service territory increased grid visibility from the network transformer level to the service delivery point offering.

The Con Edison overhead system incorporates loop designs with alternate circuit feeds that will operate to segment feeders and restore load through relaying. Con Edison can operate some through remote operation. Currently, Con Edison has over 2,000 monitored reclosers on the overhead system.

b. Identify areas to be enhanced through additional monitoring and/or distribution automation.

As the Company expands AMI deployment and has increased availability of granular network data, it will be able to improve existing planning models. This will allow grid operations use cases to be more inclusive of DG penetration and help guide M&C investments to coincide with the most needed areas in the distribution grid.

The phased implementation of DERMS and advanced distribution management functionality will be a significant driver for monitoring and distribution automation. Con Edison will use these systems as the optimization engines to fully integrate DG operation into traditional grid management. These systems will require significant M&C data points from the utility grid and third-party DER assets that will be available to provide grid support. Con Edison has actively participated in the Joint Utilities' efforts on lower-cost M&C initiatives and will continue to invest in solutions that provide the necessary operational information without impeding DG projects.

As the Company looks to the future and continues to expand grid visibility and utility distribution automation, there will be a need to consolidate older systems into more modern, flexible technologies that are capable of marrying tremendous amounts of disparate information into a complete model of the real-time system. To meet future needs, the Company will need these systems to consolidate broad skill sets in both planning and operations. Con Edison will look to both modernize and consolidate control center locations and functionality so it can deploy the full benefits of future systems (e.g., DERMS) across the service territory.

c. Describe the means and methods used for deploying additional monitoring and/or distribution automation in the utility's system.

Communications channels and functionality will continue to grow as a result of the Company's grid modernization efforts, as it is a key component of future operations. For example, Con Edison currently is engaged in a multi-year project focusing on equipping existing network protectors with newer model relays and SCADA functionality. The relays allow for more back feed in the secondary network, while SCADA enhancements give operators the ability to remotely operate the protectors. The goal of this project has been to target areas with existing or projected DG penetration growth to facilitate a network topology that is more accepting of network back feed under low load conditions.

In the near term, the Company is increasing the number of switches on the overhead system and enhancing automation capabilities on the distribution system. The Company also plans to continue to increase automation on the overhead distribution system and is able to support operational actions that will offer a greater level of flexibility during system events. Con Edison will make these types of investments as part of the Company's overall grid modernization strategy, which will target areas that would receive the greatest benefit from automated operations.

The Company also recognizes the need to monitor, and in some cases, manage third-party owned DG through set points. The Company's investment in DERMS capabilities will expand this functionality. Con Edison will explore cost-effective ways of backhauling data for optimization and operational decisions.

d. Identify the benefits to be obtained from deploying additional monitoring and/or distribution automation in the utility's system.

Expanded monitoring across the system will enable planners and operators to optimize the value of utility and non-utility owned assets. This co-optimization will lead to more informed operational decisions and capital investments that will drive customer benefit. In addition, the ability to trend data over time will refine the ways the Company is able to offer value streams to the DG community (e.g., NWS, Locational System Relief Value, and market facilitation).

Similarly, an increase in distribution automation, through DERMS investment, will increase operational flexibility and continue to advance Con Edison's ability to provide safe and reliable electric service while incorporating greater levels of system value and support from DERs.

e. Identify the capabilities currently provided by Advanced Distribution Management Systems (ADMS).

Con Edison does not currently operate an ADMS system. However, the Company operates a suite of systems that can perform some of the core functionalities characteristic of an ADMS system, including fault location, outage management, and SCADA interfaces. For instance, the Company's load flow model runs in the control rooms to forecast the 'next worst' feeder conditions and runs reactance-to-fault, which isolates failures in the network system. Additionally, many of the Company's planned grid modernization investments, such as GIS, will support ADMS functionality. For example, the Company's investments in hardware such as SCADA-enabled switches for non-network locations, SCADA-enabled MNPRs, interrupting switches for network locations, and pole top regulators, as well as enhanced models and real time load flow capabilities, provide a robust foundation for a total system ADMS.

f. Describe how ADMS capabilities will increase and improve over time.

Con Edison plans on utilizing a phased approach to grid modernization where it can incorporate new functionality as DERMS and ADMS software become more mature. As discussed above, currently, the Company does not have an ADMS in the traditional sense but achieves advanced distribution management functionality through a suite of systems. The Company plans to leverage software solutions, both those that it possesses and those it will procure, for specific needs in the near term to pilot the future development of modern tools that the Company can successfully integrate into its operational environment.

The work undertaken by the IGMVO platform will inform the Company's path for further ADMS-like development. Two of the five functional areas being developed (DER monitoring, grid operations in coordination with DERs) will deploy capabilities found in an ADMS.

The Company will have a five-step approach, as follows.

1. Continue building out advanced distribution management functionality for all network topologies at CECONY.
2. Focus on improved models of all system assets.
3. Test out advanced protection schemes based on real world needs, such as unavailability of DER assets.
4. Explore distributed intelligence to mitigate constraints.
5. Continue building business rules for M&C needs as DER penetrations increase.

g. Identify the capabilities currently provided by DER Management Systems (DERMS).

Please refer to the use cases described above in the DERMS subsection of the *Current Progress* section above.

h. Describe how DERMS capabilities will increase and improve over time.

Please refer to the discussion on the phased approach to building modules in the enterprise DERMS solution in the Future Plans section above.

i. Identify other approaches or functionalities used to better manage grid performance and describe how they are/will be integrated into daily operations.

Con Edison will continue to use lessons learned from demonstration and pilot projects to prove out the conceptual elements that the Company will need to advance grid operations in the future. The Company's ongoing work through the GOTF proceeding will also refine the capabilities needed to coordinate the operation of a range of diverse flexible resources. The GERL will serve as an important certification, testing, and training ground as new technology-enabled capabilities are explored and vetted for deployment at scale. The Company sees this as a necessary environment to partner with leaders in technology development to refine the Company's software and technology roadmap as the Company moves closer to full DSP functionality. These lessons learned will facilitate de-risked investments that the Company can phase into grid operation.

2.4. ENERGY STORAGE INTEGRATION

Context and Background

Con Edison remains committed to supporting the Climate Leadership & Community Protection Act ("CLCPA") clean energy goals by integrating a portfolio of energy storage solutions at all levels of the power grid, from bulk power to the distribution system. The Company is pursuing a balanced approach that provides benefits to all customers and minimizes overall bill impacts. The primary benefits of storage are providing resource adequacy and balancing support for intermittent renewable generation. Storage resources also provide an additional tool to better manage peak load in constrained areas, increase the hosting capacity of distribution circuits, and support more efficient and precise operations.

Since the 2023 Distributed System Implementation Plan ("DSIP"), Con Edison has continued to develop and implement energy storage system ("ESS") projects through a variety of avenues, including utility dispatch rights ("UDR") solicitations, Company-owned utility integrated storage ("UIS"), and customer-owned storage. Energy storage is necessary to balance intermittent renewable resources as it can collect excess electric supply during periods of over-generation for use during periods of high demand or under generation. This use of storage avoids stranded energy and provides additional resources to serve peak demand needs. The State anticipates exponential growth in large-scale renewables and storage across the bulk and retail sectors.[64]

At the bulk level, storage supports utility-scale renewable energy wind and photovoltaic ("PV") projects due to its ability to buffer generation intermittency, reduce curtailment, provide dispatchable power, and manage or reduce transmission system upgrades associated with siting large scale renewables. The State's commitment to develop more intermittent large-scale renewables will impact the necessity for additional storage resources by 2035.

At the distribution level, battery storage can provide peak shaving and demand side management support to absorb power during increased customer solar output periods and provide reactive power support. The ability to capture additional revenue by participating in wholesale energy markets and retail programs will continue to spur the combination of solar plus storage projects. To meet statewide climate goals, distributed solar must reach at least 10 GW by 2030.

In the longer-term, long-duration storage, defined as assets capable of storing energy for several hours, days, or weeks, will further enable a decarbonized energy supply. The primary role of long-duration storage is to provide power during infrequent but critical multi-day periods when electric demand is high and when contributions from renewables and other resources are not sufficient to meet demand. Long-duration storage will be increasingly important as electrification of building heating adds to winter loads, which is the time of year with relatively low renewable output.

Regulatory Drivers

Enacted in 2018, Public Service Law §74 directed the Public Service Commission ("PSC") to establish a statewide energy storage goal and support programs that would enable the State to achieve the goal by 2030. As part of the 2018 Energy Storage Order,[65] the PSC established a statewide energy storage goal of 3 GW of qualified energy storage systems by 2030. This order established a target for Con Edison to procure at least 300 MW of storage.

[64] Case 18-E-0130, *In the Matter of Energy Storage Deployment Program*, Order Establishing Updated Energy Storage Goal and Deployment Policy (issued June 20, 2024), p. 1.
[65] Case 18-E-0130, *In the Matter of Energy Storage Deployment Program*, Order Establishing Energy Storage Goal and Deployment Policy (issued December 13, 2018).

In January 2022, Governor Hochul announced in the State of the State Address[66] the intent to double the storage target, from 3 GW to 6 GW by 2030. The underlying driver of the target increase was the CLCPA, which calls for New York to achieve 100 percent zero emissions from electricity by 2040.

Building on the 2018 Energy Storage Order, on June 20, 2024, the PSC issued the Order Establishing Updated Energy Storage Goal and Deployment Policy ("2024 Energy Storage Order").[67] This Order formally adopted an updated statewide deployment goal of 6 GW of energy storage resources by 2030, with an interim goal of 1.5 GW by 2025. The PSC approved the Storage Roadmap 2.0 which included details on the following:

- 3,000 MW of new bulk storage to be procured through a new competitive Index Storage Credit mechanism, which was anticipated to provide long-term certainty to projects while maximizing savings for consumers.
- 1,500 MW of new retail storage and 200 MW of new residential storage to be supported through an expansion of New York State Energy Research and Development Authority's ("NYSERDA") existing region-specific block incentive programs.

The 2024 Energy Storage Order continued the directive, originally established in the 2018 Energy Storage Order, for Con Edison, along with all the Joint Utilities, to continue the bulk storage UDR request for proposal ("RFP") process to meet system needs, and if necessary, utilize the NYSERDA incentives.[68] Such procurements would count towards the 6,000 MW bulk storage goal.

By the end of 2024, the total amount of energy storage projects built in New York State was 429 MW.[69] This is less than a third of the 1,500 MW target by 2025 that was established in the 2024 Storage Order. This shortfall illustrates the importance of an all-hands-on deck approach needed to deploy storage at a level commensurate with the policy needs identified by the PSC.

In addition to complying with PSC directives, Con Edison has significantly increased the amount of storage, both customer-owned and UIS on the system. As of the end of April 2025, customers have installed and interconnected 808 ESS projects with a total capacity of approximately 96 MW. Con Edison has installed and interconnected approximately 15.4 MW of UIS.

[66] 2022 State of the State Address by Governor Kathy Hochul: https://www.governor.ny.gov/sites/default/files/2022-01/2022StateoftheStateBook.pdf
[67] Note 64, *supra.*
[68] *Ibid*, p. 38.
[69] Climate Act Dashboard: https://climate.ny.gov/dashboard.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Increased the amount of storage on the system, including distribution-connected batteries representing approximately 96 MW of capacity, as of April 2025. Many of these batteries are supported by incentives for participation in Company demand response ("DR") and dynamic load management ("DLM") programs.
- Contracted the largest bulk storage project in Company territory to date – a 100 MW/400 MWh project on a brownfield power plant site in Astoria, Queens.
- Held bulk market solicitations in 2019, 2021, 2022, and 2024.
- Energized the 7.5 MW ESS at Fox Hills, the largest battery installed in New York City ("NYC") at the time of commissioning, capable of providing power to approximately 3,000 homes up to four hours.
- Installed the first pole-mounted Battery Energy Storage Systems ("BESS") in the country at three locations in Yonkers totaling 120 kW / 600 kWh.
- Continued successful operation of approximately 8.2 MW of utility-owned and customer-sited solutions as critical components of the Brooklyn Queens Demand Management ("BQDM"), Water Street, and Newtown non-wires-solution ("NWS") portfolios.
- Supported development of Joint Utility Study of Non-Market Transmission and Distribution Energy Storage Use Cases and Related Process Proposals, to include a Con Edison and Orange & Rockland ("O&R")-specific appendix.

Utility Capabilities Demonstrated (non-exhaustive)

Planning & Forecasting: Con Edison is working to further integrate storage data into *planning* processes.

Dispatch: Con Edison continues to develop utility integrated storage projects to manage dynamic load demand. The targeted *dispatch* of these assets provides Con Edison the opportunity to balance the intermittent generation of renewable resources.

Market Participation: Con Edison has expanded the avenues for storage resources to *participate in wholesale markets* and as distribution resources through the NYISO's participation models, enabled by FERC 2222.

Energy storage will play a critical role in New York's clean energy future. Con Edison continues to actively engage with the Department of Public Service ("DPS") Staff and NYSERDA to support energy storage policy goals and the development of incentives in support of these goals. The Company's storage efforts have been diverse and robust, and follow a three-prong approach to deploying energy storage:

1. Contract with larger bulk storage systems to support the UDR program.
2. Construct and operate UIS projects to support stackable non-market use cases.
3. Target incentives and programs, such as NWS, DLM, and DR, to encourage customer-owned systems to be interconnected to the distribution system.

Contract with Larger Bulk Storage Systems

Contracting with third-party, larger bulk storage systems at higher voltages allows the Company to leverage the voltage support that greater storage capacity provides. Con Edison continues to encourage third-party owned storage deployments through its UDR solicitation. The project types engaged include facilitating energy storage with electric vehicle ("EV") charging, storage with solar generation, and developing monitoring and control ("M&C") mechanisms.

As directed by the 2018 Storage Order and subsequent modifying orders, the Company has completed three bulk storage solicitations. To date, Con Edison has established agreements for 185 MW. The Company is currently in its fourth round of solicitations for bulk storage projects. The expectation is that Con Edison remains well-positioned to reach its 300 MW target established in the 2018 Order.

Con Edison will bid these assets into the wholesale market with customers benefiting from these revenues.[70] This procurement model reduces merchant risk for developers, and reports realizable revenues to the market, both of which are expected to encourage future storage developments as developers include this value stream in their financial planning and pricing models. To bid these assets successfully into wholesale markets, Con Edison is continuing to develop analytical teams and capabilities to maximize customer value of these assets. In addition, these contractual arrangements require the Company to transmit market signals to these third-party assets, and the Company plans to eventually leverage its distributed energy resource management system ("DERMS") platforms in operating these assets.

Construct and Operate Utility Integrated Projects

UIS projects support the transmission and distribution ("T&D") systems, earn wholesale market revenue to offset customer costs, and foster the energy storage ecosystem in NYC. These assets provide the opportunity to balance the intermittent generation of renewable resources and make it easier for the Company to manage local peaks by increasing the hosting capacity of distribution circuits, which supports the further integration of distributed energy resources ("DER"). Further, in response to the 2024 Storage Order, Con Edison, in conjunction with the Joint Utilities, produced a Study of Non-Market Transmission and Distribution Energy Storage Use Cases and Related Process Proposals[71] that identifies additional potential benefits that these types of projects provide.

[70] Note 64, *supra,* under the 2018 Storage Order some of these revenues may also be retained by the Company as earnings.
[71] Case 18-E-0130, *In the Matter of Energy Storage Deployment Program*, Joint Utilities' Study of Non-Market Transmission and Distribution Energy Storage Use Cases and Related Process Proposals (filed October 29, 2024).

Table 4 summarizes the Company's current utility integrated storage projects.

Table 4: Con Edison's Utility Integrated Storage Projects

Project Name	Description	Battery Rating (MW/MWh)
Ozone Park 98th Street ESS	Commissioned in June 2018, the Ozone Park BESS was Con Edison's first front-of-the-meter[72] ("FTM") battery installation. Since commissioning, the BESS has received support through the NWS BQDM program.	2.0 MW/12 MWh
Fox Hills ESS	Con Edison completed construction on an 11-container battery storage site intended to provide peak shaving, demand relief, and system support to absorb power during periods of high customer PV output and replace temporary fossil generators needed during system contingencies. The Fox Hill ESS went into service on August 20, 2023, and was the largest BESS project developed in NYC.	7.5 MW/30 MWh
Brownsville Battery	This project is located in a disadvantaged community ("DAC") and will primarily be used for load relief, peak shaving, and reliability purposes. It will participate in the BQDM NWS program. A secondary application for this asset is wholesale market participation.	5.8 MW/23.2 MWh
Pole Mounted BESS	Installed the first pole-mounted BESS in the country in Yonkers. The BESS will provide local peak shaving and capacity support at the grid edge.	120 kW/600 kWh

Since the submission of the 2023 DSIP, the Company has completed construction of one ESS (Fox Hills) and is currently constructing another (Brownsville). The 7.5 MW/30 MWh Fox Hills ESS went into service on August 20, 2023. Located next to Con Edison's substation in the Rosebank neighborhood of Staten Island, this system furthers the Company's clean energy goals and meets distribution needs. By siting the system at an existing substation, the project took advantage of property that the Company already owned. This solution helps manage the emerging duck curve[73] due to increased PV while utilizing a restricted site in a constrained territory. Restricted sites within substation boundaries impose strict requirements during construction and subsequent operations and maintenance; however, it is essential in areas with limited available land for storage development. This system could also be used for wholesale market participation. Currently under construction, the Brownsville BESS in Brooklyn will be commissioned for the summer of 2025. This project will add an additional 5.8MW / 23.2MWh of capacity and participate in the BQDM NWS program. Collectively, these projects will enable clean energy generation and address power quality ("PQ") challenges that traditional equipment does not efficiently address. These projects will also help advance new business models and expand market participation in the New York Independent System Operator ("NYISO"), returning earned revenue to ratepayers.

[72] Defined in this document as assets that are generating power and connected directly to transmission/distribution systems therefore are in front of the customer meter.

[73] As described by the U.S. Department of Energy, a duck curve (named after its resemblance to a duck) shows the difference in electricity demand and the amount of available solar energy throughout the day. When the sun is shining, solar floods the market and then drops off as electricity demand peaks in the evening.

Con Edison works closely with the NYC Fire Department ("FDNY") and other city agencies to verify that storage systems adhere to the strictest safety and code requirements. For example, the system at Fox Hills has advanced multi-level protections and is monitored around the clock by two control centers. In addition, the batteries at this location meet or exceed all industry safety standards and certifications and are Underwriters Laboratories[74] certified.

Con Edison's UIS Program manages the existing portfolio of UIS projects, which are sited in locations where the Company has site control, including utility-owned property such as area substations, unit substations, non-substation property, and right-of-way. Continued refinement and optimization of energy storage assets to support multiple applications will help realize their full value while maintaining safe operation and enhancing grid reliability.

In addition, the 2024 Energy Storage Order directed the Joint Utilities to conduct a study of the non-market T&D services that energy storage can provide. In accordance with the Order, this study, filed by the Joint Utilities on October 29, 2024, included:

1. An engineering and economic review of the types of energy storage applications the utilities can deploy as part of their obligations to provide safe and reliable service in the most efficient and effective manner.
2. A description of how utilities will modify system planning and operations to accommodate energy storage as another tool.
3. A proposed process for the review and approval of energy storage projects as well as "a cost recovery mechanism, if the process does not align with the normal rate case schedules."[75]

The study also includes a Con Edison and O&R-specific appendix that prioritizes applications for downstate implementation of UIS and provides illustrative examples.

Encourage Customer-Owned Systems

Customer-owned storage systems offer many benefits to customers and the electric grid. For example, customer-sited storage offers customers a source of backup power. Customer-owned storage also contributes to system-wide storage goals, ultimately enabling more optimal use of renewable generation. The Company recognizes that customer-owned storage is a growing use case with barriers to overcome before deployment at scale. The sections below highlight the projects and other actions Con Edison is taking to engage with stakeholders to overcome these technical and logistical barriers.

Targeting Storage for Distribution System Needs

Con Edison continues to pursue opportunities for energy storage to participate in T&D deferral programs and provide distribution value through continued and enhanced NWS procurements and substation-sited storage implemented through competitively sourced third-party storage vendors. NWS has been effective at procuring storage to assist with distribution system load relief needs. Past solicitations have invited innovative solutions, including advanced technologies such as energy storage, advanced controls, and distributed generation ("DG").

Given its operational flexibility, energy storage is an often-used technology in NWS proposals, and the Company continues to procure energy storage technologies aimed at reducing peak demand in its NWS territories. For example, the Company successfully operated over 6 MW of peak load reduction through customer-owned energy storage for its Newtown NWS in summer 2024. **Section 2.13 Beneficial Locations for DERs and Non-Wires Alternatives** provides specific details on additional NWS programs.

[74] Underwriters Laboratories is a third-party safety certification company that sets industry-wide standards for products.
[75] Note 71, *supra.*

Reducing Technical Barriers

In concert with the Joint Utilities, Con Edison has supported the development of standard interconnection requirements ("SIR") revisions that facilitate the interconnection of up to 5 MW of energy storage. This includes releasing both technical documents that address the treatment of energy storage and guidelines for solar plus storage installations. Improvements to the interconnection process are providing enhanced value to developers and facilitating technical improvements by allowing viable projects that pass the state-developed screens to advance to interconnection quickly or using screening results to verify the need to perform a detailed study quickly. Additional details on the interconnection process can be found in **Section 2.11 DER Interconnections**.

Increase Access to Value Streams

The Company has taken several actions to update its tariffs to enable greater participation in storage and quicker access to value streams. Notably, the Company updated its SC 11 Buy-Back tariff to allow export on the secondary network and to compensate generators under 5 MW for their wholesale capacity value.

The Value of DER ("VDER" or "Value Stack") tariff provides an opportunity for individual and hybrid storage systems up to 5 MW in size to be compensated. The VDER tariff compensates resources for grid export based on actual hourly energy output across multiple concurrent value streams. The VDER rates are valued at avoided costs and include hourly energy prices, capacity, and avoided T&D when charged exclusively by renewable technologies. Hybrid storage systems can also be eligible for renewable energy credit. Additionally, paired storage can participate in the Company's Community Distributed Generation Program and receive added incentives. The Phase Two VDER rates, implemented by the Company in June 2019 and currently in effect, provide revenue certainty for projects for ten years. Due to these changes, the Company has seen growth in paired and standalone storage interconnection requests. The Value Stack Customer Portal has also been implemented to improve coordination between Con Edison and the businesses involved in administering value stack crediting for community solar and other DERs. This portal has been built to help the rapidly expanding clean energy market, aiming to support the further development of DERs, provide transparency to market partners, and standardize data sharing protocols. Some scenarios that the portal can be used for include:

- Retrieving host statements
- Allocation file submission and validation
- Value Stack account management
- Net crediting applications
- General inquiries

Additional details on the Value Stack can be found in **Section 2.10 Billing and Compensation**.

Federal Energy Regulatory Commission ("FERC") Order No. 841 enabled storage resources to participate in both the wholesale energy market and as a distribution resource, and FERC Order No. 2222 ("FERC 2222") allowed for aggregations of DER to participate in wholesale markets. FERC 2222 effectively removed barriers for DERs of 10 kW or larger, aggregated to at least 100 kW, to participate in the regulated wholesale markets. One of the overarching principles of FERC 2222 is that dual participating customers must not receive compensation concurrently for the same service, such as compensation received for the sale of energy and capacity in the retail markets that they are receiving in the wholesale markets. On March 17, 2023, the PSC approved Con Edison's tariff proposals to preclude dual market participants from receiving duplicative compensation in wholesale and retail markets concurrently and to implement other conforming changes in connection with the NYISO's Implementation of FERC Order Nos. 841 and 2222.

Currently, there are no aggregated DERs participating in the wholesale market in New York as envisioned in FERC 2222. Of the aggregators the Company has been engaging with, it is not clear if they plan to utilize storage resources. To

prepare for additional resources looking to participate in the market as envisioned, the Company is developing internal platforms to allow for this aggregation with a planned completion date in late 2025.

Similar to the overall intent of the NYISO's provision to prevent double counting of services, the Company proposed revisions to clarify customer eligibility to participate in its DER retail programs when the DER also participates in NYISO markets. In addition to avoiding duplicative compensation issues, the Company seeks to maximize dual participation opportunities for customers by proposing a new option for Value Stack customers. This would allow customers to receive payment for the energy and capacity from the NYISO and continue to be eligible to receive the applicable VDER non-energy and non-capacity compensation from the Company. Customers can calculate their VDER credits using Con Edison's Value Stack Calculations. This new option, known as the Wholesale Value Stack ("WVS"), is identical to the VDER except, unlike VDER customer-generators, WVS customer-generators will receive energy payments and capacity payments, as applicable, from the NYISO by actually participating in these markets directly or through aggregation, instead of receiving payment from the Company based on the locational-based marginal pricing and installed capacity components of VDER. Shifting the energy and capacity payment source to the NYISO encourages these assets to respond to actual market signals evolving in response to dynamically changing grid needs.

Demonstration Projects

The Company's Reforming the Energy Vision ("REV") storage-related demonstration projects evaluate new business models, third-party partnerships, and innovative technologies. These projects increase knowledge sharing through valuable lessons learned and serve as a vehicle for reducing technical barriers. In conjunction with these efforts, the Company continues to focus on expanding wholesale market participation for energy storage. Table 5 summarizes the Company's current energy storage demonstration project that is working towards advancing market development.

Table 5: Current Con Edison Demonstration Project Improving Storage Economics

Project Name	Description	Battery Rating (MW/MWh)
REV Demo: Commercial Battery Storage	Con Edison partnered with a DER service provider to deploy distributed FTM dual participating batteries (i.e., batteries that both meet distribution system needs through peak load relief and participate in wholesale markets). The project included three sites: Caddell, City Island and Woodside. The Caddell site exited the demonstration period in February 2025 and is now in the post-demonstration period.	Three sites, each 1 MW/1 MWh

Lessons learned from this project include that there is value in continued engagement with NYC officials and relevant agencies, and collaboration with the NYISO is critical. City zoning should be considered carefully during site acquisition based on the evolving rules. The Company took a proactive approach toward permitting for this project by using an expeditor to monitor any permitting changes and promptly leverage relationships with the City of New York to address potential impacts.[76]

[76] Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, REV Demonstration Project: Commercial Battery Storage Q1 2025 Quarterly Progress Report (filed April 30, 2025).

Future Implementation and Planning

Summary of Future Actions

- Evaluate the 2024 fourth UDR procurement results and award projects, as appropriate.
- Coordinate with DPS Staff and NYSERDA on future UDR procurements.
- Continue development of UIS projects with deeper integration into utility planning processes.
- Continue collaboration with stakeholders to increase the efficiency and transparency of required processes to build and interconnect ESS.
- Continue development of NWS opportunities where possible in alignment with the PSC's Energy Storage Orders.
- As directed by the PSC, implement Bring Your Own Battery Program ("BYOB").

Con Edison currently has 40 residential batteries participating in DR through its commercial programs. The Company is currently developing a standalone Bring Your Own Battery (BYOB) residential storage program and is working towards filing an implementation plan for the BYOB program by November 2025. Con Edison will continue to support and meet the State's energy goals through a portfolio of solutions and approaches that leverage energy storage across multiple use cases.

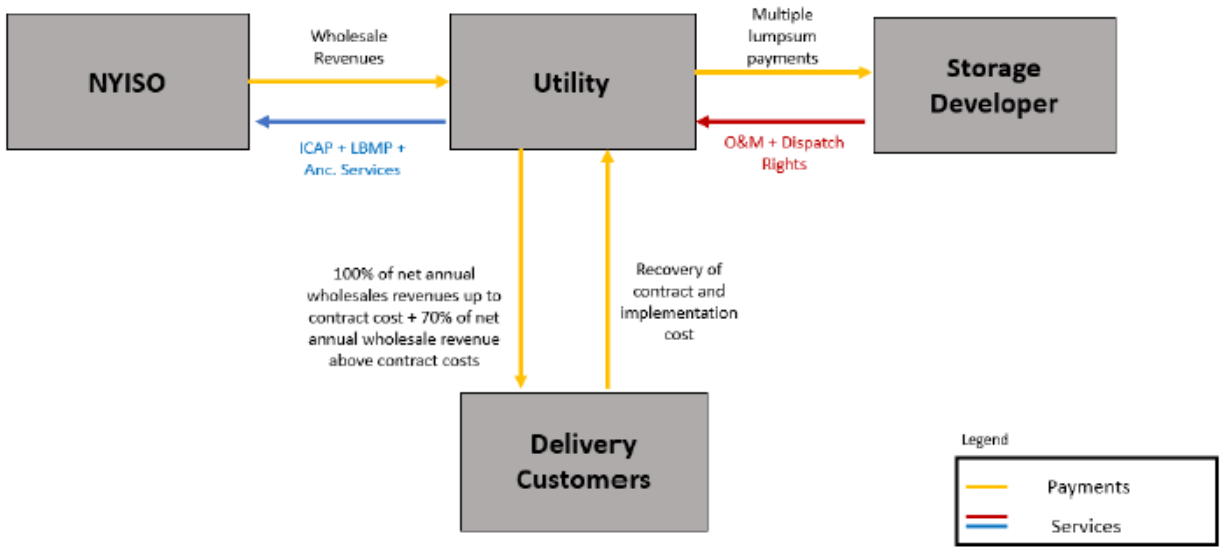
Contract with Larger Bulk Storage Systems

Con Edison will continue to use competitive solicitations to procure UDR to ESS. In the immediate future, this entails evaluating RFP responses and awarding contracts where they meet the evaluation criteria. Con Edison will apply lessons learned through these efforts to future market solicitations. As the contracted assets become operational, the Company will begin to bid the assets into the wholesale market and use them for distribution needs if they are sited on the distribution system.

Con Edison is currently in the midst of the 2024 RFP process. For the first time as part of this solicitation, portfolios of projects that are collectively sized over 5 MW, connected to the distribution system, and capable of directly participating in the NYISO wholesale market, are eligible to participate. These portfolios of energy storage projects can consist of no more than ten projects located in the same NYISO zone within the utility's service territory if the total size of each project is at least 2 MW and the projects' collective capacity is at least 5 MW.[77] A high-level overview of the potential commercial arrangement with these ESS resources is shown in **Figure 11**.

[77] Case 18-E-0130, *In the Matter of Energy Storage Deployment Program*, Revised Implementation Plan of Consolidated Edison Company of New York, Inc. and Orange and Rockland Utilities, Inc. for a Competitive Direct Procurement of Scheduling Rights from Qualified Energy Storage Systems (filed December 13, 2024).

Figure 11: Bulk ESS Commercial Arrangement[78]



Con Edison is currently awaiting Phase Two bidder proposals.

The precise timeframe for concluding contracts with the winning bidders and their subsequent installation of storage systems will depend on a variety of factors, including the bidder's requested modifications to the contract (if applicable) as well as the ability of all parties to obtain senior management and, in some cases, board of director approval in a timely manner. Con Edison has and will continue to leverage the shared experience of previous storage solicitations to develop a process that will enable the most efficient and timely path to contract execution. The Company reserves the right to modify the dates of the procurement timeline as required with notification to all participants. Con Edison expects that contracts will be executed by the end of 2025.[79]

Construct and Operate Utility Integrated Projects

Con Edison will continue to operate the utility-integrated Ozone Park BESS and Fox Hills BESS. As part of the existing BQDM program, the Company is developing the previously described Brownsville Energy Storage project. The Company began construction of the battery ESS in 2024 and plans to have the system operational for summer 2025.[80] The battery project will provide load relief and peak shaving abilities and has the potential to eliminate the need to operate standby diesel generators in the area, which includes a DAC. The Company will also continue to focus on activities driving towards NYISO market participation for the Commercial Battery Storage REV Demonstration Project.

The Company is also launching a project to reduce strain on distribution transformers by smoothing the daily electricity peaking cycle and to provide localized resiliency benefits during low-frequency, high-impact events. This project will install four pole-mounted ESS on the overhead distribution system in a DAC. The first three sites in Yonkers will be commissioned in 2025 and will be the first pole-mounted ESS to be installed in the country.

In looking forward to future UIS deployment, these systems can be deployed to provide ongoing value. While the benefits of UIS will vary with each application and implementation, the ability for storage to switch applications over

[78] *Ibid*, p. 17.
[79] *Ibid*, pp. 5-6.
[80] Case 14-E-0302, *Petition of Consolidated Edison Company of New York Inc. for Approval of Brooklyn/Queens Demand Management Program*, Con Edison 2025 BQDM Implementation Plan (filed January 31, 2025).

time enables the asset to support different system needs and enhances the reliability of the local grid over the entire lifetime of the UIS system. As non-market assets, UIS applications can use flexible capacity to help de-load equipment, gain efficiencies through optimization and coordination of utility resources, and balance needs to maximize benefits to customers and the local grid. These benefits can include support of DER integration, increased reliability and resiliency for critical infrastructure, addition of clean energy access points, and enhanced operational flexibility based on system needs. The Company has identified the following applications for UIS in Table 6 below.

Table 6: UIS Applications for Downstate[81]

Application for Utility Integrated Storage	Level
Bridge-to-Wires	D
Flexible Transmission Capacity	T
Flexible Distribution Capacity	D
Resiliency and Near-Term Reliability	D
DER Integration and Hosting Capacity	D
Integrated Large Renewable Enablement	T
Peak Shaving	T&D
Grid Optimization	D
Renewables Balancing	T
Flexible Power Transfer	D
Reactive Power Control (Voltage Control)	T&D
Flexible Shunt Reactor (Inductor)	T&D
Clean Energy Access Point (Co-Location of EV Charging/DER)	D

In addition to addressing numerous grid needs, narrow, use case-based UIS deployment will bolster the storage industry and support stakeholders over the next five years and beyond by:

1. Helping to drive down costs and reduce deployment barriers.
2. Increasing hosting capacity for third-party market storage.
3. Increasing supply chain capabilities.
4. Creating more knowledge and expertise that is shared publicly.
5. Creating more opportunities for developers and investors to support UIS initiatives through participation in solicitations by the Company for design and construction of UIS applications.[82]

Encourage Customer-Owned Systems

To help create a streamlined and transparent process for developing ESS, the Company will continue participating in the Joint Utilities' Interconnection Technical Working Group ("ITWG") and other industry forums and collaborations across the State. In addition, Con Edison will continue its business model projects to test different operational and business models and programs to further expand opportunities for energy storage. The Company feeds the lessons learned from its projects back to industry stakeholders to further market opportunities for storage.

The Company will seek to build on the experiences of its DR and NWS programs to encourage and support the development of ESS where and when these resources provide the most value, including with the standalone BYOB

[81] Note 71, *supra*, Appendix B, p. B-2.
[82] Case 18-E-0130, *In the Matter of Energy Storage Deployment Program*, Joint Utilities' Reply Comments to Initial Comments on The Joint Utilities' Study of Non-Market Transmission and Distribution Energy Storage Use Cases and Related Process Proposals (filed April 10, 2025).

residential storage program Con Edison will propose by November 2025. Con Edison will continue to enhance processes to increase opportunities for ESS to serve the distribution grid, including identifying cost-effective opportunities for energy storage to reduce customers' total bills in NWS areas. In addition, the Company will continue identifying new distribution and wholesale market revenue streams from DERs participating in NWS and refining future NWS market solicitations to provide storage developers additional information related to interconnection processes and potential costs.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Extended permitting timelines due to evolving local codes and limited Authorities Having Jurisdiction ("AHJs") familiarity with BESS	• Engage proactively with AHJs early in project development on topics including technical guidance on battery chemistries, siting, and fire safety. • Continue work with municipal authorities and other stakeholders to streamline and clarify the processes for permitting, building, and interconnecting energy storage assets.
Thermal runaway and fire safety risks associated with lithium-ion battery systems	• Collaborate with fire departments to support emergency response training. • Require and document emergency response plans. • Install and monitor applicable safety systems (e.g., sprinklers, HVAC, etc.) • Continuously review and update safety procedures.
Supply chain delays impacting delivery schedules and project deployment	• Maintain contractual flexibility with vendors. • Conduct early procurement coordination to manage lead times and adapt to supply chain constraints.
Price volatility in critical commodities and other battery materials affecting cost predictability	• Incorporate indexed pricing terms carefully • Track Inflation Reduction Act Section 45X incentives to offset commodity volatility. • Assess vendor pricing strategies to limit cost pass-through.
Data exchange and coordination challenges under FERC 2222 DER aggregation framework	• Develop automated telemetry, metering, and data exchange protocols; align with the NYISO and aggregator interfaces through joint stakeholder coordination. • The Company proposed new tariff language to clarify "dual" participation storage in light of FERC 2222 which was approved by the PSC on a permanent basis in November 2023.[83] • Utilize expanded tariff language that includes Wholesale Value Stack (WVS) and Wholesale Distribution Service (WDS) considerations.
Market-related risks for utility-owned storage participating in the NYISO markets (e.g., dispatch, performance, price volatility)	• Advance internal NYISO market readiness through tariff updates and operations planning; monitor bidding strategies and maintain compliance with dispatch and performance rules.

[83] Case 22-E-0549, *In the Matter of the Federal Energy Regulatory Commission (FERC) Order Nos. 2222 and 841, to Modify Rules Related to Distributed Energy Resources*, Order Approving Tariff Amendments on a Permanent Basis (filed November 21, 2023)

Stakeholder Interface

Con Edison has worked with several stakeholders to reduce the financial and technical barriers to energy storage. The Company actively engages developers through the Joint Utilities' stakeholder engagement groups, the ITWG, and other industry forums and collaborations across the state. The Company intends to continue engaging stakeholders as it progresses with DSIP implementation.

Con Edison also advanced technical feasibility for deploying energy storage. The Company works with municipalities to mitigate permitting concerns regarding ESS and actively participates in and co-sponsors stakeholder forums. The Company will continue to leverage this input into ongoing engagement efforts with relevant parties to advance opportunities for energy storage.

The Company further engages in broader industry forums, including co-hosting the New York Battery and Energy Storage Technology ("NY-BEST") Energy Storage Day and participating in the City University New York Solar + Storage Installer Workshop. These forums offer additional opportunities for dialogue with developers, aggregators, technology providers, and policymakers around DR programs, bulk storage procurements, EV initiatives, and best practices for energy storage interconnection. The learnings from these events help inform the Company's approaches towards battery storage.

For DR programs, the Company facilitates direct stakeholder engagement sessions. These efforts include hosting three in-person sessions in the fall, dedicated to evaluating program structures, proposing enhancements, and discussing potential tariff adjustments. By leveraging these sessions, the Company strengthens transparency and collaboration with stakeholders, enabling the continued use of DR programs as a viable platform for integrating energy storage technologies and enhancing grid reliability.

Finally, Con Edison continues to work with the Joint Utilities in ITWG efforts to propose and draft new SIR technical requirements for energy storage to help create a consistent and effective process for the interconnection of energy storage devices. Updates to the SIR are covered in greater detail in **Section 2.11 DER Integration**.

Additional Detail

This section responds to the questions in the DPS guidance specific to energy storage integration.

1) **Provide the locations, types, capacities (power and energy), configurations (i.e., standalone or co-located with load and/or generation), and functions of existing energy storage resources in the distribution system.**

As of March 31, 2025, customers have installed and interconnected 808 ESS installations, including residential batteries, for a total capacity of approximately 96 MW of capacity. Additionally, the Company has interconnected approximately 9.5 MW of utility-owned storage. **Appendix B Energy Storage Resources as of March 31, 2025** provides information on storage resources currently interconnected. The Company believes load relief is the primary function of most of these resources but does not track this information.

2) **Describe the utility's current efforts to plan, implement, and operate beneficial energy storage applications. Information provided should include:**

   a. **a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range energy storage plans;**

Con Edison has several projects in operation. The Company has designed its portfolio of projects to test different use cases and business models and assess how it can best leverage storage to meet distribution system, bulk system, and customer needs. These projects will inform the Company's long- term energy storage plan by providing real-world experience with energy storage technologies and data on the costs and benefits and advancing market development.

For additional information on these projects, see "2b)" below. Additional UIS projects may be proposed in Case 18-E-0130 – "In the Matter of Energy Storage Deployment Program".

b. The original project schedule;

Table 7 summarizes the original project schedule and current project status of the storage projects described above, including expected commercial operation date.

Table 7: Original Schedules and Current Status of Storage Projects as of May 1, 2025

Project	Original Project Schedule	Current Project Status	Next Steps
Ozone Park	In service June 2018	In service	Continue operating for load relief in the BQDM NWS program and participate in the NYISO wholesale market
Fox Hills ESS	In service August 2023	In service	Continue operating for load relief and participate in the NYISO wholesale market
Brownsville Energy Storage Project	In-service date of summer 2025	Estimated in-service date of summer 2025	Finalize commissioning and FDNY Letter of Authorization
Pole Mount	Multiple locations installed in 2024 and 2025	Three locations in Yonkers New York to be placed in service in 2025	Integration into utility operations
REV Demo: Commercial Battery Storage	Project start date: January 2017	In service	Estimated project end date: March 2028
Bulk Storage Procurement	Projects operational no later than December 31, 2030	Phase One bid reviews complete with bidders notified	Phase Two submissions due from bidders during the second half of 2025

c. The current project status;

See response to "2b)" above.

d. Lessons learned to date;

Con Edison's UIS Management Program manages the portfolio of UIS projects which are sited in locations where the Company has site control, including utility-owned property like area substations, unit substations, non-substation property, and right-of-way. Continued refinement and optimization of energy storage assets to support multiple applications will help realize their full value while maintaining safe operation and enhancing reliability.

Con Edison has been operating BESS assets for more than seven years and has identified the following lessons learned thus far:

- A dedicated Energy Storage organization is required to maintain expertise in this rapidly evolving technology which is required for full utilization of energy storage systems over the lifetime of the assets.
- Specialized emergency response is necessary in NYC to continue to foster battery energy storage development. Due to the dense urban environment, NYC is especially sensitive to the risks of deploying new technologies, including lithium-ion batteries. Con Edison has fostered a strong relationship with FDNY, and that relationship has extended to the Bulk Fuel Safety Unit division which handles lithium-ion battery technology. Through collaboration with city agencies such as FDNY, the Department of Buildings, and the Mayor's Office, Con Edison strives to reduce barriers for this technology through competency, preparedness, and technical expertise. Con Edison is expected to serve as a response partner for utility-owned BESS in its service territory and the Company seeks to maintain operational excellence for specialized emergency response, training, procedures, and system designs in a dense urban environment.
- While Company personnel are gaining experience in operations of ESS, individual projects have highly specialized needs which warrant service contracts with third-party vendors specializing in the battery equipment services. Service contracts for battery energy storage are designed to facilitate efficient, reliable, and sustainable operation of storage systems. These contracts provide comprehensive support, including maintenance, secondary monitoring, and equipment performance warrantees. Regular maintenance is important for safety, longevity and equipment performance of ESSs, and is required to guarantee warranty agreements. These service contracts include scheduled vendor maintenance visits, where trained technicians work alongside Con Edison personnel to inspect, clean, and service the equipment. Service contracts also include remote monitoring, allowing technicians to access systems remotely to perform diagnostics, updates, and minor repairs. This reduces service times and increases the overall uptime of the ESS.
- A consistent observation is that obtaining the necessary permits from municipal authorities requires significant time and effort. The permitting process will require additional stakeholder focus to support a robust market for energy storage. The Company will continue its efforts to collaborate with stakeholders to streamline the permitting process, define zoning requirements, and increase transparency in the process for its customers.
- An early lesson learned from the first operational demonstration project is that warranty provisions can restrict the optimal dispatch of the asset based on economics and grid need by restricting the number of hours a battery is fully charged. For instance, batteries generally charge before 8:00 AM due to tariff requirements and therefore may be required to discharge before the optimal time to reduce late evening peak loads.

e. Project adjustments and improvement opportunities identified to-date; and,

The Company expects ongoing streamlining in permitting processes and definitive market participation rules to facilitate future improvement opportunities. As previously described, the Company continues to pursue collaboration opportunities with non-governmental and city agencies. The Company has also been more active in engaging with individual communities to provide specific projects details and the benefits of storage.

Additionally, long lead timelines and supply chain disruptions continue to be a challenge to the energy storage industry. A programmatic approach to UIS will support long-term purchase agreements, price certainty, and standardization across projects to alleviate some of the supply chain burden.

f. Next steps with clear timelines and deliverables.

See response to "2b)" above.

3) **Provide a five-year forecast of energy storage assets deployed and operated by third-parties. Where possible, include the likely locations, types, capacities, configurations, and functions of those assets.**

Appendix A Peak Load and DER Forecast Details presents Con Edison's system-level forecast, which includes a five-year outlook for energy storage.

4) **Identify, describe, and prioritize the current and future opportunities for beneficial use of energy storage located in the distribution system. Uses considered should encompass functions which benefit utility customers, the distribution system, and/or the bulk power system. Each opportunity identified should be characterized by:**

   a. **location;**
   b. **energy storage capacity (power and energy);**
   c. **function(s) performed;**
   d. **period(s) of time when the function(s) would be performed; and,**
   e. **the nature and estimated economic value of each benefit derived from the energy storage resource.**

The Company supports and will continue to pursue the State's energy storage goals through a portfolio of solutions and approaches to maximize benefits to the grid and customers. Current and future opportunities represent a diversity of locations, sizes, functions, and business models. The Company encourages the development of storage policies, programs, and installations that provide all customers with grid benefits while maintaining flexibility to adjust course to take advantage of additional savings opportunities as storage technologies and the broader market matures. For example, utility-sited storage and customer-sited FTM storage with utility dispatch can help with load relief, reliability, and resiliency. UIS also provides benefits to the Company's grid including reductions in curtailment of renewable resources, and increased hosting capacity.

A narrow, use case-based UIS deployment is expected to support the industry by: (1) helping drive down costs and reduce deployment barriers, (2) increasing hosting capacity for third-party storage, (3) increasing supply chain capabilities, (4) creating more knowledge and expertise that is shared publicly, and (5) creating more opportunities for developers and investors to support UIS initiatives through participation in solicitations by the Joint Utilities for design and construction of UIS applications. In this way, UIS can expand opportunities for all forms of storage deployment and enhance the State's transition to a cleaner economy.

Similarly, storage at the bulk power level can support the integration of intermittent generation and help the NYISO fulfill future needs for capacity and other bulk power services. Separately, customer-sited storage can help customers manage their load more efficiently (e.g., peak shaving), be more resilient to power outages and interruptions, support grid needs when sent the appropriate signals (e.g., when an NWS or DR program activates an event), and participate in the wholesale market.

The Company is exploring adding ESS where and how they can best benefit the system and customers, including coordinating with the NYISO to leverage storage as a bulk system asset. Specifically, the distribution system and bulk system storage deployments will produce significantly higher overall benefits for all utility customers and should be prioritized. Both use cases allow for the development of larger and more economic storage installations that support the needs of the electricity grid (e.g., support reliability in a targeted manner). Customer-sited applications, which tend to be more expensive than distribution and bulk system installations, can be operated to provide distribution and bulk system benefits when located in constrained networks. Conversely, customer-sited applications in unconstrained networks provide little or no distribution benefits to other customers.

As the Company continues efforts to implement the PSC's storage orders and CLCPA requirements, and gains more experience with energy storage applications, the Company will be able to better identify and prioritize future

opportunities and pathways for meeting the State's goals. Several projects are underway to test different operational and business models. In addition, the Company is deploying energy storage at scale on utility property to support the distribution grid (e.g., relieving substations with capacity constraints), and to more readily provide services to the bulk power system. These projects are aimed at relieving grid congestion, affecting load shifting and/or peak shaving, and increasing resiliency through microgrids and islanding. This will be achieved through further enhancement of existing capabilities such as increased sophistication in dispatch of resources, and review of interconnection and planning standards to incorporate storage as an active grid asset. Collectively, these efforts will enable Con Edison to develop a more flexible grid in alignment with the PSC's Grid of the Future Proceeding.

The Company envisions energy storage enabling the integration of an increasing amount of intermittent renewable resources, supporting distribution system needs, providing resilience, and reducing greenhouse gas emissions. This will help customers and communities manage their usage to align with system capabilities, participate in DR programs, support newer applications like EV charging, and respond to more cost-reflective price signals or incentives. Table 8 below summarizes potential beneficial uses of energy storage, and Table 9 indicates the Company's status with respect to those opportunities.

Table 8: Summary of Potential Beneficial Uses of Energy Storage on the Distribution System

Potential Application	Functions	Location	Storage Capacity & Energy Provided	When Functions Will Be Performed	Value Provided
Distribution Deferral / NWAs	Defer investment in traditional infrastructure upgrades	Optimally located on the system to best meet needs	Dependent on the size and shape of the forecasted load in excess of limits	Coincident with circuit and/or system peaks	Time value of the deferred traditional solution over the deferral period; Secondary benefits include reduction of losses and revenues from participating in wholesale marketplace
Demand Charge Management	Reduce customers' peak demand over a given period by deploying energy storage BTM at times of low usage and using that energy at times of higher use	BTM, typically of large commercial & industrial customers	Dependent on customer type, size, load characteristics and desired load (i.e., bill) reduction	High demand charge periods relative to the customer's usage often correlated to times of high system demand	Primary value is the reduction in charges for demand-billed customers; Secondary benefits include system benefits provided through the reduction of load at peak times and participating in wholesale DR programs

Wholesale Market Participation	Provide energy, capacity and ancillary services such as frequency regulation in organized wholesale markets	Driven by interconnection requirements and proximity to transmission nodes/substations; may be driven by primary application for assets that perform multiple applications	Current market rules limit participation to systems >1 MW. Proposed rules for the NYISO market allow for >100 kW. After 2026 no minimum capacity for aggregated resources	Dependent on market conditions	Economic value determined by market pricing/conditions; additional distribution system benefits as the power travels through the distribution system into the transmission system
Backup Power Resiliency PQ	Provide backup power during unexpected outages or disaster recovery scenarios	Combination of FTM and BTM	Varies depending on customer type and needs	Dependent on contingent needs	Peace of mind value for residential users; Value for critical facilities such as hospitals for which a loss of power may result in unacceptable consequences; for some manufacturers there could be an avoided cost of power loss or PQ
Renewable Integration	Increase the ability of the distribution system to accommodate additional DER capacity	Circuits with high renewable penetration	Dependent on circuit load, configuration, and DER size	At times of high DER output such as mid-day and during peak conditions	Economic value of increased hosting capacity
Contingency Response	Provide added distribution benefits as needed; enable creation of micro-grid with storage as an anchor	Regions that have minimum circuit ties for contingency scenarios	Dependent on system need	During contingency period or extended outage period	SAIDI, CAIDI, SAIFI improvement[84]

[84] System Average Interruption Duration Index (SAIDI) is the minutes of non-momentary electric interruptions, per year, the average customer experienced; Customer Average Interruption Duration Index (CAIDI) is the average number of minutes it takes to restore non-momentary electric interruptions; System Average Interruption Frequency Index (SAIFI) is the number of non-momentary electric interruptions, per year, the average customer experienced.

Part of the Traditional Capital Planning Process	Operational flexibility	Substations	Dependent on system need	Potentially all hours	Battery storage at strategic locations where operational flexibility is needed
Paired with EV Charging Stations	Enable deployment with direct current fast charging ("DCFC")	Paired with DCFCs	Dependent on system	Charging during low utilization and discharging during high demand	Operator can store energy during times of low utilization and discharge stored energy during high EV charging demand
Paired with Utility- Scale Solar	Store energy produced during high solar hours and use it during peak hours	Near grid-scale solar resources	Dependent on system	Charging during the day, discharging during peak loads	Better alignment of supply with demand and allows more flexibility for utilization of renewable resources

Table 9: Energy Storage Opportunities

Deployed Resources	Near-Term Opportunities	Future Opportunities
• Distribution deferral NWSs • Contingency response	• Deploying storage as part of the traditional capital planning process • Storage paired with EV charging stations • Wholesale market participation	• Demand charge management • Backup power resiliency • Storage paired with utility-scale solar • PQ voltage control • Hosting capacity renewable integration

5) Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing energy storage at multiple levels in the distribution system.

a. Explain how each of those resources and functions supports the utility's needs;
b. Explain how each of those resources and functions supports the stakeholders' needs.

The Company is continually identifying and evaluating which resources and functions it may need in the future for planning, monitoring, and managing energy storage. For example, the Enterprise Geographic Information System ("eGIS") will serve as the system of record for the specific location and operating characteristics of grid-connected assets and be the software platform for enhanced data visualization and other advanced applications. The eGIS will also allow for more accurate distribution circuit models for planning and operations and more sophisticated hosting capacity capabilities, among other uses.

In addition, Con Edison expects the DERMS to provide M&C capabilities for utility-sited and controlled devices to provide benefits to the distribution and bulk power systems. Con Edison plans to use its demonstration projects to test options for monitoring and communicating with storage assets and providing a test case for integrating storage within the

DERMS environment. Additionally, the NYISO pilot projects in the Company's service territory, in which Con Edison is actively engaged, will also help test the monitoring, coordination, and communication of aggregated storage resources. Separately, the Company expects DERMS to provide enhanced capabilities to monitor and manage the distribution system, including energy storage devices, while advanced metering infrastructure will provide customers with the information needed to monitor and manage energy use and help determine the value of adopting energy storage devices. These enhanced DERMS capabilities include the ability to set and adjust scheduled charging or discharging, maintain visibility to asset attributes, real-time dispatch, and performance tracking.

In addition to its core functions, the eGIS is expected to integrate with other advanced systems such as DERMS. This integration will enable the development of foundational capabilities for tracking and visualizing the geospatial location of DER assets and their contractual constraints. Together, eGIS and DERMS will provide enhanced grid visibility, including real-time insight into current day dispatch schedules and emerging DER events based on evolving network conditions and forecasts.

Con Edison also leverages its mature operational Demand Response Management System ("DRMS"), which is currently dispatching batteries as DR resources. The Company started rolling out new scalability enhancements in 2023, to support the rapid growth in customer enrollments since 2020. Additional details on the Company's DERMS and DRMS can be found in **Section 2.3 Grid Operations**.

6) **Describe the means and methods for determining the real-time status, behavior, and effect of energy storage resources currently deployed in the distribution system. Information produced by those means and methods could include:**

   a. **the amount of energy currently stored (state of charge);**
   b. **the time, size, duration, energy source (grid and/or local generation), and purpose for each charging events;**
   c. **the time, size, duration, consumer (grid and/or local load), and purpose of each energy storage discharges;**
   d. **the net effect (amount and duration of supply or demand) on the distribution system of charge/discharge events (considering any co-located load and/or generation); and**
   e. **the capacity of the distribution system to deliver or receive power at a given location and time.**

See response to "5)" above.

7) **Describe the means and methods for forecasting the status, behavior, and effect of energy storage resources in the distribution system at future times. Forecasts produced by the utility could include:**

   a. **the amount of energy stored (state of charge);**
   b. **the time, size, duration, energy source (grid and/or local generation), and purpose of charging events;**
   c. **the time, size, duration, consumer (grid and/or local load), and purpose of energy storage discharges;**
   d. **the net effect on the distribution system of each charge/discharge event (considering any co-located load and/or generation);**
   e. **the capacity of the distribution system to deliver or receive power at a given location and time.**

As **Appendix A Peak Load and DER Forecast Details** highlights, energy storage is a separate line item in the DG forecast. Energy storage penetration and growth information are derived from the Company's interconnection queue, which provides a near-term view of proposed and under-construction projects.

For the 2024 forecasts, the Company reviewed existing and queued energy storage projects and utilized its REV/DER forecasting tool, which produces 20-year outlooks for energy storage installations, volume impact, and peak demand

impact in Con Edison's service territory. It provides data at both the system and distribution load assessment levels for summer and winter.

The REV/DER forecasting tool enables a highly customized series of inputs around technical and behavioral assumptions that affect the peak impact calculations. For each storage segment, the forecaster must make selections regarding charge and discharge behavior and input assumptions about available capacity at any given hour. Factors that impact the model results include whether BESS segments will behave grid-beneficially and reduce system or distribution load area ("DLA") demand, or if they will perform in a manner that is beneficial to individual customer demand reduction with no specific regard for system conditions.

The central calculation engine of the REV/DER forecasting tool is an optimization model ("the Model"). The Model takes in as input the DLA load curves as well as the previously defined inputs on technical and behavioral assumptions of various storage segments. The Model then identifies the independent peak load hours for the individual DLAs from the DLA load curves and the overall coincident peak hour for the system. The Model also has the flexibility to include other load modifiers into the calculation to account for their ability to potentially shift system or DLA peak hours in the future. The Model then considers the behavioral inputs as constraints for available storage capacity to be charged and discharged at any given hour. The Model calculates projected discharging and charging in a targeted way that would optimally reduce peak demands within all constraints. The amount of demand reduction achieved through discharging, as calculated by the Model, is what is considered the peak impact for the system and the DLAs.

ESS are flexible resources with varying system impacts. For example, a 10 MW, 4-hour (or 40 MWh) battery can discharge in several ways – 10 MW discharged for 4 hours, 5 MW discharged for 8 hours, or different levels of discharge for varying durations. Battery systems can target a use case that provides a more consistent output of intermittent renewable sources or flattens the peaks of load curves of customers with highly variable loads. These systems are most predictable when they discharge in a manner set by program rules. For planning purposes, the Company will view the demand reduction from the battery as the amount of discharge it can provide over four hours, in line with the network peak load. Thus, a 500-kW reduction from the peak would be a 2 MWh battery discharged over 4 hours. The Company understands that a battery system could discharge in a variety of ways, and if an incentive mechanism (e.g., DR, NYISO price signals, or VDER) caused the battery discharge pattern to vary from this standard, then the Company could adjust the amount of reduction the forecast includes.

When the ESS is charging, it adds demand to the system. Storage use, and its impact on peak load, varies by intended purpose (e.g., customer-peak shaving, DR, direct control of UIS) and size of the resource. Customer-peak shaving depends on the time of the customer's peak and may not be coincident with the utility or the NYISO peak. Additionally, resources targeting customer-specific energy needs may have obligations that cause them to be unavailable at certain times. The Company recognizes that several factors require further study, including storage use and charging methods.

Detailing storage operational requirements within contracts allows the Company to measure and influence or control a range of storage use cases. For example, the demonstration projects support a higher level of utility visibility and impact on peak demand. NWS also provides an opportunity for the Company to activate an ESS unit to discharge, providing localized relief as part of a larger suite of demand management projects. Similar RFPs would verify alignment with the Company's greatest need. The Company expects data from these programs to contribute to peak load and energy use impact studies in the coming years.

8) Describe the resources and functions needed to support billing and compensation of energy storage owners/operators.

Tariff-driven compensation, such as VDER and WVS, allow for customer billing through monetary crediting in lieu of volumetric crediting. As of 2021, the Company implemented a new DRMS module that automatically measures and verifies performance to calculate incentive payments and sends settlement statements to the aggregator for review,

including energy storage that is enrolled in DR. In 2024, the module was further refined to provide easy operator use. This settlements module has also successfully been integrated with the Demand Management Tracking System to facilitate easier settlements distribution. Settlements module enhancements will continue through 2028.

9) **Identify the types of customer and system data that are necessary for planning, implementing, and managing energy storage and describe how the utility provides those data to developers and other stakeholders; and**

The business model for a particular storage resource will influence which types of customer and system data the storage operator needs for planning, implementing, and managing targeted use cases. For example, Con Edison uses information from the distribution planning process to identify locations experiencing or expecting to experience constraints that storage (or other technologies) may be able to mitigate and shares this information with third parties through NWS postings and solicitations and identification of Locational-System Relief Value areas.

For developers marketing BTM storage to customers, they typically need the customer's energy demand and consumption data. This data is available through Con Edison via Green Button Connect ("GBC") and Electronic Data Interchange. Developers can also work with customers to obtain data directly (i.e., customers can use the Green Button Download, My Data tool available in My Account and share the resulting file, available in both XML and CSV formats, with the developer). Data sharing tools and capabilities are described in greater detail in **Section 2.8 Data Sharing****.**

As part of Stage 3.5 of the Hosting Capacity Roadmap, Con Edison and the Joint Utilities published Stage 1 of the Storage Hosting Capacity Maps in the spring of 2022. Stage 1 displays feeder-level hosting capacity (min/max), additional system data, downloadable feeder-level summary data, sub-transmission lines available for interconnection, and reflects existing DERs in circuit load curves and allocations. The Company also implemented Stage 2 of the Storage Hosting Capacity Maps in April 2023, providing a suite of additional functionality, including sub-feeder level data points and nodal constraints. Hosting capacity updates and functionality are covered in greater detail in **Section 2.9 Hosting Capacity**.

10) **By citing specific objectives, means, and methods, describe in detail how the utility's accomplishments and plans are aligned with the objectives established in the CLCPA.**

The Company has focused efforts to address economic and technical barriers to energy storage, including cost, market participation, permitting and zoning, access to system data, and subsidies and incentives. These have been advanced through new business models, coordination with the NYISO, work with applicable AHJs, GBC and hosting capacity maps, and NWS, DR, and VDER programs, respectively.

By integrating NWS into the planning process, the Company is routinely looking for opportunities to defer traditional investment through DER. Examples include the storage-specific RFP issued in July 2022 seeking cost-effective ESS technologies for operational availability starting as early as May 2025 within the BQDM territory. In 2023, the RFP for the Jamaica project resulted in the procurement of storage resources.

Additionally, as described above, Con Edison has actively sought and introduced new opportunities for energy storage to participate in the Company's tariffs and programs. For example, Con Edison's revised tariffs allow for storage resources to participate in the wholesale energy markets and as a distribution resource.

Con Edison has continued to work with stakeholders to advance the technical feasibility of deploying energy storage. The Company has worked with municipalities to mitigate permitting concerns regarding energy storage devices in and around buildings and continues to actively participate in stakeholder forums, particularly those with NY-BEST. The Company is also complying with new requirements in the SIR designed to facilitate the interconnection of storage assets. Finally, the Company is actively implementing the Storage Order and planning for the CLCPA, including the fourth UDR solicitation for scheduling and dispatch rights for distribution and transmission-connected ESS that will be operational by December 31, 2030.

2.5. EV INTEGRATION

Context and Background

Electric vehicles ("EVs") are integral to achieving New York State's ("NY State") clean energy goals. The transportation sector accounts for nearly 30 percent of CO_2 emissions in New York City ("NYC"),[85] which NY State is addressing through enacting a series of policies to spur adoption of zero-emission vehicles ("ZEVs"). The goal of the utility transportation electrification programs is to deploy an EV charging network across NY State that could support 850,000 light-duty ZEVs, consistent with the 2013 ZEV Memorandum of Understanding and serve as the foundation for further policy goals (New York State's Climate Action Council published a framework to reach Climate Leadership and Community Protection Act ("CLCPA") emissions reduction targets, and the framework calls for at least 3 million zero-emission vehicles on the road in New York by 2030).[86] Additionally, the passage of NY State Senate Bill 2758/Assembly Bill 4302 established targets for ZEV new vehicle including 100 percent of new light-duty vehicle ("LDV") sales by 2035 and 100 percent of all new medium- and heavy-duty ("MHD") sales by 2045. In April 2022, Governor Hochul passed a statewide zero-emission school bus mandate, requiring all new school bus purchases starting in 2027 to be zero-emission, with 100 percent electric school buses by 2035.

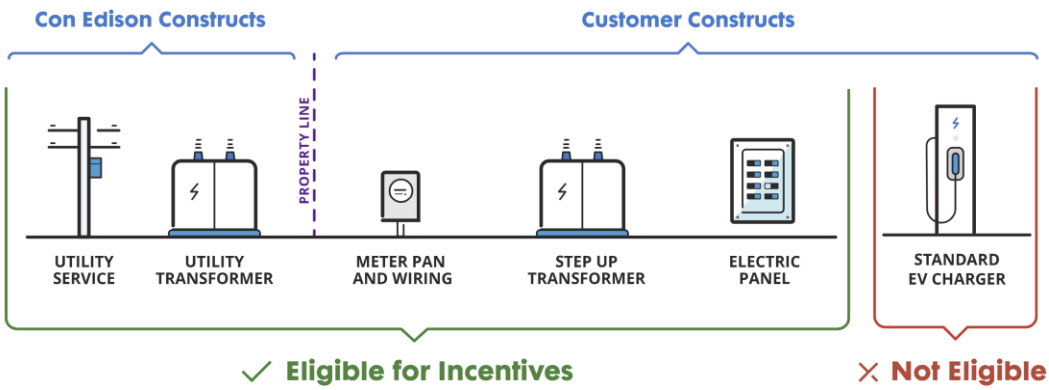
These statewide efforts were mirrored by local initiatives. In October 2023, Mayor Adams signed a bill to transition all NYC government vehicles to be zero-emission by 2038, and the NYC Taxi and Livery Commission adopted the Green Rides initiative, which requires NYC's rideshare trips to be conducted by either zero-emission or wheelchair accessible vehicles by 2030. Then, in April 2024, NYC enacted Local Law 55, which mandates that City-licensed parking garages and open parking lots with 10 or more parking spaces must have at least 20 percent of parking spaces equipped with Level 2 ("L2") charging stations and 40 percent of parking spaces wired to be capable of supporting Level 2 charging stations by January 1, 2035.

Supporting this scale of transportation electrification requires a reliable grid capable of meeting increased demand. The Public Service Commission ("PSC") initiated a series of proceedings and issued orders to develop the infrastructure and operating cost incentives, price signals, and associated programs that will facilitate the affordable electrification of on-road transportation.

In April 2018, the PSC initiated a proceeding to scale the deployment of EV infrastructure.[87] In July 2020, the PSC issued an order authorizing an EV make-ready program ("MRP")[88] to support the adoption of EVs in the state by reducing the upfront costs of building charging stations for light-duty EVs. The EV MRP incentive levels generally cover from 50 percent up to 100 percent of eligible applicable costs, where the higher end of the range is available to projects that are in a disadvantaged community ("DAC"), publicly accessible, and offer non-proprietary plugs. The infrastructure eligible for incentives includes equipment and labor behind the customer's property line, up to their EV charger, as shown in **Figure 12**.

[85] NYC Mayor's Office of Climate and Environmental Justice, PowerUp NYC (September 2023): https://climate.cityofnewyork.us/wpcontent/uploads/2023/09/PowerUpNYC.pdf.
[86] Note 1, *supra.*
[87] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and* Infrastructure, Order Instituting Proceeding (issued April 24, 2018).
[88] Note 41, *supra*.

Figure 12: Make Ready Program Eligibility



Starting in fall 2022, Con Edison and the rest of the Joint Utilities participated in the PSC's Midpoint Review of the MRP ("Midpoint Review"), evaluating budgets, targets, incentive levels, eligibility criteria, and technical standards.[89] Throughout 2022 and early 2023, the Midpoint Review continued with robust stakeholder engagement. The PSC's November 2023 order marked the conclusion of the Midpoint Review, and it adjusted the plug targets, baseline incentives, and reporting requirements for the remainder of the program.[90] Additionally, in April 2023, Governor Hochul announced the NY State proceeding to implement policies and develop programs related to MHD EV charging infrastructure.[91] This proceeding supports the electrification needs of the state's MHD EV sector as these vehicles electrify.

Encouraging off-peak charging will also play a critical role as adoption of EVs increases throughout the state. The PSC has opened proceedings on programs and price signals to incentivize EV charging during off-peak periods, which can mitigate the impact of EV charging on the grid.

In 2017, Con Edison began offering SmartCharge New York ("SCNY"), a residential managed charging program, which incentivizes customers to avoid EV charging during system peak hours and instead charge during overnight, off-peak hours. As part of the July 2020 Make-Ready Order described above, the PSC directed each utility to file proposals for active or passive managed charging programs for mass market customers.[92] The Order recognized existing programs as a means for compliance with this directive. The PSC's July 2022 Managed Charging Order continued the SCNY Program through 2025.[93]

SCNY and other technology-agnostic price signals deliver a two-fold benefit: offer operating cost support for EV drivers and support grid flexibility. Price signals have been an evolving topic across customer segments and regulatory proceedings. In November 2018, the PSC issued its EV time-of-use ("TOU") rates Order, directing each utility to have a whole-home TOU rate option and a TOU rate based on dedicated EV loads available to residential customers.[94]

---

[89] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, Notice of Meeting and Commencement of the Make-Ready Program Midpoint Review (issued August 30, 2022).
[90] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, Order Approving Midpoint Review Whitepaper's Recommendations with modifications (issued November 16, 2023).
[91] Case 23-E-0700, *Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure*, Order Instituting Proceeding and Soliciting Comments (issued April 20, 2023).
[92] Note 41, *supra.*
[93] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, Order Approving Managed Charging Programs with Modifications (issued July 14, 2022).
[94] Case 18-E-0206, *Tariff Filings to Effectuate the Provisions of Public Service Law Section 66-o* (Residential Electric Vehicle Charging Tariff), Order Rejecting Tariff Filings and Directing Tariff Revisions (issued November 15, 2018).

In 2022, the PSC opened a Demand Charge Alternative proceeding, which initially solicited stakeholder feedback. Informed by this process, in January 2023, the PSC issued the Demand Charge Alternatives Order, differentiated by upstate and downstate utilities, requiring utilities to implement both immediate- and near-term solutions.[95] This order directed each utility to implement a Demand Charge Rebate ("DCR") program and directed that Con Edison and Orange & Rockland ("O&R") also implement a Commercial Managed Charging Program ("CMCP") as an immediate solution that offers operating cost support for charging station operators. Immediate solution implementation plans were subsequently approved in November 2023.[96] This order further directed the utilities to redeploy previously accumulated and unspent funds from the Per-Plug Incentive ("PPI") Program to fund a new program to incentivize EV charging demand management technologies. Known as the Load Management Technology Incentive Program ("LMTIP"), the PSC approved utility program proposals in August 2024.[97] These programs work together to equip charging station operators with the ability to shift their load and price signals to encourage them to engage in grid beneficial behavior. Finally, the Demand Charge Alternatives Order directed the utilities to develop and file new price signals designed specifically for commercial EV charging, referred to as EV Phase-In Rates ("PIR"), intended to be a solution for supporting commercial EV charging business models as EV adoption continues. The EV PIR are available to all commercial customers with a charging ratio[98] greater than or equal to 50 percent, are designed on a revenue-neutral basis, and use a four-tiered rate structure based on a customer's load factor (the first tier begins with an energy-based charge and subsequent tiers gradually increase the relative level of revenues collected through traditional demand charges as load factor increases). The PSC approved utility proposals for EV PIR in October 2024.[99]

To prepare the grid for increased adoption of EVs, the PSC commenced a new Proactive Grid Planning Proceeding, as discussed in **Section 2.1 Integrated System Planning.** In August 2024, the PSC ordered the utilities to propose a first round of urgent projects needed for electrification loads and to develop a planning framework for future infrastructure needs driven by electrification, especially in transportation and buildings.[100] On June 12, 2025, the PSC issued the Order Addressing Urgent Upgrade Filings[101] and approved five of Con Edison's nine proposed urgent projects which will unlock a cumulative 380 MW of additional capacity for electric vehicles and building electrification in Con Edison territory.

Utility programs and offerings, paired with federal and NY State directives and incentives are stimulating EV growth and the buildout of supporting infrastructure, as expected. Statewide, there were nearly 100,000 new EV registrations in 2024, accounting for almost 10 percent of new vehicle registrations. Con Edison's service territory accounts for 35 percent (approximately 102,000 of 286,000) of vehicles[102] and 58 percent (approximately 19,500 of 33,500 committed and completed) of MRP-participating chargers statewide.[103]

---

[95] Case 22-E-0236, *Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging*, Order Establishing Framework for Alternatives to Traditional Demand-Based Rate Structures (issued January 19, 2023).
[96] Case 22-E-0236, *Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging*, Order Implementing Immediate Solutions (issued November 20, 2023).
[97] Case 22-E-0236, *Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging*, Order Establishing Load Management Technology Incentive Programs (issued August 19, 2024).
[98] Defined as the ratio of the sum of EV charging capacity in kW to the sum of the maximum simultaneous demand of all loads on the account in kW.
[99] Case 22-E-0236, *Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging*, Order Implementing Electric Vehicle Charging Rates for Commercial Customers (issued October 17, 2024).
[100] Note 26, *supra.*
[101] Note 27, *supra.*
[102] EValuateNY, Atlas Public Policy (accessed May 1, 2025): https://atlaspolicy.com/evaluateny/.
[103] Joint Utilities Plug and Budget Tracker (accessed May 15, 2025): https://jointutilitiesofny.org/ev/make-ready, The 19,500 plugs represent a combination of L2 and DCFC plugs that are either completed or under contract through the PowerReady Program. The 33,500 plugs include both completed and under-contract L2 and DCFC plugs incentivized through the Joint Utilities' Make-Ready Program.

The rapid progress of EV adoption is encouraging for staying on track with the state's clean energy policy goals; however, work remains to spur further adoption and shape charging behavior. At this early stage in the EV charging market, continuity in the broad availability of programs and right-sized incentives are important to support EV charger build out and to cost-effectively ingrain grid beneficial behavior in charging station operators. A combination of operating cost support and price signals that encourage charging during the right times has the potential to expand grid flexibility and allow more efficient connection of electric transportation loads to the grid.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Partnered with NYC Department of Transportation ("DOT") and FLO EV Charging Stations, deploying 118 curbside EV charging plugs across NYC.
- Energized more than 11,000 L2 plugs and approximately 430 Direct Current Fast Charging ("DCFC") plugs through the PowerReady MRP as of the end of 2024.
- Launched an MHD MRP pilot and a Micromobility MRP to serve the infrastructure needs of those markets.
- Achieved 25.9 percent market penetration of registered light duty EVs within the Con Edison service territory as of the end of 2024 through the SCNY residential managed charging program.
- Launched SmartCharge Commercial ("SCC"), a commercial managed charging program, in January 2024 to incentivize eligible commercial EV charging stations for off-peak charging.
- Launched LMTIP to support customers in implementing load management solutions for EV charging.
- Launched a demonstration project to test cost-optimization strategies for MHD fleets.
- Continued to electrify Con Edison's fleet, with over 711 LDVs and 29 MHDVs as of the end of 2024.
- Completed over 115 fleet site assessments in 2023 and 287 in 2024.

Utility Capabilities Demonstrated (non-exhaustive)

Planning & Forecasting: The Company's experience developing infrastructure for several EV programs and the PSC's Proactive Planning Order are being leveraged to better understand current patterns and *forecast* future EV charging load.

Customer Programs: Con Edison has engaged with and incorporated feedback from stakeholders into its various EV *customer programs* and has made adjustments based on lessons learned. To accelerate vehicular electrification, the Company is focused on providing best-in-class customer experience and provides valuable information via its advisory services.

Market Participation: Con Edison has developed programs and right-sized *incentives* that are designed to support the buildout of charging stations and promote grid-beneficial charging behaviors.

Con Edison is focused on enabling the buildout of a widespread and accessible EV charging network and overcoming barriers to EV adoption. The Company supports the installation of chargers at diverse locations, including public hubs, curbs, multifamily dwellings, and retail locations to combat range anxiety and encourage EV sales. Con Edison offers incentives for a broad range of vehicle classes, from e-bikes, to cars, trucks, and buses, and provides a best-in-class customer experience through a range of early engagement advisory services and site assessments. Complementing

these services are tools to clarify charging costs and rate options, including self-serve tools such as hosting capacity maps that support project development. The Company is also focused on an initiative to shorten service timelines to connect and energize charging stations to the grid. Con Edison pursues initiatives in four key areas: 1) charging infrastructure, including advisory services; 2) grid beneficial behavior and innovation; 3) fleet initiatives; and 4) innovation. The Company is continuing to test a range of EV enablement activities and assess where it can make the largest impact on market growth and create the most benefits.

Charging Infrastructure

Con Edison continues to facilitate charging infrastructure deployment and leverage partnerships with public agencies and the private sector. The Company's progress in this area is shown through the PowerReady Program (approved under the Make-Ready Order) and its curbside charging project with the NYC DOT. The experience developing infrastructure to run these programs provides insight to distribution planners about the nature of EV charging load and how to build out the electric infrastructure to serve it. Infrastructure development and alignment with planning processes will be further explored through the Proactive Planning proceeding.

PowerReady Make Ready Program

Con Edison's PowerReady MRP supports stakeholders' needs for EV charging at public, workplace, destination, and muti-unit dwelling use cases to accelerate adoption of EVs. The program reduces the up-front costs of building EV charging stations through Make-Ready incentives, which offset a large portion of, or in some cases, all of the infrastructure costs associated with preparing a site for EV charger installation.

The PSC's November 2023 Order[104] marked the conclusion of the Midpoint Review, throughout which extensive stakeholder engagement, comment periods, and technical conferences were held to inform the adjustments to plug targets, baseline incentives, and reporting requirements for all the utilities. The Midpoint Review Order authorized a six-fold increase to the budget to install a total of 21,371 L2 and 3,157 DCFC charging plugs in the Con Edison service territory.

Con Edison has seen a robust market response to the PowerReady incentives. As of December 2024, more than 11,000 L2 plugs and approximately 430 DCFC plugs have been energized through the PowerReady MRP. Thirty percent of the total plugs completed are located in DACs. The number of L2 and DCFC plugs completed nearly doubled in 2024 as more plugs were completed that year than in almost all previous years combined.[105]

In addition to the substantial progress in charging plug installation, the PowerReady program is on target to commit incentives toward its maximum plug target while remaining under budget, with over $150M in savings expected from the L2 and DCFC program combined.

Medium- and Heavy-Duty Vehicle Make-Ready Pilot

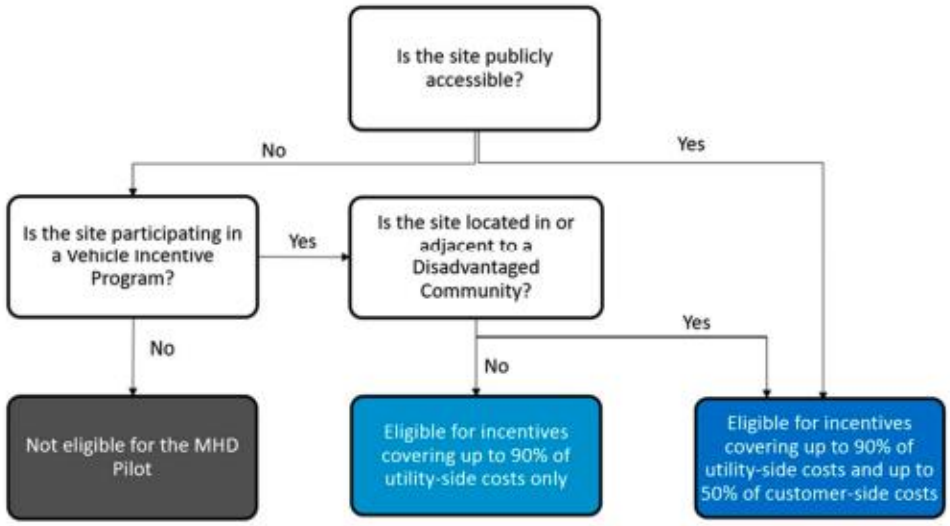
The Midpoint Review Order also authorized updates to the MHD Pilot Infrastructure Make-Ready Program ("MHD Pilot"), by authorizing incentives up to 50 percent of customer-side costs and up to 90 percent of utility-side costs for certain eligible projects. **Figure 13** shows a flowchart that illustrates incentive eligibility. Subsequent PSC Orders also expanded eligibility to include sites adjacent to or partially in DACs. Con Edison, along with the Joint Utilities, has worked with Department of Public Service ("DPS") Staff to broaden the eligible voucher programs as more federal programs

[104] Note 90, *supra.*

[105] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, PPI and MRP 2024 - Annual Report (filed on February 28, 2025). Noted *completed* plugs have both been energized and incentives have been paid out.

became available. These updates to the program made the MHD Pilot accessible to more customers, but there are still eligibility challenges, as participation has been limited. Since the program's inception, 13 applicants have applied for over 450 plugs. The MHD Pilot will be important to meet the ambitious policy mandates for MHD fleets and school bus electrification in the state, and to build additional expertise to help inform a full-scale program.

Figure 13: MHD Pilot Program Eligibility Flowchart



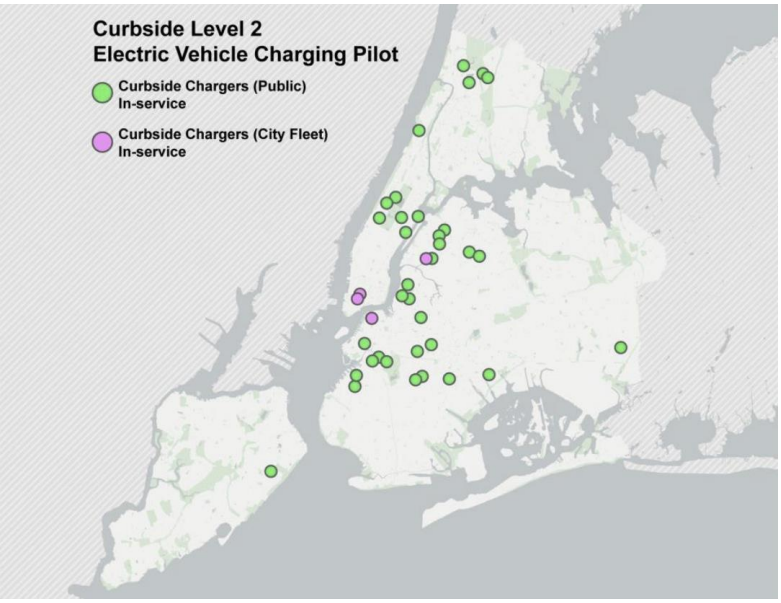
Curbside Charging Demonstration Project

Public EV charging is a critical segment for supporting EV adoption in dense urban environments where many residents lack dedicated parking. Con Edison has partnered with the NYC DOT and FLO to demonstrate the viability of curbside charging stations located throughout the city and test rates of charger utilization, feasibility of the installation process, hardware durability, and new customer technology acceptance. The project is nearing completion and has proven the viability and attractiveness of curbside EV charging in NYC, where charger utilization has exceeded expectations.

As of the end of 2024, the project partners have deployed and are operating 118 FLO SmartTWO, L2 electric vehicle chargers across NYC. Figure 14 shows the project sites in service as of Q1 2025. To use the charging network, EV drivers become customers of the FLO brand charging network, which is free to join. FLO offers customer service, billing and payments, and equipment operations and maintenance for the charging stations. Con Edison financed the project and performed project management for station location design, engineering, construction, and maintenance. NYC DOT selected the locations, including dedicating regulated parking spots for NYC fleet chargers and public parking spots for the balance of the network.[106]

[106] Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, REV Demonstration Project: Curbside Electric Vehicle Charging Q1 2025 Quarterly Progress Report (filed April 30, 2025).

Figure 14: Curbside Demo Project Sites in service as of Q1 2025 (NYC DOT)



The project is intended to demonstrate that curbside charging in the public right-of-way can be acceptable to host communities, used by EV drivers, and viable as a business opportunity for investors and other institutions in NYC. The Company collects lessons learned from the demonstration project, which it reports in quarterly update filings.

Site utilization is one metric to prove the business case for curbside charging is scalable in NYC. During the first three years of operations, the Company observed steadily increasing utilization of curbside charging stations. More recently, system-wide utilization has reached a steady state of high usage. During the month of March 2025, the system-wide average utilization was 72 percent, which is an improvement on the annual average public charger utilization observed in 2024, when the Company saw 32 out of 34 public locations utilized over 50 percent of the time. The Company continues to monitor charging behavior and factors affecting utilization.

Micromobility Make Ready Program

Micromobility devices (such as electric bikes and electric scooters) are more affordable than EVs and provide an efficient transportation mode, particularly in dense urban areas. Providing safe, designated charging for micromobility devices is one important way to support clean transportation and help overcome barriers to personal electric mobility, especially in DACs. Authorized in the November 2023 Midpoint Order, the Micromobility MRP program provides incentives to offset the cost of installing e-bike chargers in DACs. Con Edison has laid the groundwork for the program, including developing program processes, building program application management and tracking systems, creating program communication and marketing materials, and launching tools, including a program website. The Company also conducted multi-channel marketing and communication outreach, attended events to promote the program (e.g., the Brooklyn Chamber of Commerce's Energy Summit & Expo and Electric Car and E-Bike Ride and Drive), and engaged closely with stakeholders (including local regulatory agencies) to convene a monthly working group. Con Edison has received approximately 90 program applications as of early 2025.[107]

[107] This data reflects the most recent update from the Micromobility Program, as of May 2025.

EV Affordability and Managing Operational Costs

Con Edison provides a variety of programs and rate options designed to accomplish two goals – ingrain grid-beneficial charging behavior and provide operating cost support to EV charging station operators and EV drivers. This operating cost support improves charging station economics and spurs the infrastructure buildout needed to facilitate EV adoption. Con Edison's three managed charging programs (SCNY, SCC, and SmartCharge Technology) each support these goals in a different way and additionally help work towards achieving the objectives of the Grid of the Future ("GOTF") proceeding by spurring adoption of EVs and electric vehicle supply equipment ("EVSE"), which may be used as flexible resources.

SmartCharge New York

SCNY is Con Edison's managed charging program that promotes grid-beneficial charging behavior through two categories of incentives targeted at EV drivers:

1. Primary incentive for avoiding on-peak EV charging during summer weekdays (June-September).
2. Secondary incentive to encourage overnight off-peak (midnight-8 am) charging.

The primary incentive requires consistent behavior over the entire month in which the Company disburses incentives. The secondary incentive is earned on a rolling basis with monthly or quarterly incentive disbursements, as it depends on the volumetric energy use during off-peak hours.

As required by the Managed Charging Program Order, the Company has set incentive levels lower than the difference between standard and TOU or alternative off-peak rates for the supply and delivery portions of an illustrative EV charging electricity bill. Consequently, SCNY has altered its participant pool, offering the program to customers who are not enrolled in any TOU rate structures.[108]

To minimize system impacts, the SCNY Program incentivizes participants to avoid the 2 PM to 6 PM system peak window for charging their vehicle. Incentive structures are designed for LDVs, whether mass market or fleet. In the relaunch of the program in 2023, a limited amount of on-peak charging is permitted where incentive levels are adjusted downwards, proportional to the on-peak charging, thereby increasing the flexibility of the incentive across the summer months.

Through February 2025, the Company enrolled around 25,000 EVs into the residential managed charging program. Between 2023 and 2024, the Company nearly doubled participation in the program, from about 12,500 EVs enrolled at the end of 2023 to about 23,500 EVs enrolled by the end of 2024.[109] These program participants helped avoid costly peak demand, avoiding 1.57 kW per EV on the road in 2023.[110] As of December 2024, participation in the program represents 25.9 percent of registered light duty EVs in Con Edison's service territory.

SCNY permits program participation through onboard vehicle telematics and networked EVSEs. To date, more than 97 percent of vehicle data is sourced through onboard telematics, with only 3 percent through home charging systems.

Under the Managed Charging Program Order, SCNY and the utilities' managed charging programs are authorized to continue through the end of 2025. A gap in program continuity could result in participant attrition and market

[108] Note 93, *supra.*

[109] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, Joint Utilities' Petition to Extend the Managed Charging Programs (filed April 9, 2025).

[110] Case 22-E-0064, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, 2023 Updated Con Edison Earnings Adjustment Mechanisms Achievement Report (updated November 15, 2024).

uncertainty, impacting enrollment and charging behavior of both new and existing customers. In April 2025, the Joint Utilities submitted a petition to the PSC seeking continued authorization of the programs through 2026 and a process to reauthorize the programs beyond 2026.[111]

Commercial Managed Charging Program

Once approved in the PSC's November 2023 Order to implement Immediate Solutions, Con Edison launched its CMCP, known as SCC, in January 2024. The SCC program design provides price signals to encourage grid beneficial charging behavior and provides meaningful operating cost support to commercial EV charging station operators by incentivizing EV charging station operators to reduce their usage during periods of high electricity demand at the local network level.

The program offers both a peak avoidance kW incentive and an overnight, off-peak charging kWh incentive. The program also provides use case-specific adder incentives for public L2 charging and transit fleet charging customers. To calculate incentives, station operators must submit monthly consumption data for each participating charger through 15-minute interval usage data or charging session usage data. Stations can use meter data to calculate incentives if their EV charging is separately metered from non-EV site load. Con Edison and O&R petitioned the PSC in April 2024 to expand data eligibility requirements for the CMCP to allow more station operators to participate in the program, and in September 2024, the PSC approved the use of charging session data as an alternative to 15-minute interval data.

As of the end of 2024, the Company had enrolled 44 participating sites totaling 21 MWs in its CMCP program, with an average monthly peak demand of 306 kW. For those customers participating in both the CMCP and the DCR, that average monthly peak demand increases to 611 kW.[112] These sites are highly impactful on shifting load to reduce localized peaks.

Demand Charge Rebate

As of March 2023, the DCFC PPI program stopped accepting applications. Participants were given the option to stay enrolled for the remainder of the program or to switch to the DCR. All Con Edison PPI participants chose to switch programs.

Approved in the PSC's November 2023 Order and launched in January 2024, the DCR provides a 50 percent off-bill credit on demand charges for eligible public DCFC stations and reduces the operating costs for owners of EV charging stations. As of the end of 2024, Con Edison has three sites participating in the DCR, and nine sites participating in DCR and CMCP.[113] The DCR program will phase out once the Companies begin to offer the EV PIR.

SmartCharge Technology Incentives

The PSC's August 2024 LMTIP Order approved the Joint Utilities' proposal to repurpose the unused funds from the now-sunset DCFC PPI program to offer incentives for load management technology used with EV charging projects that participate in complementary utility programs.[114] The LMTIP, known as SmartCharge Technology at Con Edison, launched in November 2024, and encourages the installation of load management technology, including on-site energy storage equipment, energy storage-integrated EVSE, load management software, and load management hardware. For customers, load management helps to manage charging and can reduce the costs of EV charging and the need for site infrastructure upgrades.

[111] Note 109, *supra*.
[112] Case 22-E-0236, *Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging*, Consolidated Edison Company of New York, Inc. and Orange and Rockland Utilities, Inc. Immediate Solutions Annual and Semi-Annual Report (filed April 18, 2025).
[113] *Ibid.*
[114] Note 97, *supra.*

As of May 2025, Con Edison's SmartCharge Technology program has received 49 applications.

Residential Rate Options

Con Edison offers two residential TOU rate options for EV drivers to consider: (i) a residential TOU with a one-year price guarantee and reduced monthly customer charge ("Special Provision E") and (ii) installation of a separate residential meter to solely charge an EV. For Special Provision E, after 12 months, the Company will compare what was paid under TOU rates with what would have been billed under the standard residential rate. If a customer paid more on the TOU rate, the Company credits the customer's account for the difference.

As of the end of 2024, the Company had 300 EV customers enrolled in the whole house TOU rate and 14 customers with separately metered EV consumption.[115]

Cost Optimization for Fleet Electrification Demonstration Project for Medium- and Heavy-Duty Vehicles

Con Edison is partnering with First Student to implement a scalable and cost-effective smart energy management solution for 12 heavy-duty school buses. This project aims to test cost optimization strategies to reduce the total cost of ownership ("TCO") of electrifying MHD vehicle fleets. The solutions to test these cost optimization strategies include:

1. Developing a Smart Energy Hub, with stationary battery storage and solar panels on 12 electric buses and the depot and using software for fleet charging and load management.
2. Using First Student's proprietary above-ground EV charging infrastructure design, which is a prefabricated kit that provides a no-trenching approach, reducing upfront installation costs.
3. Comparing the operational costs between six new electric buses and the retrofit of existing buses.
4. Potentially installing bi-directional chargers to evaluate the feasibility of testing vehicle-to-grid ("V2G") earnings opportunities.

The Company launched the demonstration project in January of 2025 and has started Phase 0, which includes reviewing current operations, collecting baseline data, and engineering and procurement. Phase 1, which addresses DCFC charger installation, is currently in progress.[116] **Figure 15** below shows an example of First Electric's electric school buses with rooftop solar panels at a charging depot (for illustrative purposes).

Figure 15: First Student Electric School Buses Featuring Rooftop Solar Panels at a Charging Depot

[115] Case 18-E-0206, *Tariff Filings to Effectuate the Provision of Public Service Law Section 66-o (Residential Electric Vehicle Charging Tariff),* Con Edison PSL Compliance (filed January 30, 2025).
[116] Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, Medium- and Heavy-Duty Vehicle Cost Optimization for Fleet Electrification Q1 2025 Quarterly Progress Report (filed April 30, 2025).

Fleet Initiatives

Con Edison Fleet Transportation

Con Edison is transitioning its light-duty fleet to EVs and reducing the use of fossil fuels in MHD trucks. The Company aims to electrify 80 percent of fleet LDVs by 2030 and 100 percent by 2035. In 2023, Con Edison piloted its first all-electric bucket truck in day-to-day operations, and in 2024, deployed its first all-electric class 8 tractor.

All new light-duty fleet vehicles the Company purchases are electric. The fleet electrification plan also includes the installation of L2 and DCFC chargers for fleet vehicles and dedicated workplace chargers for employee personal vehicles. There are a total of 155 fleet charging ports located on the Company premises, with more planned. The Company continues to engage employees in its fleet electrification efforts through electric pool vehicles available to employees for business use. **Figure 16** below shows one of the Company's new light-duty EV fleet vehicles along with a charger.

Figure 16: Electrified Con Edison Vehicle

Advisory Services for E-Mobility Projects

Con Edison offers a Site Capacity Assessment Service for LDV and MHD fleet operators and charging station developers interested in electrification. The Company completes proactive outreach to local, small, and large national fleets that may be considering electrification and offers the service to other participants considering installing EV chargers. The Site Capacity Assessment Service helps fleet operators evaluate certain costs and benefits associated with fleet electrification, including support for site selection and project charging costs using the EV rate tool described later in this section.

As the Make-Ready Program has evolved, the Company along with the rest of the Joint Utilities, have expanded their Fleet Assessment Services to support non-fleet EV charging developers and now offer a broader range of technical advisory services. These include a rate calculator, in-person training, and *ad hoc* consultations to help customers evaluate duty cycles, charging configurations, metering options, and rate selection. Advisory services, such as pre-engineering Site Capacity Assessments, help conserve Company engineering resources by identifying viable sites early and reducing project cancellations. In 2024, Con Edison

received 287 site assessment requests, but only 35 advanced to full engineering review, reserving full engineering review for the most promising projects. Attrition rates have also declined for projects that underwent site assessments before reaching service determination.[117]

Con Edison, along with the Joint Utilities, has developed a common application form that owners and operators can find on the Fleet Assessment Services website.[118]

Resources and Information

Con Edison enhances the customer experience by creating greater awareness and streamlining processes that simplify the path for participation. In its EV program design, the Company has developed a suite of tools and resources for EV customers and contractors, easily accessible through the Electric Vehicles & Transportation Electrification pages of the Con Edison website.[119] Here, customers may access information on:

- Incentives and resources for installing EV chargers, including those that guide participants through the applications for MRPs.
- Incentives for EV charging station owners, including the CMCP and LMTIP offering.
- Incentives for EV drivers, such as the SCNY residential managed charging program.
- EV services and tools, including EV cost calculator, available contractors, contractor resources, and technical advisory services like site assessments.

Additionally, to support external customer application and project tracking as well as program administration, the Company has developed an EV program platform, which supports the entire project lifecycle from initial outreach through payment, closeout, accounting, and reporting with integrations to the Company's backend energy services and financial systems. Through a single login, program participants can track their project's status in the program and energy services process, upload all required documents and data, and submit inquiries.

To receive personal assistance with EV questions and issues, customers may schedule an appointment with a member of Con Edison's E-Mobility Team by accessing an online portal. Topics that may be pre-arranged for discussion include incentive program overview, registration and application processes, EV charging calculator and rates, and site assessment introduction.

EV Charging Cost Calculator

Con Edison launched its EV charging cost calculator to help customers estimate fuel cost savings, choose the most cost-effective rate for their charging station, and see available operating cost incentives. The calculator was subsequently updated following the launch of SCC in 2024.[120] This tool provides two entry pathways focused on fleet customers and commercial charging station operators, such as public stations and multi-unit dwellings. The tool accounts for the factors that influence the cost of charging, such as the typical load profile of the facility, how often the chargers are used, and

[117] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and* Infrastructure, Notice of Commencement of Make-Ready Program Review (issued March 12, 2025), In March 2025, the Commission initiated a comprehensive Statewide review of the Make-Ready Program. Con Edison, in coordination with other utility companies, submitted detailed comments on the current state of the EV charging market. One comment from the Joint Utilities highlighted the importance of advisory services. Full comments are available at: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={D0836E96-0000-CE3F-A395-4ED80A7E45B4}.

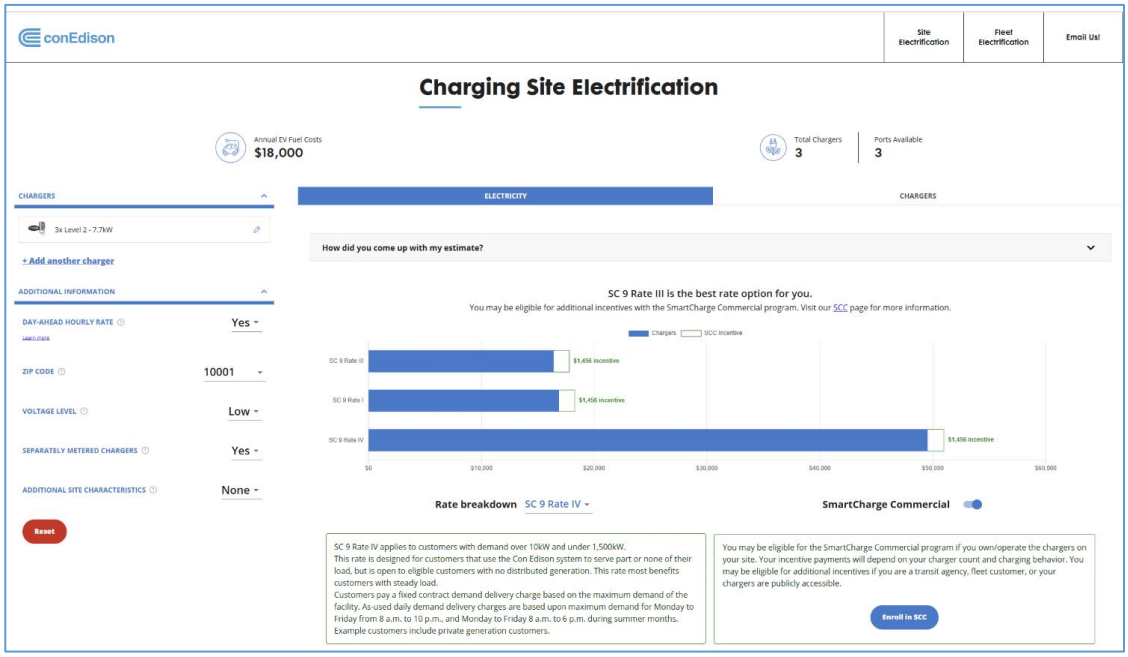
[118] Joint Utilities Fleet Assessment Services landing page: https://jointutilitiesofny.org/ev/make-ready/fleet-assessment.

[119] Con Edison Electric Vehicle resource landing page, https://www.coned.com/en/our-energy-future/electric-vehicles.

[120] Con Edison Charging Cost Calculator: https://charging.coned.com/.

the characteristics of the charger installed. Figure 17 shows an example of the output from the Company's EV Charging Cost Calculator.

Figure 17: EV Charging Cost Calculator Output



Summary of Future Actions

- Continue the PowerReady Program to advance toward the Con Edison goals of 21,371 L2 and 3,157 DCFC plugs and provide additional charging infrastructure support to help achieve the state's goal of 3 million EVs by 2030, as outlined in the 2022 Climate Scoping Plan.
- Expand the SCC managed charging program:
  - Provide incentives to eligible commercial EV charging stations for grid-beneficial charging.
  - Develop a custom-built participant portal, allowing customers to easily apply and upload their monthly charging data.
- Continue to implement the LMTIP (SmartCharge Technology) to provide a range of demand management technologies to limit the grid impact of EV charging and develop flexible load management capabilities.
- Expand technical advisory services, enabling more prospective participants across programs access to planning resources such as the rate calculator and fleet advisory services.
- Continue stakeholder collaboration with various EV owners' clubs, non-governmental organizations, dealerships, developers, building management companies, and other businesses to educate their members, employees, and customers about EV program offerings.
- Continue to grow application pipeline and support for MHD projects.
- Continue to provide incentive and other support through the Company's micro-mobility program.
- Finalize and implement Proactive Planning long-term framework, pending PSC action.
- Collaborate with DPS, program participants, and other stakeholders during the Make-Ready program review.

With many program milestones occurring in 2025, Con Edison and the Joint Utilities are looking forward by planning for the next phases of existing programs and are participating in the regulatory process that will inform future programs (drawing on stakeholder feedback and program learnings in the process). Supporting the continuation of programs will improve support for EV charging. Specifically, renewed programs will support EV charging infrastructure investment and grid-beneficial charging behavior through right-sized incentives that reduce the up-front cost to multi-unit dwellings, public garages and parking lot operators, retailers, employers, and other public parking site operators. A flexible incentive structure that promotes cost containment will balance stakeholders' 2028 considerations, which include EV market conditions, affordability, emission reduction targets, and healthy air.

The New York MRP (Con Edison's PowerReady) program review commenced in March with a stakeholder webinar, and over the course of the review, feedback from the utilities, industry stakeholders, interest groups, and government entities will inform the next steps for future EV charging make-ready incentives, through 2030 and beyond. The utilities' experience in the first five years of the program, and especially since the Midpoint Review, indicates that incentives remain necessary to encourage charger deployment and, in turn, EV adoption.

The program review will evaluate the investment needed in relation to charging plug targets that support state EV adoption goals in 2030 or beyond, costs of make-ready infrastructure, and policy goals related to public access and other topics.

The review will also assess the LMTIPs (Con Edison's SmartCharge Technology), evaluating the implementation to date and determining whether they should be re-authorized with additional funds. SmartCharge Technology represents an important opportunity to build capabilities that monitor and manage flexible resources at the grid edge. The review also

addresses the Micromobility Program's progress in its efforts to bring safe and affordable clean transportation options to New Yorkers.

The MRP also includes the aforementioned MHD Pilot. A forthcoming order is expected to authorize a full-scale MHD program to replace the MHD Pilot and continue to meet MHD stakeholders' needs beyond 2030. To advance to a full-scale deployment of MHD charging infrastructure, there is a need for a significant increase in investment and an adjustment to eligibility criteria. The future program should use the learnings from the MHD Pilot to offer flexible and right-sized incentives, and the regulatory process preceding the full-scale program should include significant input from utilities and stakeholders to support an effective program design. A full-scale program has the potential to meaningfully reduce the upfront investment that fleet owners and operators face when choosing to electrify with the total-cost of EV ownership, including charging development and electricity costs, which is an important factor in fleets' decision making. The Joint Utilities expect this order before the end of 2026 and will operate the Pilot until the full-scale program is authorized.

The Residential Managed Charging program (Con Edison's SCNY) has seen successful since launching but is also set to end in 2025. The utilities have filed a petition[121] requesting authorization to continue the programs until the end of 2026; Con Edison would use unspent money from the current program budget and is not requesting additional funding. This petition also requested the opportunity to initiate a process to reauthorize the programs beyond 2026.

The CMCP (Con Edison's SCC) is one of the Immediate Solutions currently under evaluation. The PSC commenced the first biennial review of the Immediate Solutions in January 2025, including the CMCP and DCR programs. Con Edison views the SCC program as a necessary program for that market segment, with incentives that are well aligned to the grid value it provides. Con Edison has requested the PSC continue the existing SCC program with adjustments to incentive levels for EV PIR customers and is awaiting further direction.[122]

The DCR and the use case-specific adders of the CMCP will sunset once the EV PIR become available. The utilities will make the EV PIR available for customer participation by or before October 2025.

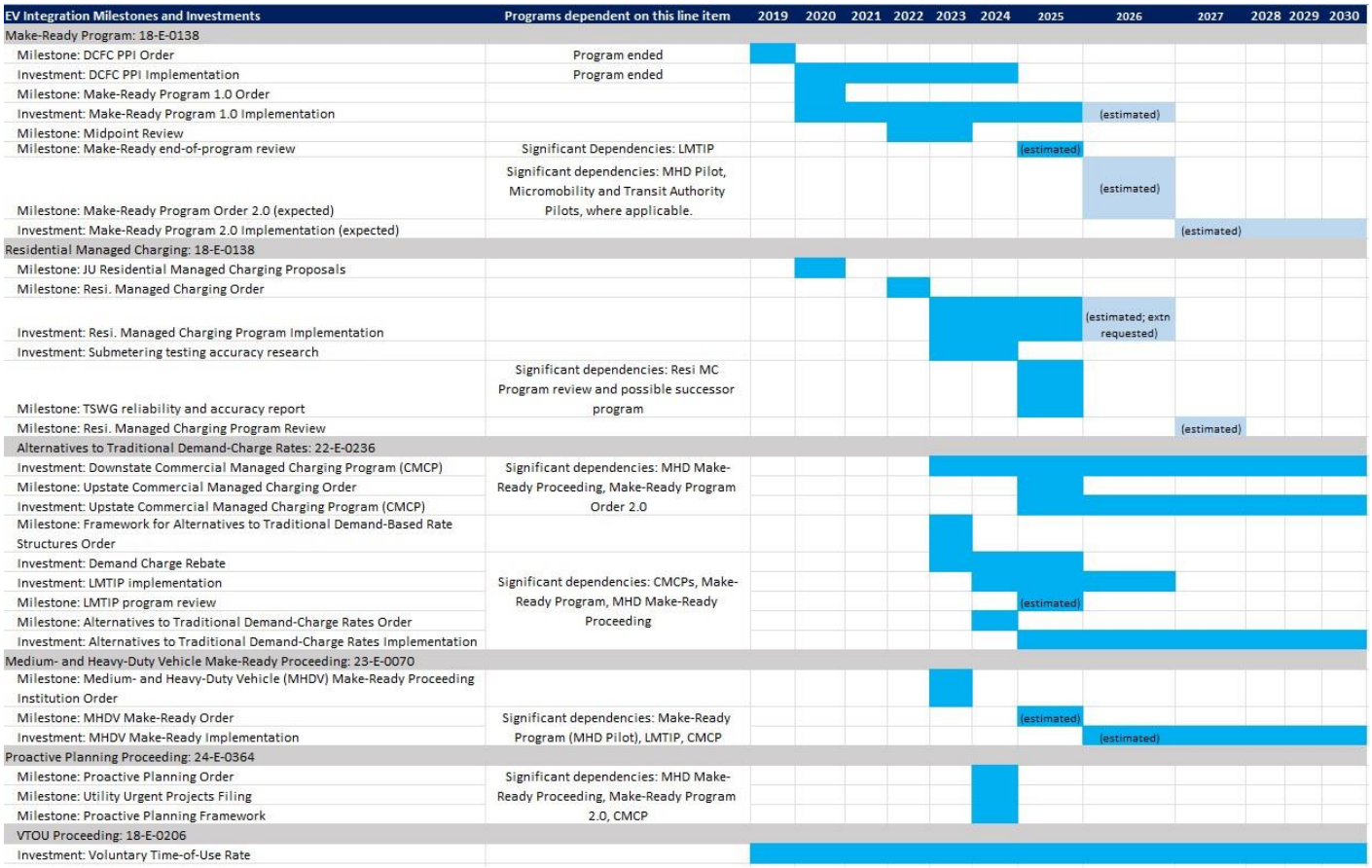
Con Edison is committed to the state's EV goals and implementing programs and projects that facilitate development of charging infrastructure to support increased EV adoption. The Company will continue to apply experience and lessons learned from its portfolio of EV demonstration projects and programs to develop future customer offerings and drive towards the state's ambitious EV charging goals. The Company will continually evaluate program performance and effectiveness and dynamically adjust incentive schemes to align with evolving grid needs. This approach will allow Con Edison to scale EV programs as EV adoption increases while continuing to build the flexible grid envisioned in the GOTF.

As part of the Joint Utilities' EV Working Group ("EVWG"), Con Edison will continue sharing lessons learned and best practices related to critical EV topics. The EVWG will also continue working with other related working groups, including the Information Sharing Working Group and the Integrated Planning Working Group. Collectively, the Joint Utilities have developed a high-level implementation timeline that shows key milestones for all topic-related work and investments described in the two previous sections. This timeline is shown in **Figure 18**.

[121] Note 109, *supra.*

[122] Case 22-E-0236, *Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging*, Con Edison and O&R Biennial Review Comments (filed April 1, 2025).

Figure 18: Integrated Timeline of EV Topics and Proceedings, Including Timeline Estimates



Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Loss or interruption of program support to the market for programs like MRP and Residential Managed Charging	• Continue program review that has been initiated to evaluate, adjust, and renew programs, as needed.
EV adoption slows, not keeping pace with CLCPA Scoping Plan goals	• Support and encourage EV adoption with programs that expand charging sites and convenience, which in turn promotes further adoption, potentially driving down the cost of EVs and promoting customer awareness of the transition. • Monitor key factors that address market evolution including vehicle cost, range, commercial fast-charging speeds, etc.
EV market development is faster than expected and ahead of grid buildout	• Utilize established proactive planning frameworks and methodologies to proactively anticipate areas of needed grid infrastructure investment to support electrification.

Project vendors disrupted	• Use competitive solicitations and/or robust procurement practices.
Program participants reduce investment in New York, conducting their business out of state instead	• Recommend program continuity through the make-ready review process and through the February 2025 petition in Case 18-E-0138.
Inflation and supply chain constraints	• Regularly discuss operations constraints with developer customers and trade allies and host monthly group calls to ask and answer open questions. • Point industry partners to regulatory activity, encouraging them to participate in technical conferences and stakeholder question opportunities.
Reduction in federal policy support or increased tariffs on equipment and materials	• Discuss routinely with the Joint Utilities and state and local policy partners to understand the risk customers may face as a result of reduced federal policy.

Stakeholder Interface

Con Edison engages with a wide variety of stakeholders as it develops, launches, manages, and adjusts its EV program offerings. For each group of stakeholders, Con Edison seeks to understand each party's needs, provide guidance on how its programs and offerings meet those needs, and consider how best to provide information and guidance to the stakeholders to take informed action.

Individual Drivers

These are customers who participate in programs to receive incentives and adopt EV and EVSE technologies. Stakeholders in this category include direct residential and commercial utility account customers, personal vehicle drivers, and fleet drivers. Con Edison has developed a suite of EV programs and tools that are designed to address the goals and needs of customers and reduce barriers to enable greater EV adoption. These goals and needs include additional support for EV charging, increased affordability of EV models, and awareness and understanding of the transition to electric transportation.

Trade Allies, Including Developer Participants

Stakeholders in this category include automakers, EVSE original equipment manufacturers, managed charging aggregators, network service providers, site hosts, consultants, developers, electricians, and installers. Charging site developers, who partner with property owners, or site hosts, often proceed through the program as a direct participant, streamlining the process for these site hosts. These entities provide hardware, software, engineering, and planning service support to help customers adopt and integrate EVs and EV charging; they are key partners to the Joint Utilities in advancing the objectives of EV integration. These providers are routinely engaged for expertise and guidance by the utilities when designing and implementing programs.

Government Entities

Government entities provide policy, regulatory, and public investment aligned with the deployment of EVs and EVSE infrastructure. Con Edison meets regularly with these stakeholders, including DPS Staff, New York State Energy Research and Development Authority ("NYSERDA"), NY State and the NYC DOT, the New York Power Authority ("NYPA"), Port Authority of New York and New Jersey, and city and municipal governments. These authorities contribute to achieving the state's overall objectives for the transition to electric transportation in New York and sometimes set their own EV

targets and implement programs supporting EV adoption. Con Edison and the Joint Utilities prepare and submit comments, propose implementation plans, and report on progress, in part, to keep these stakeholders informed.

Interest Groups

Interest groups are stakeholders that provide technical expertise, community representation, and advocacy for policy objectives such as equity, decarbonization, and advancements of technology. These stakeholders include environmental groups, industry associations, and sector coalitions (e.g., bus fleet operators) who have regular opportunities to influence and guide policy decision-making regarding EV programs. Their needs are met through participation in technical conferences and other stakeholder forums, submission of comments and testimony, and public advocacy for desired EV programs and policies.

Methods for Engagement

The EV programs that Con Edison implements are designed for the benefit and participation of customers as well as the other stakeholders. It is important that the Company regularly gather feedback and input from customers and other stakeholders to right-size offerings and develop new programs for the future. The Company collects feedback on various program aspects including the attractiveness of EV programs, features and benefits most likely to drive participation, affordability and benefits relative to costs, and customer experience. When a public comment period is open in an EV proceeding, such as the review of the technical charging station standards in the MRP, the utilities may conduct informal outreach to a range of stakeholders to encourage their participation.

In addition to actively soliciting public feedback, the EV program has allocated dedicated resources to support participants and prospective applicants throughout their engagement. The program hosts monthly informational calls that provide the latest updates, highlight key milestones, and offer a platform for attendees to ask questions and share input. Each EV program is also staffed with dedicated program managers who serve as direct points of contact and facilitate the collection of participant-provided information. These managers work closely with participants, offering personalized guidance through every stage of the application and implementation process, from eligibility assessments to technical support and project completion.

Both the Con Edison and Joint Utilities websites are regularly maintained and updated to provide participants and stakeholders with access to current program information. These platforms offer detailed guidance on program eligibility, application procedures, technical requirements, and available incentives. The Company also provides application portals where program participants can upload required information.

Finally, Con Edison collects feedback through a variety of channels to inform new or modified program designs (including participation requirements, incentive structure, or eligibility). These channels include public comment periods in proceedings, technical conferences, customer surveys, working groups, and informational webinars, which collectively allow stakeholder comments to be considered by the utilities and the PSC. Key forums described in the program activities above include the EV Infrastructure Interconnection Working Group (“EVIIWG”), the MRP Midpoint Review, and implementation plans/annual reports on key programs. Given broad stakeholder interests in the EV ecosystem, Con Edison is responsive to numerous ad hoc communications and opportunities for collaboration (e.g., quarterly State agency National Electric Vehicle Infrastructure (“NEVI”) coordination meetings, meetings with NYSERDA, participation in industry forums and conferences). Con Edison also participates as a member of the Joint Utilities for stakeholder outreach, technical working groups, including webinars, newsletters, and the Joint Utilities website.

Additional Detail

This section responds to the questions in the DPS guidance specific to EV integration.

1) **Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and anticipated EV charging scenarios in the utility's service territory. Each scenario identified should be characterized by:**

   a. **the type of location (home, apartment complex, store, workplace, public parking site, rest stop, etc.);**

The most detailed analysis of charging scenarios across the Joint Utilities comes from the National Renewable Energy Laboratory's ("NREL") 2017 *National Plug-in Electric Vehicle Infrastructure Analysis*, which includes an estimated number of public L2 and DCFC or quick charging ports in several geographies.[123] Subsequent NREL analysis segments national trends by charging level, charging network, public vs. private, charging location, and fleet vs. non-fleet.[124] Table 10 highlights examples of Con Edison's EVSE market segments and locations categorization.

Table 10: EVSE Categorization

	Residential	Commercial
Private Property- Sited Vehicle Charging	• Single-family home • Multi-unit dwelling	• Workplace • Maintenance yards and depots (light-duty fleet) • Transit bus depot • School bus depot • Private parking lots (e.g., requiring visitor validation)
Publicly Accessible Vehicle Charging	• N/A	*Co-located with commercial host* • Stores • Shopping centers/malls • Parking garages • Rest areas *Co-located with multi-unit dwellings ("MUDs") and other commercial hosts* *Dedicated charging location* • Municipal curbside and parking lot • Quick charge hubs

As of this filing, the PowerReady Program for light-duty vehicle charging has collected nearly five years of L2 and DCFC program data. The data provides valuable insights into charging use cases. These insights help inform the current status

[123] NREL, *National Plug-in Electric Vehicle Infrastructure Analysis*: https://www.nrel.gov/docs/fy17osti/69031.pdf.
[124] Brown, Abby, Stephen Lommele, Alexis Schayowitz, and Emily Klotz, (2021), *Electric Vehicle Charging Infrastructure Trends from the Alternative Fueling Station Locator: Fourth Quarter 2020.* Golden, CO: National Renewable Energy Laboratory, NREL/TP5400- 0120: https://www.nrel.gov/docs/fy21osti/80120.pdf.

of and future outlook for charging infrastructure development. Table 11 highlights the breakdown of installed and under-contract plugs based on use-case for L2 and DCFC.[125]

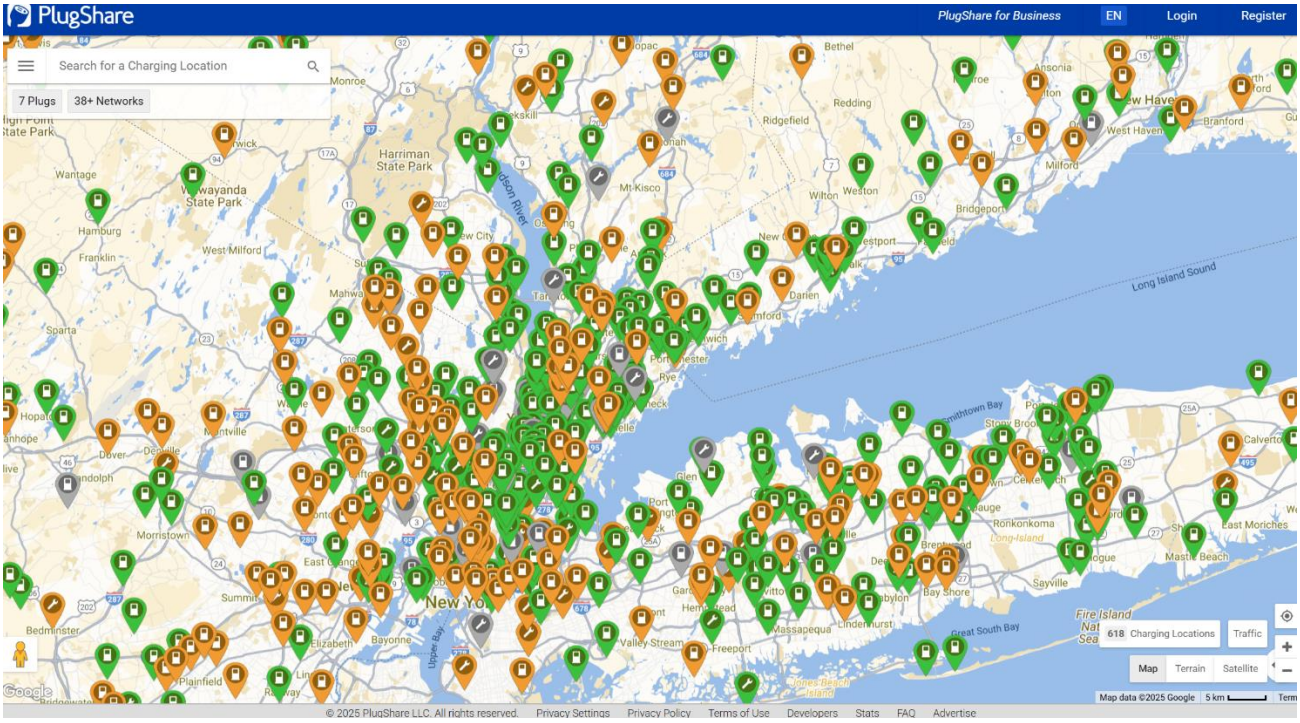
Table 11: Distribution of L2 and DCFC Plugs by Use Case

PowerReady Light-Duty Vehicle Charging Infrastructure Installation Across Con Edison's Service Territory				
Plug Type	**Multi-Unit Dwellings**	**Parking Lots and Garages**	**Workplace**	**Other[126]**
L2	77%	18%	3%	2%
DCFC	3%	43%	30%	24%

b. the number and spatial distribution of existing instances of the scenario;

The U.S. Department of Energy Alternative Fuels Data Center ("AFDC") has a searchable database and includes the capability to download data about existing and announced or planned charging stations. In addition to AFDC, the PlugShare website also identifies public L2 and DCFC chargers to help EV drivers find and access charging stations.[127] PowerReady participants who have installed publicly accessible charging sites are required to add these locations to PlugShare. A screenshot of some of the information available from PlugShare is presented in Figure 19.

Figure 19: PlugShare Map of Publicly Accessible Chargers



[125] Data reflects projects completed and those under contract from 2021 to May 2025.
[126] Refers to retail and other places that conduct business.
[127] PlugShare landing page: https://www.plugshare.com/.

c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;

The Company does not maintain a specific EVSE forecast as EVSE developers and site hosts will largely determine the nature of public and other charging in the Company's service area. EVSE developers will likely look at driver travel patterns, vehicle charging profiles, vehicle registration distribution, and other key data that is required to understand the nature of charging infrastructure needs.[128] Based on five years of data from the PowerReady program, the Company has identified EVSE deployment patterns that are distinctive to its service territory. Notably, the market has predominantly installed L2 light-duty charging infrastructure at multi-unit dwellings (see response to Question 1a). Furthermore, as the program advances, the Company anticipates the DCFC market will increasingly target sites requiring service upgrades, given that most locations with adequate existing service have already been equipped with charging infrastructure. The Company will refer to the data in part (a) when anticipating future spatial distribution of charging scenarios.

d. the type(s) of vehicles charged at a typical location (commuter car, bus, delivery truck, taxi, ride-share, etc.);

The Company expects in the near-term that LDVs will be the predominant class of EVs in the service area. This will include a mix of privately-owned, commercial and municipal fleets, for-hire transportation network vehicles, and taxi cabs. The Company assumes these LDVs will charge at private and public charging locations, which it will continue to support through the MRP.

In NYC, the Green Rides Initiative is expected to drive year-over-year growth in ride-share trips conducted by EVs. Public data from the Taxi Limousine Commission indicates that while many rideshare drivers reside in the outer parts of NYC (Queens, Bronx, and south Brooklyn), a significant number of drop-offs and pick-ups occur in the Central Business District in Manhattan and at the airports.[129] Consequently, ride-share charging is anticipated both in residential areas where drivers begin and end their shift and at locations equipped with DCFC charging for mid-shift recharges.

With the passage of Advanced Clean Trucks and additional future policy developments, Con Edison expects to see greater adoption of MHDVs, which has been limited to date. These vehicles would typically be part of commercial fleets and will likely use private charging. In NYC, zoning and other real estate factors necessitate that commercial fleets, such as delivery vehicles, typically park in industrial business zones, where charging infrastructure is expected to be installed. Con Edison's collaborations on these use cases are described above in the Stakeholder Engagement section, and planning for these fleets is included in the proactive planning forecasts.

Based on these expected adoption patterns of different vehicle types, Table 12 details the most common vehicles charged at a typical charging location.

Table 12: Most Common Vehicles Charged at a Typical Location

Charging Location	Most Common Vehicle Charging
Public	LDV and ride-hail vehicles
Multi-unit dwelling	LDV
Private	LDV and MHD (school bus, logistics)

[128] There are a few public studies on current and forecast public EVSE needs. *See, e.g.*, National Renewable Energy Laboratory, *National Plug-in Electric Vehicle Infrastructure Analysis*: https://www.nrel.gov/docs/fy17osti/69031.pdf.
[129] Taxi Limousine Commission, Electrification in Motion, (September 2024): https://www.nyc.gov/assets/tlc/downloads/pdf/electrification_in_motion_report_2024.pdf.

e. the number of vehicles charged at a typical location, by vehicle type;

While the Company can forecast the range of vehicles needed to comply with ZEV, it is difficult to answer how many chargers will be installed at specific individual locations to support those vehicles. As a source of general information, the NREL's *National Plug-in Electric Vehicle Infrastructure Analysis*[130] counts the current number of chargers and vehicles to estimate how many chargers are typical of public charging locations and how many vehicles those chargers support, all in support of forecasting future infrastructure needed to advance EV adoption.

f. the charging pattern by vehicle type (frequency, times of day, days of week, energy per charge, duration per charge, demand per charge);

Generally, Con Edison does not collect or forecast charging patterns by vehicle type. Con Edison collects charging pattern data through the SCNY and SCC Programs, but this data is not disaggregated based on vehicle type.

g. the number(s) of charging ports at a typical location, by type;

The Company does not forecast the number of chargers at a typical location in its planning scenarios, as this is typically determined by the market and the nature of a charging site. However, the PowerReady Program has program data to provide insights on port count at a typical location. The data in Table 13 below offers a clear picture of the port count for a typical location.[131]

Table 13: L2 Projects Installed Through PowerReady

Location	Average Plug Count
Multi-Unit Dwellings ("MUDs")[132]	19
Parking Lots and Garages	15
Workplace	14

Table 14: DCFC Projects Installed Through PowerReady

Location	Average Plug Count
Multi-Unit Dwellings (MUDs), including MUD garages open to the public[133]	14
Parking Lots and Garages	11
Workplace	4

[130] Note 123, *supra.*

[131] The data includes all committed and contracted charging plugs from the program's inception through April 2025

[132] For L2 charging space in MUDs, charging spaces are primarily reserved for tenants (e.g., private charging sites), although some buildings opt to make these spaces available to the public as well.

[133] In New York City, one business model for DCFC stations involves placing them within MUDs, where the charging spaces are accessible to the general public and not limited to tenants. This approach is currently not common in the PowerReady Program and is reflected in two projects, which together average 14 DCFC plugs per MUD site.

h. the energy storage capacity (if any) supporting EV charging at a typical location;

The instances of energy storage applications installed in Con Edison's service territory to specifically support EV charging are limited. To date, the PowerReady program has committed incentives to less than five battery storage projects. The LMTIP has also received less than five on-site energy storage applications and only has one storage installation.[134]

i. an hourly profile of a typical location's aggregated charging load over a one-year period;

The Company does not currently track the hourly profile of a typical location's aggregated charging load over a one-year period.

j. the type and size of the existing utility service at a typical location; and

The type and size of the existing utility service vary based on the location. Existing service for residential and commercial customers may potentially support Level 1 EVSE and a small number of L2 chargers in some cases. Quick charging (DCFC) and/or deployments of several L2 EVSE may require a service upgrade and/or grid reinforcement.

k. the type and size of utility service needed to support the EV charging use case.

Existing service for residential and commercial customers may potentially support Level 1 EVSE and a small number of L2 chargers in some cases. Quick charging and/or deployments of several L2 EVSE may require a service upgrade and/or grid reinforcement.

2) Describe and explain the utility's priorities for supporting implementation of the EV charging use cases anticipated in its service territory.

The Company's priorities for supporting EV adoption are to: (1) expand customer options and access to EV charging through widespread and visible EV charging network for personal vehicles and fleets, in part through developing make-ready infrastructure for EVSE; (2) support adoption of EVs by providing advisory services for fleets and charging developers and reducing operational costs; (3) expand grid flexibility through SCNY, SCC, and SmartCharge Technology; and (4) provide best-in-class customer service to support the success of the Company's various efforts.

Alongside private charging by customers who have access to a charging station at home or work, publicly accessible EVSE serve as an enabler for the many vehicle owners without access to off-street parking and/or private EVSE. For example, fast charger hubs, analogous to conventional fueling stations, reduce the "range anxiety" challenge to EV adoption. Curbside charging presents an additional opportunity for public charging in Con Edison's dense urban area.

Further insights related to EV charging will come through the curbside charging demonstration project in partnership with the NYC DOT and FLO, the EVSE network provider. As discussed above, these parties have identified and equipped dedicated EV parking locations with chargers across NYC. Con Edison and its partners are now identifying best practices for public charging based on the experiences of the curbside demonstration project and making these available through quarterly reports on the program. The Company also continues to expand customer access to charging through the PowerReady Program.

The Company offers advisory services to developers looking to install EV charging infrastructure within the Con Edison service territory. Developers submit site-specific information, and in response, the advisory team provides tailored guidance on anticipated load requirements, estimated costs, and eligibility for various incentive programs. This service

[134] As of this filing, the LMTIP program is still in its nascent stage, with most applications currently in the application phase and not yet under contract.

supports the application process by helping to identify unfeasible projects and equipping viable ones with the actionable insights needed to move forward efficiently.

Additionally, the Company continues to encourage off-peak charging, which limits the impact of new EV charging loads and limits customers' exposure to higher charging costs. Con Edison offers residential TOU rates to incentivize off-peak charging, including a one-year price guarantee for EV charging loads. The SCNY Program, discussed above, provides incentives for eligible EV drivers to avoid charging during summer system peak hours and charging in Con Edison's service territory at off-peak times. The Company launched its CMCP in January 2024, providing incentives for all commercial stations such as public, fleet, and multi-unit dwelling stations to avoid charging during local network peak periods and for charging during overnight off-peak times.

3) Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing EV charging at multiple levels in the distribution system.

a. Explain how each of those resources and functions supports the utility's needs.

Hosting capacity maps identifying transformer load can provide developers with some information on network locations for siting EV charging stations. Company incentives, like those for managed charging programs, encourage grid beneficial charging, as do residential and commercial TOU tariff offerings. Through LMTIP, the Company also supports battery-integrated fast charging and standalone battery installations that help charging station operators manage their EV load. The Company additionally tested V2G through a school bus demonstration project.[135]

In response to the PSC's August 2024 Order on Proactive Planning proceeding (Case number 24-E-0364), the Company submitted a list of urgent infrastructure projects that can begin construction by Q3 of 2026. These projects, spanning across Con Edison's service territory, aim to build the grid infrastructure ahead of anticipated electrification demands. On June 12, 2025, the PSC issued the Order Addressing Urgent Upgrade Filings[136] in which it approved five of Con Edison's nine proposed urgent upgrade projects. These five projects unlock a cumulative 380 MW of additional capacity for electric vehicles and building electrification in Con Edison territory. More information can be found in **Section 2.1 Integrated System Planning.**

b. Explain how each of those resources and functions supports the stakeholders' needs.

See response to "3a)" above. Additionally, capacity maps assist developers in identifying potential sites for EV charging infrastructure. By utilizing these maps, developers can select the locations of those under consideration for new charging stations, saving time during the site scoping phase. Operating cost relief programs, such as managed charging, improve the economic viability of EV charging projects. Proactive planning involves preparing the grid in key hotspots in anticipation of electrification projects. Upgrading the grid infrastructure in these areas ahead of time makes certain that the necessary electrical capacity is available, facilitating a smoother and faster rollout of EV charging infrastructure.

4) Identify the types of customer and system data that are necessary for planning, implementing, and managing EV charging infrastructure and services and describe how the utility provides this data to interested third parties.

The Company's customer data requirements for planning EV infrastructure and services include vehicle types, consumer driving ranges and locations, and driving and charging patterns. The Company collects this data through outreach to EV charging station developers, fleets, other large customers, and through SCNY and SCC for customers enrolled in these

[135] Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision*, REV Demonstration Project: Electric School Bus V2G Q1 2022 Quarterly Progress Report (filed May 2, 2022).
[136] Note 27, *supra.*

programs. The Company may share aggregated anonymized SCNY data from the program with third parties, including the public, to inform charging patterns in the service area, subject to the applicable privacy standard.

For system planning purposes, the Company collects new customer charging load information via a "load letter" submitted through the energy services process, following a process similar to other customer load requests. The load letter provides key information to identify any necessary system reinforcements and/or excess distribution facilities needed to deliver the service. This customer-specific data is not shared with third parties.

To help developers identify sites where it may be easier to install charging, the Company provides an EV charging capacity map. In the networked underground system, the map shows four levels of transformer capacity, ranging from less than 200 kVA to more than 1,000 kVA. This tool provides guidance but does not replace a site work analysis that considers additional physical and electrical factors.

Additionally, the Joint Utilities have identified a subset of the higher priority data that will be required for planning, implementing, and managing EV charging infrastructure and services, including:

- Customer Load Profile: The utility will need to know the customer load profile, including charging capacity pre- installation of EV charging infrastructure to understand the customer and system-level impacts.
- Likely EV Charging Demand*:* In workplace or other non-residential types of EV charging, the utility would need to know the anticipated charging demand (e.g., how many EVs are likely to be charging, and at what level, such as Level 2 charging versus DC fast charging). This will help characterize the charging capacity required at the facility. For a residential installation, Con Edison would need to know the level of charging that the customer is seeking, namely Level 1 or Level 2. At this time, it is unlikely that the utility plays a substantive role in deploying Level 1 charging infrastructure.
- Distribution Asset Load Profile: The utility will need to know the load profile on the nearest substation or similar distribution asset to understand the likely impact that may arise from increased load attributable to EV charging. This will enable the utility to update its asset management strategy for that substation or feeder.
- Potential Location of EV Charging Infrastructure – To the extent that implementation of EV charging infrastructure is inclusive of installation, the layout of the proposed installation, namely the location of the physical hardware, will help determine the associated costs. More specifically, the trenching and cutting costs associated with the installation of EVSE at existing facilities can vary significantly depending on the location of the planned installation relative to the point of connection with utility service.
- PowerReady Participant EVSE Station Information: Once a site is energized and in operation, participants must provide data on the usage of EV charging equipment installed through MRP to a statewide third-party consultant. This reporting requirement enables tracking of the station's operations, effectiveness, and compliance with operational requirements. Examples of data collected includes the number of daily sessions, start and stop times of each charge, and peak kW per charging session.[137]

5) Describe the resources and functions needed to support billing and compensation of EV and EVSE owners/operators.

EV charging stations may be separately metered, or the EV charging load may be commingled with other non-EV load behind a single meter. In both cases, EV charging customers are billed similarly to any other customers based on metered data. Administration of managed charging programs like SCC rely on either separately metered EV chargers or

[137] Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, Information on the data requirements collected from program participants is detailed in the PowerReady Implementation Plan, available at: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={902B7195-0000-C364-B83F-75B0F4E80432}.

data pulled directly from the EV chargers through network service providers ("NSPs"). Since the EV charging market is still nascent, data provided by the NSPs can vary greatly in terms of format, accessibility, and quality. New tools and integrations are needed to be able to clean and process this data in a timely manner. Pilots under proceedings like GOTF can help refine these emerging tools to further enable the adoption and use of flexible resources.

For retail EV charging stations that charge users, compensation is typically provided by credit card or through a mobile application.

6) By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for EV adoption.

The CLCPA is New York's ambitious climate law that aims to reduce the state's greenhouse gas emissions by 85 percent by 2050, compared to 1990 levels. This includes cutting emissions from all sectors of the economy, such as transportation**,** electricity generation**,** buildings**,** industry, and agriculture. One of the most significant sectors addressed by the CLCPA is the transportation sector, which is New York's largest source of emissions. To meet its goals, New York has implemented a series of regulations and programs designed to accelerate the deployment of EVs, including:

- The Advanced Clean Cars II rule, requiring 100 percent of new car sales to be ZEVs by 2035.
- An electric school bus mandate, passed in 2022, which specifies that starting in 2027, all new school buses sold must be zero-emission.
- The Advanced Clean Trucks rule, which sets annual targets for increasing zero-emission commercial vehicle sales, aiming for 40-75 percent ZEVs by 2035, depending on vehicle class.

Con Edison supports the state's EV and EV charging policy goals through a variety of projects and programs in four key areas:

1. Supporting charging infrastructure development
    - Power Ready MRP installed (i.e., energized) more than 13,000 L2 and almost 610 DCFC plugs as of May 2025 for LDV drivers.
    - The MHD Pilot Program has received almost 15 applications from school buses and trucks and is actively working with applicants through the interconnection process. As of May 2025, the program is preparing a petition to broaden eligibility criteria, allowing more sites to participate.
    - As of May 2025, the Micromobility Program has received almost 90 applications from e-bike charging stations and battery cabinet developers and is working with applicants and other stakeholders to unlock market potential.
    - The Company partnered with NYC DOT and FLO EV Charging Stations, deploying over 100 curbside EV charging plugs across NYC.

2. Encouraging grid beneficial behavior and providing operating cost support
    - As of the end of 2024, the SCNY residential managed charging program achieved 25.9 percent market penetration of registered light duty EVs within the Con Edison service territory.
    - Launched SCC, a CMCP, in January 2024 to provide incentives to eligible commercial EV charging stations across all use cases, and the DCR program, targeted at public DCFC stations.
    - Launched in November 2024, Con Edison's SmartCharge Technology program incentivizes the installation of load management technologies at commercial EV charging sites. As of May 2025, the program has received 49 applications.

3. Providing support services to fleets
    - Offering Fleet Assessment Service to advise fleet owners and charging infrastructure and other needs for the transition to electrification.

4. Sharing resources and information with market participants and stakeholders
    - A suite of tools and resources for EV customers is easily accessible through the Electric Vehicles & Transportation Electrification pages of the Con Edison website.

The Company is continuing to expand its EV offerings and assess where it can make the largest impact on market growth and create the most benefits and progress towards policy goals.

7) Describe the utility's current efforts to plan, implement, and manage EV-related projects. Information provided should include:

a. a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range EV integration plans;
b. the original project schedule;
c. the current project status;
d. lessons learned to-date;
e. project adjustments and improvement opportunities identified to-date; and
f. next steps with clear timelines and deliverables.

The Company describes its programs, demonstrations, and other projects in Tables 15 - 22.

Table 15: SCNY Residential Managed Charging Program

Description	Con Edison's SCNY Program encourages off-peak EV charging through enrollment payments, behavioral incentives, and access to a real-time usage dashboard to monitor EV statistics. The program will help Con Edison understand charging behavior and EV driver response to incentives and was expanded to offer incentives to MHDVs, including buses. The EV user connects to the SCNY Platform through their vehicle's on-board telematics or through a compatible charging station. This allows users (and the Company) to know where, when, and how much energy an EV consumes during charge events. Incentive payments are then calculated based on the EV behavior, with increased earning opportunities when avoiding charging during summer (June 1 to September 30) peak hours between 2:00 p.m. and 6:00 p.m. on weekdays.
Schedule	SCNY started in April 2017 and was relaunched in 2023 following a 2022 PSC order.
Status	As of February 2025, approximately 25,000 EVs were enrolled in the program.
Lessons Learned	The Company is working to optimize the onboarding process into SCNY and provides participants with monthly mobile payments that reinforce grid beneficial behavior.

Adjustments/Improvements	The Company has transitioned away from the hardware device needed to provide vehicle telematics data and now primarily uses on-board telematics and has also addressed incentive structures.
Next Steps	The program will continue to add new participants and explore ways to improve the customer experience.

Table 16: PowerReady MRP

Description	In authorizing Con Edison's PowerReady Program, the PSC set a target of 18,539 L2 plugs and 457 DCFC plugs. In November 2023, the Order Approving Midpoint Review Recommendations with Modifications was issued and authorized new totals of 21,371 L2 and 3,157 DCFC charging plugs.
Schedule	The 2020 order authorized the PowerReady Program to run from July 2020 through 2025 or until plug targets were met.
Status	As of April 2025, more than 13,000 L2 and almost 610 DCFC charging plugs had been energized.[138]
Lessons Learned	There is a demand for EV charging, including in DACs, but installation is still dependent on incentives. Neither the L2 nor the DCFC charging market are self-sustaining, yet.[139] As incentives decreased, the number of applications also declined. The program is also seeing an increase in more expensive DCFC projects as sites with adequate service are becoming less common. Some developers have also expressed interest in utilizing load management technologies, which help reduce make-ready costs and provide grid benefits.
Adjustments/ Improvements	In November 2023, the Order Approving Midpoint Review Recommendations with Modifications was issued and authorized a new total PowerReady Program budget of approximately $700 million. The Midpoint Review considered the following topics: • Incentive levels • Plug targets • Changes to equipment eligibility • Funding for DACs • Support for MHDVs • Micromobility infrastructure program • Fleet assessment services • Program timeline and continuation

[138] In this context, installed plugs refer to plugs that have either been incentivized or are currently undergoing site verification prior to the issuance of incentives.

[139] Note 107, *supra*, In March 2025, the PSC initiated a comprehensive Statewide review of the Make Ready Program. Con Edison, in coordination with other utility companies submitted comments on the current state of the EV charging market, highlighting the need for incentives.

Next Steps	As of May 2025, the PowerReady Program is expecting two key decisions from the PSC: 1. Ruling for authorization to incentivize plugs beyond the target cap.[140] 2. Issuance of a new order that will determine the next phase of the Make-Ready Program. This new order will impact program elements such as the budget and plug targets.

Table 17: SmartCharge Commercial

Description	Con Edison's SCC program offers incentives to commercial EV charging stations operators to avoid charging during local network peak periods and to charge during overnight off-peak periods. The program offers operating cost support to encourage the buildout of more EV charging stations and provides a price signal to encourage grid-beneficial charging behavior. All commercial charging use cases, including public, fleet, and multi-family dwellings, are eligible.
Schedule	SCC launched in January 2024.
Status	As of December 2024, 44 sites were enrolled in the program.
Lessons Learned	The broad eligibility of the program has benefited SCC, with strong market interest across a variety of use cases. The Company has used a variety of strategies to address customer challenges regarding data eligibility and monthly data submission requirements.
Adjustments/Improvements	The Company developed a custom-built participant portal, allowing customers to easily apply and upload their monthly charging data submission, and has continued to enhance the functionality of the platform. The Company expanded data eligibility requirements to allow customers to submit charging session data if they do not have access to 15-minute interval data and to use advanced metering infrastructure data in cases where EV charging is separately metered from other site loads.
Next Steps	The program will continue to add new participants and explore ways to improve the customer experience.

Table 18: SmartCharge Technology Program

Description	Con Edison's SmartCharge Technology program offers incentives for the installation of load management technology, including load management software, load management hardware, and battery storage to complement

[140] The PSC's 2023 Make Ready Order stipulated that light duty Make Ready Program would pause once the authorized plug targets are met, even if incentive funds remain. In February 2025, the Joint Utilities petitioned the PSC for authorization to utilize unspent incentive funds to deploy additional plugs beyond the established targets. As of May 2025, this petition is pending PSC's ruling.

	SCC in encouraging grid beneficial behaviors.
Schedule	SmartCharge Technology launched in October 2024.
Status	As of May 2025, the program has received 22 applications.
Lessons Learned	The Company has received strong early interest in the program.
Adjustments/Improvements	In addition to the per-participant incentive caps, the Company has added technology-specific incentive caps to avoid over-incentivizing any one load management technology.
Next Steps	The program will continue to add new participants and explore ways to improve the customer experience.

Table 19: NYC Curbside L2 Charging

Description	Con Edison partnered with the NYC DOT and FLO to provide L2 EV charging to drivers across the city's five boroughs with the goal of increased visibility and access to EV chargers. The demonstration includes 60 dual-charger posts for a total of 120 EV plugs, where 20 chargers are exclusive to NYC fleet vehicles and the rest are open to the public. Publicly available EV charging enables EV ownership by customers that lack off-street parking.
Schedule	The project was launched in July 2021 and will end on July 7, 2025.
Status	As of the end of 2024, the project partners have deployed and are operating 118 FLO SmartTWO Level 2 electric vehicle chargers across NYC.
Lessons Learned	Customer research provided early lessons from the Operations phase. Survey results showed support for EVs, with project awareness steadily increasing from baseline. Half of survey respondents reported that they are likely to consider purchasing an EV within the next five years, and the majority of respondents reported that the project would make them feel positive about both their neighborhood and Con Edison. The Company has observed steadily increasing utilization of the curbside charging stations. To identify strategies that improve site performance, the Company continues to study trends in charging behavior and factors affecting utilization, such as location, time in service, customer and community outreach, and parking enforcement.
Adjustments/Improvements	N/A
Next Steps	The partners will continue to offer the NYC Curbside program through July 2025. Lessons learned are being collected to inform future investments in public charging.

Table 20: Cost Optimization for Fleet Electrification ("COFE") MHDV Pilot

Description	Con Edison will partner with First Student to implement a scalable and cost-effective smart energy management solution for 12 heavy-duty school buses. The proposed project implements a cost-effective electrification strategy for MHD fleets, with the aim of reducing the TCO of electrifying MHD fleets through innovative technology solutions. TCO remains a significant obstacle for fleets intending to electrify today. The project plans to demonstrate how a combined hardware and software energy management solution can lead to operational cost savings for MHD fleets. The project will integrate First Student's advanced charging infrastructure, solar technology, distinctive energy storage solutions, and adaptive load management software. First Student will implement this project in Brooklyn.
Schedule	The program began in January 2025 and will run through June 2028.
Status	The COFE Demo is working on Phase 0 & Phase 1 in parallel. Design for Phase 1 was completed in April of 2025.
Lessons Learned	Projects of this type should account for volatility in the charger and EV infrastructure space. The initial charger manufacturer that was going to be used exited the industry, meaning the project partners had to scope out new charger providers. This also emphasized the importance of future proofing designs, which can be compatible with different charger and hardware manufacturers.
Adjustments/Improvements	Due to changing charger manufacturers, the project went from 9 chargers to 12 chargers.
Next Steps	Phase 1 is scheduled to complete construction and start operation in the fall of 2025. Design for Phase 2 will also begin during the summer of 2025.

Table 21: MHD Make-Ready Pilot

Description	Con Edison is implementing an MHD Make-Ready Pilot Program that provides incentives for charging infrastructure for MHD vehicles. The pilot was expanded to a total budget of $67M across the Joint Utilities as part of the November 2023 Order Approving Midpoint Recommendations. Of the $67M, Con Edison was authorized a $21M budget for incentives in the pilot program.
Schedule	The program began in 2020 and will run through at least 2025.
Status	Con Edison continues to review receive applications for the MHD Make-Ready Pilot and advises customers on their MHD fleet electrification needs.

Lessons Learned	With the program expansion, incentives cover up to 90 percent of utility-side and up to 50 percent of customer-side make-ready costs for applicable projects.
Adjustments/Improvements	Con Edison has expanded the program as authorized by the Order Approving Midpoint Recommendations.
Next Steps	Continue to accept applications and proceed with applications already received for approximately 450 plugs.

Table 22: Micromobility Program

Description	Con Edison is implementing a Micromobility Make-Ready Program that provides incentives for charging infrastructure for e-bike charging stations and battery cabinets. The program was created with a total budget of $21 million across CECONY and O&R as part of the November 2023 Order Approving Midpoint Recommendations.
Schedule	The program began in 2023 and will run through at least 2025.
Status	Con Edison continues to receive applications for the Micromobility Program and advises customers on the process and regulatory environment for e-bike charging and battery cabinets. In particular, Con Edison is working with stakeholders such as NYC and the FDNY.
Lessons Learned	Clarity on regulatory rules and providing consistent information to market participants will spur applications.
Adjustments/Improvements	Con Edison has submitted comments during the Make-Ready Midpoint Review to provide feedback on eligibility requirements.
Next Steps	Continue to accept applications and proceed with applications already received for approximately 90 sites.

8) Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), and DPS Staff to facilitate statewide EV market development and growth.

Con Edison continues to collaborate closely with many of the stakeholders mentioned to advance EV adoption. This includes regular engagement with NYSERDA, the NYPA, and DPS to exchange information and provide project updates. For instance, the Company holds monthly coordination meetings with NYSERDA to align efforts on light-duty EV infrastructure and the MHD pilot program, including how to coordinate with NYSERDA's Truck Voucher Incentive Program. In addition, Con Edison and the other Joint Utilities meet with NYPA to discuss the development of NEVI-funded charging sites. Finally, the Company meets regularly with DPS Staff to review the status of various EV-related programs.

Beyond these ongoing meetings, Con Edison participates in research initiatives that support the continued evolution of the EV market. In collaboration with the Joint Utilities and DPS Staff, Con Edison participates in the Technical Standards

Working Group, which is focused on conducting accuracy testing of EVs and EVSE for submetering applications in residential managed charging programs. Furthermore, the Company has supported fleet testing and product development across multiple manufacturers and previously served as the East Coast technical service center for Toyota's launch of the electric RAV4. Additionally, Con Edison developed some of the first fast chargers for over-the-road EVs at its Manhattan facility and contributed to the American National Standards Institute Standardization Roadmap for EVs.

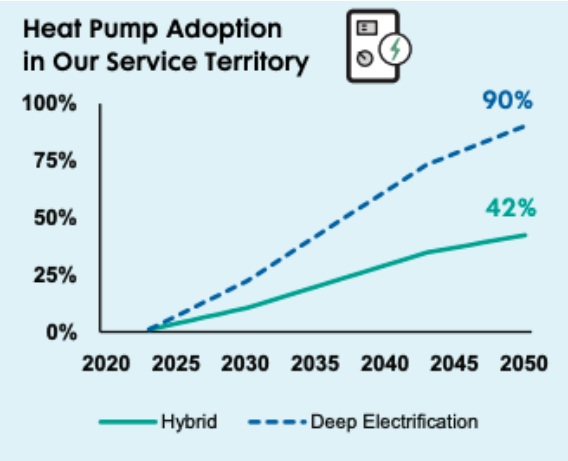
2.6. CLEAN HEAT INTEGRATION

Context and Background

Building Electrification ("BE"), or the adoption of electric space and water heating equipment in lieu of fossil-fuel equipment, is a critical part of the state's clean energy goals and a key part of Con Edison's approach to the energy transition, as outlined in its Integrated Long Range Plan ("ILRP").[141] The Company will play a critical role in fostering this shift and educating customers to understand the needs, benefits, and costs of making these changes. Con Edison aims to educate and empower its customers through attractive electrification programs and incentives. As a utility, the Company is uniquely positioned to administer these programs while managing and driving other key outcomes related to energy system planning.

The Company facilitates end-user decarbonization through its energy efficiency ("EE") programs, which help customers reduce the amount of energy they consume in their homes and businesses, and through its BE programs, which support a transition from fossil fuel heating to clean electric heating. The path to electrification varies significantly for customers depending on the type of home in which they live, the ownership structure, the legacy heating system and many other building characteristics. For many customers, particularly those in older buildings, electrification may be challenging from a cost and technical perspective. The Company's ILRP models multiple pathways to achieve the state's policy objectives, which reflect the uncertainty in the timing and proliferation of end-user technology adoption. As shown in Figure 20 below, heat pump adoption needs to represent a significant percentage of space heating load in Con Edison territory to achieve greenhouse gas ("GHG") reductions targets under two scenarios evaluated in the Company's ILRP.

Figure 20: Adoption of Heat Pump Technologies for Space Heating in Different ILRP Scenarios



BE is a critical component of the state's ambitious clean energy goals. The state's Climate Action Plan, written to lay out a path to achieve the goals of the Climate Leadership and Community Protection Act ("CLCPA"), identifies that across the state, buildings are the largest emitters of GHGs and calls managed BE "critical" to meeting the state's goals.[142] In January 2022, Governor Hochul established guidance to achieve a minimum of one million electrified homes statewide

[141] Note 3, *supra.*
[142] Note 1, *supra*, p. 176.

by 2030[143], [144] which the CLCPA Scoping Plan, released in December 2022, expanded to "one to two million" electrified homes.[145] Assuming a load-ratio-share basis, that level of electrification would include between 350,000 and 750,000 homes in the Company's service territory.[146]

The 2020 New Efficiency: New York ("NENY") Order[147] created the New York State ("NY State") Clean Heat Program, which offers incentives for heat pumps and other BE technologies. The Clean Heat Program offers a variety of initiatives to advance the adoption of efficient electric heat pump systems that are used for space and water heating. Eligible technologies include air source heat pumps ("ASHP"), heat pump water heaters ("HPWH"), and ground source heat pumps ("GSHP"). In addition, the program offers incentives for building envelope improvements, heat pump controls, and energy recovery ventilators/heat recovery ventilators when paired with an eligible heat pump system. The Company has learned over time that incentives targeting broad sectors such as residential, multifamily, small business and commercial, can help each sector adopt BE measures effectively.

The May 2025 Public Service Commission ("PSC") Order Authorizing Non-Low-to-Moderate-Income ("non-LMI") Energy Efficiency Building Electrification ("EE BE") portfolios for 2026-2030[148] builds on the success of the Clean Heat Program from 2020-2025 and adjusts its focus. The Clean Heat Program will be the branding for the BE program for the residential customer class (1-4 family units) while other customer classes, like multifamily and commercial, will receive BE incentives from the Company's EE BE sectoral programs in a manner more tailored for the sector's specific needs. The EE BE Order further directs the NY State Clean Heat Program to evolve by March 1, 2026, to offer differentiated incentives such that significantly higher incentives are provided for projects meeting a minimum weatherization level. This differentiated incentive approach is expected to be phased out by March 1, 2028, at which time the program will require minimum building weatherization levels as a pre-requisite to receive incentives.

The NY State Clean Heat Program for Con Edison currently offers 13 categories of incentives that are specific to a range of technologies across all customer sectors, namely residential, multifamily, small business and non-profit ("Small Biz")[149] with average annual peak demand < 300 kW, and large commercial and industrial ("C&I") customers. These incentives will continue to be offered through the end of 2025. The 2025 EE BE Orders will likely dictate an evolution in the Company's approach to specific incentives beginning in 2026. Those changes will be codified in the non-LMI Implementation Plan, the Clean Heat Implementation Plan filings due in the second half of 2025, and subsequent program manuals. The incentives currently available to customers are described in **Table 23**.

[143] New York State, Governor Hochul Announces Plan to Achieve 2 Million Climate-Friendly Homes by 2030: https://www.nyserda.ny.gov/About/Newsroom/2022-Announcements/2022-01-05-Governor-Hochul-Announces-Plan-to-Achieve-2-Million-Climate-Friendly-Homes-By-2030.

[144] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Con Edison Petition to Support Clean Heat Market Growth (filed February 24, 2022), p. 5.

[145] Note 1, supra, p. 21.

[146] Ibid, p. 15.

[147] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025 (issued January 16, 2020).

[148] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Order Authorizing non-Low-to-Moderate-Income Energy Efficiency and Building Electrification Portfolios for 2026-2030 (issued May 15, 2025).

[149] For the purposes of the Clean Heat Program, the Small Biz customer class is defined as customers with an average annual peak demand of 300 kW or less.

Table 23: Con Edison Clean Heat Incentives

Incentive Category	Available Incentives
Category 2	• 2a: Cold Climate Air Source Heat Pump ("ccASHP"): Residential Full Load Heating with Integrated Controls • 2b: ccASHP: Residential Full Load Heating with Decommissioning • 2c: Air Source Heat Pump (ASHP): Multifamily Full Load Heating with Decommissioning • 2d: ASHP: Small Biz Full Load Heating with Decommissioning • 2e: Air-to-Water Heat Pump ("AWHP"): Residential Full Load Heating with Decommissioning
Category 3	• 3: Ground Source Heat Pump (GSHP): Residential Full Load Heating • 3a: GSHP Multifamily Space Heating
Category 4	• 4: Custom Space Heating Allocations • 4a: Customer Space Heating Applications + Envelope
Category 5	• 5: Midstream Heat Pump Water Heater (HPWH)
Category 6	• 6: Custom Hot Water Heating Applications • 6a: Prescriptive Hot Water Heating Applications
Category 10	• 10: Custom Partial Space Heating Applications

Across all sectors, incentives cover up to the listed rates or up to 50 percent of project costs, whichever is lower. However, incentives for residential ASHP and GSHP projects located within a disadvantaged community ("DAC") cover up to 70 percent of project costs.[150] These incentives are designed to achieve the state's policy goals, accelerate the adoption of electrification technologies, and reduce emissions from New York's buildings.

Existing buildings, including gut renovations, are eligible for ASHP, AWHP, GSHP, and HPWH incentives. New construction projects are not eligible to receive incentives for ASHP or AWHP for space heating. New construction is only eligible to receive incentives for GSHP for space heating, GSHP paired with other custom water solutions, GSHP paired with envelope improvements, hot water heating solutions for domestic hot water usage, or HPWH incentives through the midstream program. Information on current incentive levels and eligibility can be found in Con Edison's Clean Heat Program Manual.[151]

As discussed in **Section 2.1 Integrated System Planning,** to prepare the grid for future infrastructure needs driven by the electrification of vehicle transportation and buildings,[152] the PSC commenced a new Proactive Grid Planning Proceeding in August 2024.[153] As part of this proceeding, the PSC ordered utilities to propose a first round of urgent projects needed for electrification loads and to develop a planning framework for future infrastructure needs driven by this increased electrification. On June 12, 2025, the PSC issued the Order Addressing Urgent Upgrade Filings in which it approved five

[150] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency* Initiative, Con Edison Heat Pump Program Manual, Version 8 (April 1, 2025): https://cleanheat.ny.gov/assets/pdf/Program%20Manual%20-%20Con%20Edison%2004.01.25.pdf.
[151] *Ibid.*
[152] Electrification of buildings is primarily driven by electrified heating needs.
[153] Note 26, *supra.*

of Con Edison's nine proposed urgent upgrade projects.[154] These five projects unlock a cumulative 380 MW of additional capacity for electric vehicles and building electrification in Con Edison territory.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Between 2020 and 2024, Con Edison and its customers realized savings of 3,698,978 MMBtu through the Clean Heat Program which represented an achievement of 370 percent of the NENY savings target of 1,000,000 MMBtu established for the 2020-2025 period.
- In 2024, Con Edison supported almost three times more projects than in 2023.
- ASHP installations with decommissioning of existing fossil fuel heating systems accounted for approximately 92 percent of all residential ASHP projects acquired in 2023 and rose to over 99 percent in 2024.
- Reduced 82,146 metric tons of GHGs by decommissioning existing fossil fuel heating systems and replacing them with ASHP over the electrified equipment's lifespan.

Utility Capabilities Demonstrated (non-exhaustive)

Planning & Forecasting: Con Edison continuously evaluates how to best incorporate load growth from building electrification efforts into *forecasts* and *planning* processes.

Customer Programs: Con Edison continues to modify and improve its *customer programs* based on operational learnings and PSC direction.

Market Participation: Con Edison is continually evaluating and adjusting *incentives* to support the adoption of electrified equipment as the market matures and customer needs evolve.

Clean Heat Program Performance

Con Edison commenced its Clean Heat Program in March 2020 and experienced resounding growth in the latter half of 2021 and Q1 2022. By April 2022, the program exceeded the overall 2021-2025 energy savings target. In response, the Company announced a pause on accepting new applications for ASHP incentives for this program in May 2022. Following the 2022 Clean Heat Order that codified the program's funding through 2025 with a continuity funding mechanism ("CFM"), Con Edison resumed the program in January 2023 under a modified program framework.[155]

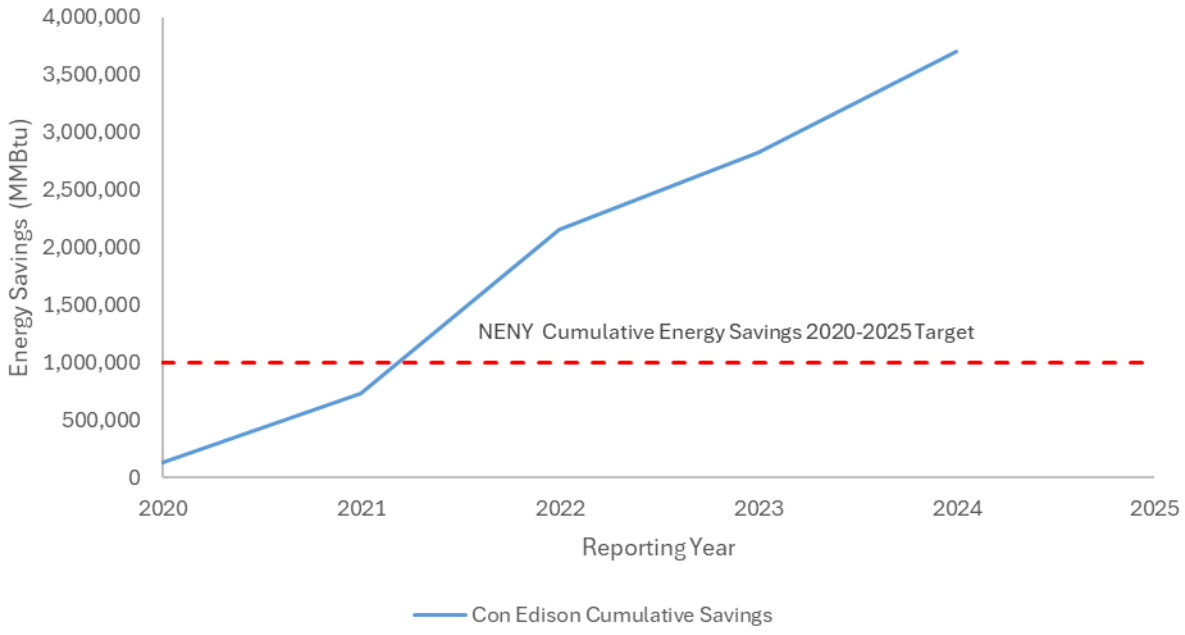
In 2023, Con Edison supported over 5,600 projects, achieving an annual energy savings of 289,095 MMBtu at a spend of $38,151,026. Together with its initial authorizations, the Company achieved 672,721 MMBtu of annual energy savings at a spend of $147,681,304. Growth continued in 2024, when Con Edison supported 14,018 projects, yielding 873,463 MMBtu of savings, with a total spend of $200,825,277. Compared to 2023, Con Edison supported almost three times as many projects in 2024, while spending increased by 36 percent. The Company's cumulative savings performance

[154] Note 27, *supra.*

[155] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Order Approving Funding for Clean Heat Program (issued August 11, 2022).

between 2020-2024 is shown in Figure 21. Through the Clean Heat Program, Con Edison's customers have avoided 82,146 metric tons of GHG emissions by reducing fossil fuel combustion.

Figure 21: Clean Heat Program Savings 2020 - 2024



As outlined in Tables 8 and 9 the Company's section of the NY State Clean Heat Program 2024 Annual Report,[156] several changes were made to the Clean Heat Program in its service territory in 2024, including:

- Introduced an incentive for thermal conductivity testing for non-residential GSHP projects.
- Expanded eligibility of Category 2c for multifamily buildings up to 100 units.
- Offered limited time offers to spur program achievement across multiple sectors.
- Added a revised disciplinary process for contractors and other refinements to improve program oversight and drive quality installations.

Con Edison continues to help catalyze a shift toward residential customers decommissioning their fossil fuel systems upon electrifying their homes. In 2023, ASHP installations with decommissioning of existing fossil fuel heating systems accounted for approximately 92 percent of all residential ASHP projects acquired, which rose to over 99 percent in 2024. Today's cold-climate heat pumps are a more efficient and cleaner way of heating or cooling space.

The Company will continue to support the adoption of electrified equipment through upfront incentives that will be adapted as the market matures, and customer needs evolve. Additionally, by supporting electrification and grid integration of electrified end uses, Con Edison enables buildings to potentially participate in flexibility programs, such as demand response ("DR").

[156] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative,* New York State Clean Heat Program 2024 Annual Report, (filed April 1, 2025): https://cleanheat.ny.gov/assets/pdf/NYS%20Clean%20Heat%202024%20Annual%20Report.pdf.

Supporting Clean Heat for Low-to-Moderate Income Customers

In response to the PSC's July 2023 Order, Con Edison developed its LMI Multifamily EE BE Portfolio Proposal Filing, outlining plans, budgets, and metrics to provide a cohesive EE BE offering to LMI multifamily customers between 2026 and 2030.[157] This portfolio is intended to address the barriers facing LMI customers in realizing the benefits of EE BE, including:

- Limited LMI customer access to capital and financing
- Limited awareness of EE and BE programs and resources
- Split incentives for affordable housing owners to make investments that improve tenant space
- Administrative challenges in identifying and reaching LMI customers
- Health and safety or structural deficiencies that impede progress on EE work
- Limited technical and engineering assistance for building owners

On May 15, 2025, the PSC issued an Order Authorizing LMI EE BE Portfolio for 2026-2030[158] budgets and targets, directing program administrators to prioritize weatherization and EE efforts. As part of the directive, the PSC authorized program administrators to allocate up to 15 percent of LMI program budgets to support the deployment of heat pumps in LMI one- to four-family and affordable multifamily buildings. Additionally, the Order permits up to 10 percent of LMI program budgets to be used for remediation of health and safety barriers to building weatherization.

Future Implementation and Planning

Summary of Future Actions

- Provide ongoing program and stakeholder support for Clean Heat Program.
- Pursue additional installations and electrification categories across all market sectors (e.g., multifamily, small and medium business, etc.).
- Implement programs that encourage increased BE in the LMI market and align with existing bill assistance programs such as the Energy Affordability Program and Home Energy Assistance Program to minimize costs incurred by the customer.
- Continue collaboration with the Joint Utilities and New York State Energy Research and Development Authority ("NYSERDA") (collectively, the "Joint Efficiency Providers"), working with technical experts, manufacturers, and other industry partners to explore and expand the range of technologies available for clean heat incentives.
- Continue efforts to develop the clean heat workforce through training and workgroup participation.
- Continue to meet state and local policy requirements and work towards clean energy goals.

Program Implementation

Over the next five years, Con Edison will continue to implement its Clean Heat Program, with approved program budgets. The May 2025 EE BE Orders (non-LMI and LMI) set overall budget and target levels for the Company's portfolio for 2026-2030 and placed a cap on BE spending at 50 percent of the program budget for non-LMI electric EE. The PSC

[157] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, CECONY LMI Portfolio Proposal Filing (filed November 1, 2023).
[158] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Order Authorizing Low-to-Moderate Income Energy Efficiency and Building Electrification Portfolio for 2026-2030 (issued May 15,2025).

further directed the Company to specify a level of funding for the residential Clean Heat Program in the non-LMI EE BE Implementation Plan due 60 days after the order. The Company's implementation plan will contain further programmatic information, including a minimum weatherization standard that will unlock higher incentives for certain residential projects.

Con Edison will continue to pursue opportunities to make program implementation more efficient, make rules and communication clearer, and respond to participant feedback and market development. Key upcoming activities are intended to provide useful resources to the contractor workforce, who are pivotal to achieving the scale of clean energy targets. These activities include updating program manuals and reports, continuing the working group series for participating contractors and industry partners, and maintaining training on a variety of topics.[159]

Clean Heat Program as an Enabler of Grid Flexibility

Increased deployment of heat pumps through the Clean Heat Program enables grid flexibility. Nonetheless, before the Company can reliably utilize heat pumps for flexibility, it needs confidence in the ability of heat pump load to be shifted reliably without negatively impacting customer comfort or heat pump performance. Additionally, Con Edison's investments in its Distributed Energy Resource Management System ("DERMS") and Demand Response Management System ("DRMS") operational systems, described in **Section 2.3 Grid Operations**, develop the forecasting, monitoring, and management capabilities that will be needed to turn the electrified heating systems into flexible grid resources. Electrification of heating promotes further overall BE that also allows more buildings to potentially enroll in flexibility programs.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Rapid market evolution (e.g., evolving technologies, market participants, potential reductions in federal incentives, etc.)	• Maintain flexibility in program structure and funding to quickly adapt to changing market conditions and transparently communicate program changes with customers, Department of Public Service ("DPS") Staff, contractors, and other stakeholders.
Contractor misrepresentation of required system size to customers	• Continue implementation of new quality assurance/quality control ("QA/QC") processes, contractor qualification, and disciplinary actions for violators.
Overallocation of program budgets	• Adopted sectoral allocations that distribute and cap approved funding across customer segments. • Created monthly allocations for residential contractors to reserve a specific quantity of incentives to better control budgets and manage incentive availability. • Modified incentive limitations, including placing a cap on incentives of 50% and 70% of project costs for residential projects located outside of and within DACs, respectively. • Maintain a project cost cap of $1 million or 50 percent of project costs for multifamily and C&I customers.

[159] Con Edison's training can be found at the following website: https://www.gotostage.com/channel/605e6790b2d043e5b2d270c27c6b517d.

Stakeholder Interface

Con Edison works with a number of stakeholders in offering its Clean Heat Program. As described above, the Company works as a Joint Efficiency Provider to develop, support, and continuously improve the program. This means working collaboratively across the NY State Joint Utilities and NYSERDA, in addition to working with participating contractors who implement the program.

The Company also collaborates with the Joint Utilities and NYSERDA through the LMI Joint Management Committee ("JMC") to develop solutions aimed at advancing affordability and access to EE and BE upgrades for LMI residents.

To keep stakeholders informed about changes and the current status of its Clean Heat Program, Con Edison and the Joint Efficiency Providers, comprised of NY State utilities and NYSERDA, regularly maintain communications with the market. Program updates are reflected in program documents such as the NY State Clean Heat Program Manuals and implementation plans and are further communicated through various channels like the Clean Heat Program website and the Working Group Series for Participating Contractors and Industry Partners. These resources help contractors and industry partners understand the eligible technologies, available incentives, and enrollment processes, while also providing a forum to engage with the Joint Efficiency Providers to ask questions and offer feedback about the program.

Additional Detail

This section responds to the questions in the DPS guidance specific to clean heat integration.

1) **Using a common framework (organization, format, semantics, definitions, etc.) developed jointly with the other utilities, identify and characterize the existing and clean heat installation scenarios in the utility's service territory. Each scenario identified should be characterized by:**

    a. **the type of location (single family residence, multifamily residence, commercial space, office space, school, hospital, etc.);**

Con Edison offers summary information by sector:

- Residential: one to four dwelling units
- Multifamily: five or more dwelling units
- Small business & non-profit ("Small Biz")
- Commercial and industrial buildings ("C&I")

    b. **the number and spatial distribution of existing instances of the scenario;**

The primary driver for program participation, as evidenced by the increased and cumulative number of installations, is attributed to the residential sector and the ASHP technology. From 2020-2024, the residential incentives (Incentive 1, 2, 2a, and 2b) comprised 92.6 percent of all projects (40,629/43,852), while the ASHP incentives (Categories 1, 2, 2a, 2b, 2c, and 2d) comprised 93.5 percent (41,007/43,852) of all projects. A snapshot of installations by sector is shown in Table 24.

Table 24: Total Number of Air Source Heat Pump Installations by Sector[160]

Sector	Cumulative Projects Installed and Provided Incentives 2020-2024
Residential	40,543
Multifamily	790
Small Biz	565
C&I	101

c. the forecast number and spatial distribution of anticipated instances of the scenario over the next five years;

Con Edison forecasts overall program achievement based on recent program performance and economic factors while adhering to PSC authorized budgets. The Company has not historically produced a spatially differentiated forecast of BE for the purpose of program implementation.

Please see Section 2.2 Advanced Forecasting for additional discussion of the approach to incorporating BE into Company's forecasts, including at the granular level of local electric network.

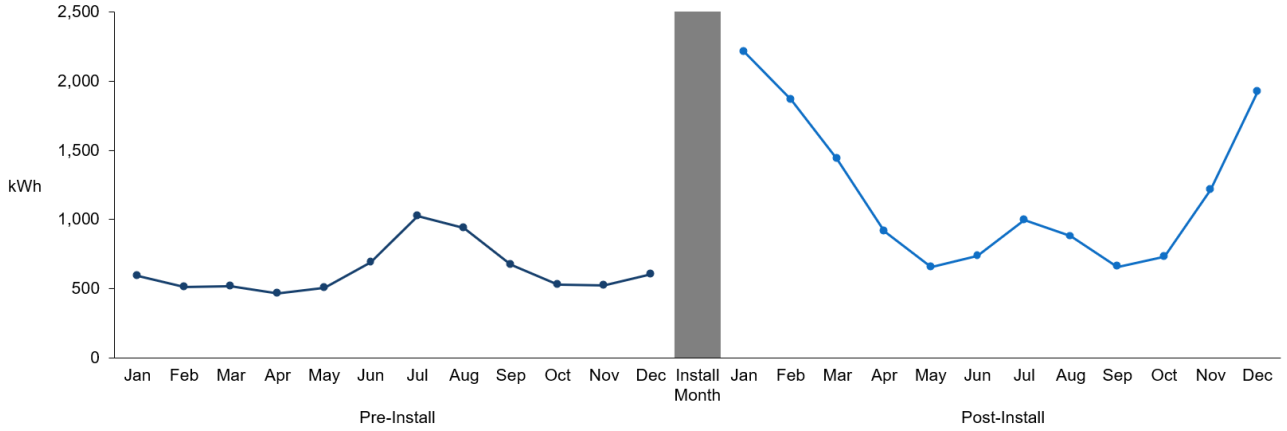
d. the type(s) of clean heat solution installed at a typical location (ASHP, GSHP, HPWH, etc.);

The most common installation in the residential, multifamily, and small business category are ASHP with decommissioning of the legacy fossil system. The most common commercial systems are custom ASHP with a technology mix that responds to the needs of the building.

e. an hourly profile of a typical location's aggregated clean heating load over a one-year period;

The Company has developed a sample of average electric usage across ASHP customers. Figure 22 below depicts the hourly profile of a typical location's aggregated clean heating loads over a one-year period. The sample consists of single-family Clean Heat participants that are CECONY gas customers who installed heat pumps while decommissioning fossil fuel heating systems and have similar behavioral heating and cooling load patterns. The figure shows energy savings before and after installation.

Figure 22: Average Electric Usage for ASHP Customers by Replacing Fossil Fuel Heating



[160] Note 156, *supra.*

Customers that switch from fossil fuel heating to ASHP can expect to see increased electricity usage as they are now using electricity for both heating and cooling, rather than natural gas. However, customers can still expect to see overall bill savings as the reduction in costs from natural gas usage generally outweighs the increase in electricity usage costs.

f. the type and size of the existing utility service at a typical location; and

Clean Heat customers span all Con Edison customers from small detached single-family homes to large, new commercial development projects. As such, the utility services for clean heat customers varies widely.

g. the type and size of utility service needed to support the clean heating use case.

The type and size of utility service needed to support clean heating use cases will depend on the level of electrification (e.g., 100 amp versus 200 amp) and the various sizes of dwelling units (e.g., apartments versus homes, etc.). The right size level of utility service needed will likely become clearer as Company heat pump installations are levelized.

2) Describe and explain the utility's priorities for supporting implementation of the clean heating use cases anticipated in its service territory.

Con Edison runs the largest BE program in New York. The Company is focused on cost-effective program design with attractive incentive offerings for customers. Customer-friendly programs will be very different based on the customer segment. Con Edison has dedicated significant internal resources to running the full scope of the Clean Heat Program, with a robust, cross-functional team of program managers, finance professionals, and engineers. Similarly to how the Company has thus far exceeded the targets prescribed by the 2020 NENY Order, it will work to meet and exceed the ambitious goals of the 2025 EE BE Orders, where possible. Specific changes to function and process are still in development.

Additionally, effective deployment of clean heating resources enables more potential grid flexibility, which is a priority of the GOTF Proceeding. As described above, there is more data needed to understand grid and customer impacts of deploying heat pumps as flexible loads, but continued electrification efforts can support testing efforts and pilot opportunities.

3) Identify and describe all significant resources and functions that the utility and stakeholders use for planning, implementing, monitoring, and managing clean heating at multiple levels in the distribution system.

a. Explain how each of those resources and functions supports the utility's needs.

Con Edison is dedicated to meeting its electrification goals by acquiring projects, providing the necessary metrics on deployments, expenditures, and energy savings, enhancing the overall customer experience, and managing costs for ratepayers. To accomplish this, Con Edison requires a substantial and high-quality workforce, which is achieved through the Company's external stakeholder engagement, sector-specific program teams for interfacing between customers, contractors, and implementation contractors, as well as support functions, data management, and marketing teams.

Con Edison recognizes the growing impact of clean heat in its forecasting and planning processes. The Company continues to refine its forecasting processes year over year for clean heat by adjusting its electrification load modifiers for the electrification of buildings. As part of the Company's efforts to leverage advanced metering infrastructure ("AMI") data, several use cases have been developed to gain valuable insights into customer behavior, identify emerging trends, and better understand the impact of technology adoption. One specific use case relates to how AMI data can be used to better assess the impact of heat pumps on gas and electric peak loads and volumes. Please see **Section 2.2 Advanced Forecasting** for a more complete discussion of the inclusion of clean heat in the Company's forecasting process.

Clean heat participation is relevant for both gas and electric planning and could represent a significant source of grid flexibility. As the Company's program matures, Con Edison will look to enhance its planning processes and explore the ability of clean heating resources to shift demand and participate in flexibility programs such as the Company's DR programs.

b. Explain how each of those resources and functions supports the stakeholders' needs.

Con Edison publishes monthly reports to stakeholders regarding the status and utilization of clean heat funding. The Company also publishes annual reports related to system forecasting and planning.

4) Identify the types of customer and system data that are necessary for planning, implementing, and managing clean heating infrastructure and services and describe how the utility provides this data to interested third parties.

The Company leverages customer data such as name, address, and account number to determine program eligibility. In turn, customers can monitor their consumption data through AMI, allowing them to engage in more efficient energy habits. Aggregated customer billing data made available to contractors and other interested third parties through Green Button Connect can provide valuable insights into customer consumption profiles and potential marketing opportunities.[161]

The Company's use of system data for electrification of heating, or heat pumps, are incorporated as a load modifier in forecasting. This reduces the total forecasted system load (or gross load) and is applied in the winter peak forecast. Additionally, hosting capacity maps have been enhanced to show winter and summer ratings to determine available capacity for BE. Details on all enhancements to hosting capacity maps are available in section **2.9 Hosting Capacity**.

5) By citing specific objectives, means, and methods describe in detail how the utility's accomplishments and plans are aligned with New York State policy, including its established goals for clean heat adoption.

As discussed above, Con Edison runs the largest BE program in NY State. Buildings are the largest source of GHG emissions statewide. Every BE program participant moves the state one step closer to its goal of one to two million electrified homes, one million electrification-ready homes and overall GHG reduction and PSC-established targets for BE. In accordance with the May 2025 non-LMI BE EE Order, Con Edison will additionally develop a detailed approach for coordinating residential weatherization offers with BE incentives offered through the NY State Clean Heat Program. This will complement Con Edison's existing efforts to invest in deeper electrification efforts that advance progress on CLCPA goals.

The Company will also continue to work with the PSC, DPS Staff, participating contractors, stakeholders, and customers to adapt its BE Program as the portfolio shifts from one sanctioned by the 2020 NENY Order to one governed by the 2025 EE BE Orders. To date, the Company has exceeded the 2025 target of 1 TBtu by 370 percent, electrifying over 80,000 dwelling units in its service territory.

[161] Data shared through GBC is handled securely and adheres to all applicable data privacy standards. For additional detail, see **Section 2.8 Data Sharing**.

6) **Describe the utility's current efforts to plan, implement, and manage clean heat-related projects. Information provided should include:**

a. **a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range clean heat integration plans;**

The Company tracks dozens of data points for each clean heat project including building and customer characteristics, project scope including equipment used, and the savings associated with each measure. The Company additionally conducts detailed portfolio modeling that builds achievement by sector. Each completed project moves the Company towards the achievement targets set by the PSC, and feeds into its own portfolio planning efforts.

b. **the original project schedule;**

The Company has a well-established process to oversee and manage its Clean Heat Program. The current processes were rebuilt in the Fall of 2022 to match the requirements of the 2022 Clean Heat Order in time for a program relaunch in January 2023. Further information on program administration activities, process enhancements, heat pump incentives, and market development are available in the New York State Clean Heat Program 2024 Annual Report.[162]

c. **the current project status;**

Part of the Company's continuous improvement process includes making program management more effective and efficient. This approach has been successful, and the Company has currently achieved 370 percent of its 2020-2025 cumulative NENY MMBtu savings goal (1 TBtu), electrifying over 80,000 homes and saving 3.7 TBtu since 2020. In 2024, Con Edison saw a marked increase in Clean Heat Program applications. During that year, it supported 14,018 projects, which generated 873,463 MMBtu of savings.

d. **lessons learned to-date;**

Con Edison has learned extensive lessons regarding the management of its Clean Heat Program, including but not limited to the following:

- Active management, of budget, contractors and other key activities are crucial to success.
- A sectoral, focused approach is useful. For example, the Company has divided its residential program delivery teams by technology, ASHP and GSHP, to reflect the fact that the contractors active in each space are distinct. Similarly, contractors and customers in multifamily or commercial projects need and expect a different level of support for projects than in the residential space where projects are simpler and move more quickly.
- Thoughtful incentive design facilitates customer understanding and ultimately, program performance. Upon relaunch in 2023, the Company moved away from incentives denominated in heat pump capacity. Rather, for space heating, it offers incentives based on building (per apartment, per home, by square footage) or per savings for custom projects.
- Continued engagement with market actors, customers, contractors, distributors, manufacturers, government entities, and advocates helps build a stronger program.

In short, market demand for clean heat technologies has remained high across the Company's service territory. The Company is dedicated to managing a Clean Heat Program that delivers on this demand within the budgets allowed by the PSC.

[162] Note 156, *supra.*

e. project adjustments and improvement opportunities identified to-date; and

When the Company relaunched the program in 2023, it made a number of significant adjustments, some of which are discussed in "6d)" above. In addition to changes in incentive structure, the Company introduced a number of techniques to facilitate budget management including sector-specific budgeting and contractor allocations for residential contractors. The Con Edison Clean Heat Program Manual[163] contains a table of revisions that tracks program changes over time and can be used as a complete reference to all the changes codified in the manual.

f. next steps with clear timelines and deliverables.

Con Edison is currently running its Clean Heat Program within the confines of the CFM as ordered by the PSC. This approach will continue through 2025, after which new budgets and targets for the 2026-2030 period, established by the PSC during the NENY Interim Review, will inform the program. The May 2025 EE BE Order set out a detailed schedule of compliance requirements. Notably, the Company will file a Clean Heat Implementation Plan on September 1, 2025.

7) Describe how the utility is coordinating with the efforts of the New York State Energy Research and Development Authority (NYSERDA), the New York Power Authority (NYPA), New York Department of Environmental Conservation (DEC), DPS Staff, or other governmental entities to facilitate statewide clean heat market development and growth.

The Company collaborates closely with NYSERDA, DPS Staff, and other government agencies regarding Clean Heat development and growth. For example, NYSERDA is a sitting member of the Clean Heat JMC. As of May 2025, Con Edison has again assumed a co-chair role on the JMC and meets weekly with NYSERDA and DPS Staff in that capacity to coordinate activities across the state. Con Edison and the Clean Heat JMC both hold quarterly public webinars on the Clean Heat Program to discuss program performance, changes, and other matters.

The Company communicates regularly with various agencies from NYC regarding the Clean Heat Program and related buildings issues. Con Edison also briefs DPS Staff monthly on the performance of its Clean Heat Program. Where appropriate, the Company works with the Department of Environmental Conservation. For example, the Company commented on the rulemaking regarding the regulation of wells deeper than 500'. Drilling deeper wells is important to the industry, and a method to deliver cost-effective projects in many cases.

The 2025 EE BE Orders institute close collaboration between the Company and NYSERDA with carefully defined roles and responsibilities. Such clarity has the potential to lead to more efficient and complementary programming which not only helps program administrators but also more importantly, customers across the state.

[163] *Ibid.*

2.7. ENERGY EFFICIENCY INTEGRATION AND INNOVATION

Context and Background

Energy Efficiency ("EE") is an important component of Con Edison's program landscape that reduces overall load on the grid, thus enabling deployment of other distributed energy resources ("DER"). EE is also a key area of focus in supporting the state to achieve its clean energy goals. The Company offers a range of incentives and programs designed to promote customer adoption of more efficient technologies to reduce greenhouse gas ("GHG") emissions, lower customer energy usage, and meet system demand. The portfolio continues to evolve from incentivizing efficient lighting and appliances toward deeper solutions including building electrification ("BE") and building envelope upgrades. Con Edison's successful deployment of these programs and broad customer participation will be critical in moving the state toward its clean energy future.

Regulatory Proceedings

At the time of the 2023 Distributed System Implementation Plan ("DSIP"), the Company undertook its EE and BE activities under the direction of the Public Service Commission's ("PSC") 2020 New Efficiency: New York ("NENY") Order issued in January 2020.[164] This order set a statewide goal of 35.8 TBtu of energy savings. Related goals included a 3.0 percent annual reduction in electricity sales and 1.3 percent annual reduction of natural gas sales by 2025, an aggregate reduction of 3.6 TBtu through heat pump deployment, and an emphasis on the prioritization of programs for low-and moderate-income ("LMI") customers.[165] This order also authorized utility budgets and adjusted targets for Energy Efficiency and Building Electrification ("EE BE") for 2021-2025 and established a statewide Clean Heat Program, which is discussed further in **Section 2.6 Clean Heat**.

In September 2022, the PSC issued the NENY Interim Review and Clean Energy Fund Review[166] which evaluated the performance of utility EE BE portfolios and solicited stakeholder feedback. In July 2023, the PSC issued the Order Directing Energy Efficiency Building Electrification Proposals,[167] which adopted a Strategic Framework for EE BE measures and directed the program administrators to submit proposals within specified budgets. The Strategic Framework is intended to further progress the state's energy goals by requiring 85 percent of portfolio budgets be allocated to measures that can be defined as "strategic,"[168] including those that permanently reduce or eliminate electricity or natural gas usage. The order also emphasized continued focus on BE, which is discussed further in **Section 2.6 Clean Heat**.

As directed by the 2023 order, Con Edison filed both its LMI and non-LMI EE BE Portfolio Proposals in November 2023 and refiled in January 2024. On May 15, 2025, the PSC issued two companion orders authorizing utility-administered EE BE portfolios for the 2026-2030 period, one for non-LMI[169] and one for LMI[170] customers. Both orders authorized the cumulative EE BE program budgets for the non-LMI and LMI portfolios including the Con Edison specific cumulative

[164] Note 147, *supra.*
[165] *Ibid*.
[166] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Order Initiating the NENY Interim Review and CEF Reviews (issued September 15, 2022).
[167] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Order Directing Energy Efficiency and Building Electrification Proposals (issued July 20, 2023).
[168] The PSC established definitions for programs measures to be considered Strategic, Non-Strategic, or Neutral, according to the degree to which they support the energy efficiency and greenhouse gas emissions reductions objectives of the CLCPA and other State and PSC policies.
[169] Note 148, *supra.*
[170] Note 158, *supra.*

budget for the 2026-2030 period. They both also maintain the established Strategic Framework included previously in the 2023 Order that 85 percent of portfolio budgets must be allocated to measures that can be defined as "strategic," though some deviations will now be allowed for certain measures and appliances.[171]

In the non-LMI order, the PSC approved, with modifications, the base portfolio that Con Edison submitted as part of its previously filed proposal and directed all utilities to submit a preliminary non-LMI EE BE Implementation Plan, consistent with the Order's requirements, within 60 days. Additionally, the non-LMI order endorsed a collaborative model between the utilities and the New York State Research and Development Authority ("NYSERDA") where each organization has "differentiated roles and responsibilities, but work in tandem to achieve the State's policy goals."[172] The LMI order designated Con Edison, NYSERDA, and KeySpan Energy Delivery Long Island/KeySpan Energy Delivery New York ("KEDLI/KEDNY") as the lead administrators of LMI programs serving the affordable multifamily customer segment in the downstate region. It also directed downstate utilities and NYSERDA to file a single LMI Implementation Plan detailing program plans for the 2026-2030 LMI portfolio within 120 days of the order. The Company will adapt its programs to be consistent with the Strategic Framework and the other dictates of these orders.

Con Edison recognizes that to advance the achievement of statewide goals, EE targets and budgets need to be expanded in alignment with continually refined priorities driven by the state's carbon emission reduction goals. Thus, the Company's EE priorities include the following:

- Pursuing deeper savings measures with longer effective useful lives, including building envelope upgrades, heat pumps, and waste heat recovery.
- Continuing to grow LMI customer and disadvantaged communities ("DAC") participation in these programs.
- Encouraging tailored program design to align offerings with market needs and maximize effectiveness of EE initiatives.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Achieved non-LMI total portfolio savings of 935,361 MMBtu (Electric) and 2,018,980 MMBtu (Gas), and LMI total portfolio savings of 22,617 MWh (Electric) and 477,415 MMBtu (Gas) for 2024.
- Gren non-lighting electric measures across the portfolio in 2024 to achieve 278,562 MMBtu of savings.
- Achieved substantial multifamily sector savings in 2024, driven by building shell projects that accounted for 25 percent of total electric savings of 114,462 MMBtu and 66 percent of total gas savings of 712,062 MMBtu across the combined LMI and non-LMI portfolios.
- Increased growth onboarding new participating contractors in the Real Time Energy Management ("RTEM") program and achieved approximately 1,800 MMBtu of energy savings. Continued to incentivize customers to deploy and use sophisticated analytics systems to optimize their building heating, ventilation, and air conditioning ("HVAC") and lighting operations.
- Expanded offerings for LMI customers through the statewide LMI EE effort.
- Completed five Evaluation Measurement & Verification ("EM&V") evaluations across the Company's non-LMI portfolio in 2024 and three evaluations in 2023, as part of a continuous effort to validate savings.

[171] *Ibid*. Appendix A, Strategic Framework: Proposed Modifications and Determinations.
[172] Note 148 *supra*, p. 4.

Utility Capabilities Demonstrated (non-exhaustive)

Planning & Forecasting: Con Edison continuously evaluates how to best incorporate learnings from its EE programs into its *forecasting* and *planning* processes.

Customer Programs: Con Edison continues to pursue EE solutions that offer deeper energy savings while expanding offerings for LMI customers and disadvantaged communities. The Company also continues to expand its EM&V to better understand actual savings from *customer programs* and adjust based on results.

The Company has continued to deliver programs designed to encourage customer and industry investments in EE and BE, with offerings tailored to each customer segment's unique needs. The Company offers sector-specific programs divided into four categories: residential, multifamily, small business & nonprofit ("Small Biz") and commercial and industrial ("C&I"). Current programs for residential customers include accessing rebates and incentives related to weatherization ("Weather Ready") and Clean Heat, home energy reports ("HER"), and retail products. Current programs for multifamily offerings include those related to HVAC and HVAC control, motors and drives, building shell, lighting and domestic hot water. C&I includes the multifamily measures, and adds measures related to process equipment.

The Company's EE programs also seek to increase customer engagement and choice. The Company provides customers with actionable insights and the ability to efficiently manage their energy needs, while creating broader system and grid benefits. For example, the Company provides educational materials, increases access to information on energy efficient products and services, and promotes controllable technologies. Con Edison will continue to refine data sharing initiatives to help customers stay well informed about EE program performance and savings measures. As electrification accelerates and overall demand on the grid rises, expanded EE efforts will help mitigate demand pressures on the distribution system. By reducing baseline consumption and managing peak load, EE helps defer or avoid costly infrastructure upgrades. Collectively, these efforts support Con Edison's commitment to increasing customer access to energy markets and delivering greater value through the development of a modernized Distributed System Platform.

The Company's commitment to shifting the portfolio towards deeper EE and BE is exemplified by the growth of savings from non-lighting measures and the phase out of lighting offerings. After January 1, 2026, lighting measures will no longer be part of the non-LMI Portfolio and will only be part of the LMI Portfolio in specific circumstances dictated by the PSC.

A snapshot of Con Edison's electric EE program performance in 2024 is shown in **Table 25**.

Table 25: NENY EE Program Performance (2024)

Program	Highlights	Verified Gross Electric Savings (MMBtu)	Verified Gross Gas Savings (MMBtu)	Total Verified Gross Energy Savings (MMBtu)
Commercial Sector				
Small Business & Nonprofit (Small Biz)	• Average project was 27,000 kWh, (> 92 MMBtu), on par with previous years. • Underwent full marketing rebrand, including a name change from Small-Medium Business to Small Business and Nonprofit (Small Biz), to better align with the customers served by the program and to provide clarity regarding program eligibility. • Continued to improve processes and data management to better support customers and drive new projects. • Completed first evaluation of the gas program, delivering actionable program recommendations and improvement opportunities for future program evaluation. • Expanded outreach and marketing efforts toward specific customer segments to better reach the program's diverse customer profile.	170,859	9,190	180,049
C&I	• Established deadline for new lighting project submissions to reflect the program's shift toward strategic measures. • Expanded offerings to include incentives for energy management systems and fuel switching. • Continued targeted outreach to customers in high energy use sectors with significant energy savings potential (e.g., hospitals, universities, and large offices).	209,429	121,514	330,943
Mid-stream Water & Space Heating	• Introduced first electric measure category, offering incentives for energy efficient pump energy index ("PEI") pumps. • Will introduce additional measure categories to further expand its electric savings offerings.	592	38,490	39,082

Instant Lighting	• Began program phase out in 2024; on track to end in 2025. • Introduced new measures, effective in 2025, to incorporate lighting measures previously offered through the C&I and multifamily programs.	79,292	-	79,292
Virtual Commissioning	• Moved out of the pilots portfolio and was established as an independent program. Performance is now tracked and reported separately. • Introduced automation to supply daily feed to the program vendor, eliminating the need for manual effort. • The program provided daily advanced metering infrastructure ("AMI") data for a record number of accounts.	-	-	-
Multifamily				
Multifamily	• Expanded to include energy efficient fuel switching and secondary steam offerings. • Gained expertise in building envelope projects, with building shell measures contributing 90,441 MMBtu in gas savings and 8,987 MMBtu in electric savings.	69,133	244,436	313,569
Residential Sector				
Residential Home Energy Reports (HER)	• Continued focus on customer engagement to increase and drive program cost efficiencies and deliver tailored messaging to customers with higher-than-average energy consumption. • Expanded outreach and customer engagement efforts by providing messaging materials and reports in Spanish leading to 20% increased awareness. • Program will be phased out at the end of 2025.	269,627	31,966	301,593
Weather Ready	• Implemented a new quality assurance/ quality control ("QA/QC") process to monitor that project standards are met. • Expanded eligibility requirements to include 2–4-unit multifamily buildings. • Expanded eligibility requirements to include Con Edison customers using geothermal or air-source heat pumps for heating and cooling.	3,772	7,842	11,614
Retail Products	• The program showed strong performance in 2024 with retail products contributing over 97 percent of gas savings growth in the residential sector.	130,551	1,564,833	1,695,384

Pilots				
Pilots	• The 2019 Heat Pump Demand Pilot study was finalized and filed in 2024. • Received proposals for domestic hot water hard-to-electrify multifamily projects and planned to fund three to support market transformation of central multifamily domestic hot water systems with low-global warming potential heat pumps and specified built-up designs, in partnership with the New Buildings Institute.	-	-	-
Multi-Sector				
Real Time Energy Management (RTEM)	• Brought on vendors to support savings calculation and data reviews, with vendors valuing the unique, customized approach compared to other RTEM programs. • Significantly increased the number of new participating contractors.	1,815	-	1,815

In addition to the non-LMI portfolio, the Company is committed to successful deployment of the LMI portfolio. In comparison to the non-LMI portfolio, the LMI portfolio generally offers higher incentive levels for income-eligible customers. Furthermore, it often covers a larger percentage of equipment and installation costs for certain upgrades such as weatherization measures. Technical support in the LMI portfolio is also typically at a higher level than with the non-LMI portfolio and can be delivered through, or in partnership with, community-based organizations ("CBOs") or NYSERDA's FlexTech program. Con Edison filed its Statewide LMI Implementation Plan in November 2024. Consistent with the direction of the May 2025 LMI EE BE Order, the Company will file an updated implementation plan in September 2025. The Company made significant progress towards targets for 2024 and for the cumulative period of 2020 to 2024. In total, Con Edison's LMI program offerings contributed 22,617 MWh of electric savings and 477,415 MMBtu of gas savings in 2024. A detailed list of 2024 LMI efforts is found in the annual Statewide LMI Portfolio Report.[173] Performance against electric and gas LMI plans are captured in **Table 26** and **Table 27**.

Table 26: Achieved LMI Portfolio Electric Savings versus Implementation Plan Projections (MMBtu)[174]

	2024 Savings	2020-2024 Savings	2020-2025 Implementation Plan Projection	% Achieved to Implementation Plan Projection
Existing 1-4 Family Homes	108	332	590	56%
Existing Affordable Multifamily Buildings	10,074	25,784	32,212	80%

[173] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Statewide Low- and Moderate-Income Portfolio Report 2024 (filed April 1, 2025): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={D04BF195-0000-C411-8D35-1ABFB4CD9312}.

[174] *Ibid.*

Customer Awareness, Outreach & Engagement	12,435	88,642	101,196	88%
Total	**22,617**	**114,759**	**133,998**	**86%**

Table 27: Achieved LMI Portfolio Gas Savings versus Implementation Plan Projections (MMBtu)[175]

	2024 Savings	2020-2024 Savings	2020-2025 Implementation Plan Projection	% Achieved to Implementation Plan Projection
Existing 1-4 Family Homes	3,973	10,331	16,444	63%
Existing Affordable Multifamily Buildings	448,680	1,325,790	1,479,022	90%
Customer Awareness, Outreach & Engagement	24,763	86,835	114,934	76%
Total	**477,415**	**1,422,957**	**1,610,401**	**88%**

Con Edison is on track to achieve its 2020-2025 NENY LMI targets. As of the end of 2024, Con Edison achieved 86 percent and 88 percent of the 2020-2025 target for electric and gas, respectively.

In addition, the Company remains committed to furthering EE innovation projects to expand access to low-cost DERs, particularly for customers in DACs. These initiatives were developed in response to the PSC's Order Adopting Regulatory Policy Framework and Implementation Plan for Reforming the Energy Vision("REV").[176] The REV proceeding aims to "reorient both the electric industry and the ratemaking paradigm toward a consumer-centered approach that harnesses technology and markets." In alignment with this vision, Con Edison launched several demonstration projects, including the Community Power Project.

The Community Power Project was designed to examine a new self-sustainable model for increasing access to DERs, such as solar-powered generation, for LMI customers. Completed in October 2024, the project has delivered 965,682 kWh of clean energy and reduced CO_2 emissions by 882,050 pounds. It has enabled LMI residents to gain access to and indirect ownership of DERs, enhancing their ability to manage and reduce energy costs. At the project's conclusion, 454 LMI customers had been enrolled, with an additional 50 on the waitlist. On average, participants have saved over $12 per month on their electric bills through net crediting. This project exemplifies Con Edisons ongoing efforts to drive EE innovation and promote energy affordability for underserved communities.

[175] *Ibid.*
[176] Note 7, *supra.*

Future Implementation and Planning

Summary of Future Actions

- Participate in ongoing stakeholder processes on the future of EE and BE in New York.
- Expand EM&V efforts to address divergences between reported and verified savings, improve communication, and further refine procedures, including using AMI data where appropriate.
- Design and pursue approval to construct utility thermal energy network ("UTEN") projects in Chelsea, Mount Vernon, and Rockefeller Center.
- Complete the Hard-to-Electrify Building Solutions Pilot for central domestic hot water discussed in the Company's 2024 System Energy Efficiency Plan ("SEEP").
- Administer the Affordable Multifamily Energy Efficiency Program ("AMEEP") as recently directed by the PSC.
- Implement the non-LMI and LMI EE BE portfolio as directed by the PSC in the orders issued May 15, 2025.

Evaluation, Measurement, and Verification

The Company continues to integrate new technology and evaluation methods into its EM&V efforts, including incorporating AMI interval consumption data, where available, into program analyses. This aligns with the Company's goal of improving the timeliness and accuracy of feedback on programs through refining QA/QC activities across its portfolio as programs evolve as well as the goal of targeting measurement and verification on new technologies.

Con Edison is in the process of planning and implementing EM&V improvements for most of its EE and BE programs. Additionally, EM&V expanded its offerings for LMI customers through the statewide LMI EE effort. These improvements typically involve on-site and virtual inspections and documentation reviews by third parties, design and implementation of QA controls, and estimation of energy and demand savings when actual results are not available.

The full table of the 2019-2025 EM&V activities and schedule are available in the SEEP 2019 – 2025 report filed April 1, 2025.[177]

Utility Thermal Energy Network Projects

To implement the Thermal Energy Network and Jobs Act [178] the PSC ordered the utilities, including Con Edison, to propose at least one UTEN pilot project. The Company is committed to developing UTEN projects that will aid in achieving key learning objectives, testing scalability, and informing future policy. Testing new utility-owned networks will leverage the Company's existing expertise in owning and managing large-scale distribution networks to provide safe, reliable, and resilient energy to diverse customer types while demonstrating the value of ambient loop systems at scale. In support of the PSC's Order, Con Edison is currently in the early stages of developing three UTEN projects. These projects are located in:

[177] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Con Edison 2024 System Energy Efficiency Plan (SEEP) Annual Report (filed April 1, 2025): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={D0DCF295-0000-C22B-887C-189BEFF10415}

[178] Case 22-M-0429, *Proceeding on Motion of the Commission to Implement the Requirements of the Utility Thermal Energy Network and Jobs* Act, Order on Developing Thermal Energy Networks Pursuant to the Utility Thermal Energy Networks and Jobs Act (issued September 15, 2022).

- Chelsea
- Mount Vernon
- Rockefeller Center

The Chelsea project proposes to create a UTEN in downtown Manhattan that links an existing commercial office building which houses a data center with three nearby New York City Housing Authority low-income multifamily buildings (291 units) in a DAC. This UTEN would capture and recycle heat from the commercial office building, which would otherwise be released into the local environment, to provide domestic hot water services to three buildings. One of those three buildings will also utilize the system for space heating and cooling.

The Mount Vernon Project proposes to create a UTEN consisting of two-pipe ambient utility distribution systems in Westchester County, connected to several geothermal borehole fields that will be installed in existing parking lots and greenspace. The UTEN is designed to serve up to 42 existing buildings and one new, mixed-use Energy Center building in a DAC, connected to the network via heat pumps. Envisioned participants range from residents of 1-4 family homes, a low-income multifamily housing complex, small businesses, and community buildings.

UTILITY THERMAL ENERGY NETWORK

A UTEN is an ambient temperature loop system which connects multiple buildings by using some variation of ground source heat pumps, geothermal infrastructure, waste heat energy, and utility-owned load balancing systems.

The Rockefeller Project proposes to create a UTEN that converts three large commercial buildings in midtown Manhattan from steam heating to UTEN-connected heat pumps. The project would utilize clean, recycled waste heat from a variety of sources (e.g., multiple building systems, steam condensate) in the Rockefeller Center network of buildings, creating a waste heat exchange "marketplace" between buildings with different ownership.

All three of these UTEN projects are in Stage 2, which entails pilot project engineering design and development of customer protection plans.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Project complexity and ability of customers to have confidence in energy and cost savings, particularly for larger projects	• Design programs in a way that creates simple, easy to understand incentives and programs for both customers and contractors. • Share savings calculators and other program tools to help contractors and customers calculate savings and incentives. • Deliver strong EE program messaging.
Project capital and operating costs to customers make energy savings and overall returns less attractive	• Provide remote energy audits, pursue additional strategic partnerships with large energy users, and make investments in new energy-saving technologies and market channel strategies supports. • Continue emphasis on programs that achieve deeper savings.
Administrative burdens and barriers to customer participation	• Work continually with customers and other key stakeholders to reduce the barriers to participation, particularly for LMI customers.

Stakeholder Interface

The Company coordinates through regular meetings with the utilities and NYSERDA to exchange lessons learned and best practices. Con Edison meets weekly with the utilities across the state to administer cohesive programs across the shared territories, and with the Joint Utilities and NYSERDA to administer statewide LMI programs. These meetings serve as a forum to identify opportunities to improve and expand EE programs, explore cost-effective innovations, enhance customer engagement, and maintain compliance with PSC and Department of Public Service orders and directives.

In addition, the Company actively engages with city and state representatives, public agencies, community organizations, industry groups, and contractors to improve program design and better meet customer, community, and market needs. Feedback gathered through coordinated events and trainings is used to inform and implement program changes, where appropriate. The Company holds regular webinars for its EE and BE programs and is in daily contact with major market participants to assess program performance.

To better serve LMI customers, the Company continues to actively participate in Statewide LMI Portfolio Stakeholder Webinars, most recently on December 5, 2024,[179] and to strengthen partnerships with New York City Housing Preservation and Development, New York City Accelerator, and CBOs. These efforts also include coordination with NYSERDA's Regional Clean Energy Hubs, four of which are located within Con Edison's service territory. Each hub is operated by selected CBOs and nonprofits that lead outreach efforts, build partnerships, support project application processes, and provide workforce development and small business assistance for DACs. Con Edison serves as a resource to the hubs by supporting their efforts where possible and is actively working to strengthen collaboration to maximize impact. As of October 2024, the Regional Clean Energy Hubs have hosted 2,104 outreach events and created 100 new partnerships.

Additional Detail

This section responds to the questions in the DPS guidance specific to EE integration.

1) **The resources and capabilities used for integrating energy efficiency within system and utility business planning.**

Con Edison's EE programs play a significant role in reducing system peak, minimizing demand growth, and deferring large utility investments. The Customer Clean Energy Programs ("CCEP") department, which runs the EE programs, is within the larger Customer Energy Solutions ("CES") organization. CES encompasses groups that lead program design and delivery, including procurement of NWS demonstration projects and distribution planning, among others. There is close collaboration among the groups to leverage EE as a resource, including targeting EE temporally and spatially, to help meet system needs. **Section 3.1 DSIP Governance** provides a more detailed discussion of the CES organization.

These groups also coordinate with other groups across Con Edison to integrate EE into additional business planning processes. For example, CCEP provides volume and peak reduction forecasts to the relevant user groups within Con Edison for budget, capital project, and/or system expansion planning purposes. **Appendix A Peak Load and DER Forecast Details** describes in detail how the Company incorporates these EE forecasts as load modifiers, reducing the system forecast.

[179] Case 18-M-0084, *In the Matter of a Comprehensive Energy Efficiency Initiative*, Statewide Low- to Moderate-Income Portfolio Stakeholder Webinar Summary Report, December 5, 2024 (posted April 2, 2025).

2) **The locations and amounts of current energy and peak load reductions attributable to energy efficiency and how the utility determines these.**

Con Edison measures the fuel-specific energy savings and peak load impact for each project in its territory according to standardized approaches codified in the New York State Technical Resource Manual[180] or other approved calculations. These savings are reported quarterly on utility scorecards and summarized in program-specific annual reports.

Upstream and midstream delivery programs may aggregate savings at the vendor or local store level, as opposed to the individual end-user level. The Company is currently developing and testing the methods and models that can be used to attribute savings to programs for which the Company does not currently have end-user participation data.

3) **A high-level description of how the utility's accomplishments and plans are aligned with New York State climate and energy policies and incorporate innovative approaches for accelerating progress to ultimately align with the CLCPA.**

New York State is at the forefront of fostering the clean energy transition. The Climate Leadership and Community Protection Act ("CLCPA") requires zero-emissions electricity by 2040, and that overall statewide GHG emissions be reduced 85 percent from 1990 levels by 2050.

Achieving full decarbonization will require a significant rebalancing of the types of energy delivered to customers, driven primarily by electrification of building heating and transportation, as well as access to a growing supply of carbon-neutral energy. Attaining this fully decarbonized future is a central component of the Approach to the Energy Transition portion of the Con Edison Long Range Plan.[181] The Company's planning for CLCPA compliance and a fully decarbonized future relies heavily on achieving substantial improvements in EE, BE, economy-wide electrification (e.g., electric vehicles), and heat pump adoption. The Company has established specific and aggressive targets for each of these initiatives within its decarbonization planning pathways.

Con Edison's EE programs have been effective in delivering energy savings and bill savings to customers across its territory. More detail and granularity of the accomplishments are described at length in the multiple annual reports, including the SEEP and the LMI Annual Report (links are provided in **Table** 28) and the Clean Heat Annual Report.[182]

4) **Summary of information on energy efficiency programs offered by the utility, with direction to annual filings for more detailed information on energy efficiency programs.**

Commercial Sector

The Company offers a range of custom and prescriptive EE programs serving C&I customers. Commercial programs are tailored to suit the needs of specific commercial markets such as large commercial buildings, small commercial buildings, hospitals, and schools.

Commercial & Industrial

The C&I Program provides prescriptive incentives for energy-efficient technologies, such as high-efficiency chillers, HVAC measures, insulation, waste heat recovery, and variable frequency drives. The program is currently available to individually metered commercial customers who are billed on a commercial rate schedule.

[180] The New York State Technical Resource Manual is regularly updated by the Joint Utilities with the most recent consolidated plan released on March 3, 2025: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={E0297195-0000-CD34-98A6-65D7FA8C45B8}.
[181] Note 3, *supra.*
[182] Note 156, *supra.*

The program also offers rebates for custom efficiency projects. The custom track is a flexible and innovative equipment replacement program designed to encourage C&I customers to identify energy-saving opportunities and implement cost-effective retrofit projects. Custom projects involve the installation of non-lighting measures that are not qualified for the prescriptive track and, as such, require additional engineering analysis to determine energy savings.

Midstream Water and Space Heating

The Midstream Water and Space Heating Program is a program that incentivizes high-efficiency gas, water, and space heating equipment by engaging with distributors to increase the stocking and sales of high-efficiency models. This program serves interruptible and non-interruptible commercial customers, veterans-service and religious organizations with a residential rate code, and multifamily customers. In 2024, the program introduced its first electric measure category, offering incentives for energy efficient PEI pumps.

Instant Lighting

The Instant Lighting Program provides point-of-purchase discounts to commercial electric customers for LED lighting upgrades. Customers receive discounts instantly on eligible ENERGY STAR®-certified and Design Lights Consortium-listed lamps at the point of sale when purchased from one of the Company's program participants. This program is currently being phased out and will officially end after 2025 in alignment with the Company's efforts to move towards deeper, more impactful energy savings measures.

Small Business & Nonprofit

The Small Biz Program offers Con Edison's small commercial and nonprofit customers upgrades to more energy-efficient equipment for systems such as lighting, HVAC, refrigeration, energy management systems, building envelope, and hot water systems. The Small Biz program serves a diverse group of customers, such as hotels, warehouses, schools, auto repair shops, retail stores, and houses of worship that may not otherwise have the time, expertise, or available capital to access and implement energy-saving technology upgrades.

Virtual Commissioning

The Virtual Commissioning Program serves medium-to large buildings in the Small Biz, C&I, and multifamily sectors. It analyzes interval energy data to identify energy savings opportunities and remotely guides customers in implementing low- and no-cost operational measures. This helps optimize building operations for real and persistent energy savings.

This program also provides innovation in customer outreach by targeting those who haven't participated in the Company's efficiency programs in the last two years. Using AMI data analysis, potential opportunities are identified, and customers are contacted by a vendor. This zero-cost pathway requires no enrollment forms and offers free operational optimization coaching.

Additionally, the program tests a pay-for-performance model using regression analysis of the pre- and post-meter data to measure the savings achieved, which is performed by an implementation vendor. This approach reduces savings performance risk for the Company by invoicing only measurable savings at the meter. If savings aren't detectable, the vendor does not receive payment for engagement on that project.

Residential Sector

Weather Ready

The Weather Ready Program offers incentives for one- to four-family homes to upgrade their insulation, air sealing, and duct sealing. Customers can work with a participating contractor to install the aforementioned measures and receive incentives. Customers also have an option to work with a third-party company to finance their projects.

Residential Home Energy Reports

The HER Program is a behavioral program designed to motivate customers to use less energy and save money on monthly bills by providing customer-specific energy usage reports, including "neighbor" comparisons and personalized energy-saving advice. This program aims to empower customers to take control of their usage by providing energy-saving recommendations via email and printed mailers. The HER Program also provides Con Edison with measurable and verifiable information about customer behavior. This program delivers HERs to both electric and gas customers. This program will be discontinued at the end of 2025.

Retail Products

Launched in July 2023, the Retail Products Program offers rebates for customers that purchase and install qualified energy efficient products in Con Edison's service territory. The program employs several key offerings for customers including discounted energy efficient weatherization measures such as batt insulation, air sealing caulk, air-conditioning covers, door sweeps, spray foam insulation and weather stripping purchased at participating retailers. Midstream incentives are offered to retailers for pass-through price reductions to customers for the sale of energy efficient products.

The Direct Load Control Bring Your Own Thermostat ("BYOT") program offers a rebate to customers who enroll and allow limited seasonal adjustments to their thermostat settings. Additional details on the BYOT program are available in **Section 2.3 Grid Operations**.

Multifamily Sector

The Multifamily Energy Efficiency Program promotes EE for existing multifamily electric and gas customers with five or more residential units. The multifamily market consists of nearly 70,000 residential buildings across New York City and Westchester County. The program is designed to help building owners and property managers of multifamily buildings reduce energy consumption and save money on utility bills while also helping to reduce GHG emissions.

LMI Sector

Affordable Multifamily Energy Efficiency Program

The AMEEP is the statewide LMI Multifamily Program designed and managed collaboratively by the Joint Utilities in collaboration with NYSERDA. The program offers incentives for the installation of energy-efficient equipment and technology in existing affordable multifamily housing. The May LMI EE BE Order established that Con Edison, KEDNY/KEDLI, and NYSERDA will collectively administer LMI EE BE programs for the affordable multifamily segment downstate.

Additionally, Con Edison has conducted efforts focused on increasing education and awareness about EE, as well as providing energy efficient equipment for use in the home.

Detailed information on Con Edison-supported EE programs can be found via the links below in **Table 28**.

Table 28: Con Edison Annual Fillings for EE Programs

Report	Link
Con Edison 2024 SEEP Annual Report	https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={D0DCF295-0000-C22B-887C-189BEFF10415}
Statewide LMI Portfolio 2024 Annual Report	https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={D04BF195-0000-C411-8D35-1ABFB4CD9312}

The May 2025 LMI EE BE Order also directed Con Edison to collaborate with NYSERDA, KEDLI, and KEDNY to file a single LMI Implementation Plan detailing plans for the 2026-2030 LMI portfolio within 120 days of the authorization order. The LMI Implementation Plan will subsequently be updated on an annual basis. Similarly, the May 2025 non-LMI EE BE Order directed Con Edison to file a preliminary non-LMI EE BE Implementation Plan within 60 days of the authorization order. It further instructed Con Edison to file an updated non-LMI EE BE Implementation Plan on an annual basis.

5) **Describe how the utility is coordinating and partnering with NYSERDA's related ongoing statewide efforts to facilitate energy efficiency market development and growth.**

The Company works closely with NYSERDA under the NENY framework in place from 2020-2025 to facilitate energy efficiency market growth. NYSERDA sits on the Joint Management Committees for both Clean Heat and LMI, and on the Technical Resource Manual Management Committee.

The 2025 EE BE Orders revised the roles and responsibilities for EE BE program administrators across the state including Con Edison and NYSERDA. As summarized in the 2025 non-LMI EE BE Order, Con Edison and other utilities will continue to be "the primary administrators of end-user incentive programs for the non-LMI Market".[183] As noted previously, Con Edison, KEDNY/KEDLI, and NYSERDA will collectively administer LMI EE BE programs for the affordable multifamily segment downstate.

The 2025 Orders also clarified roles for NYSERDA. In the LMI EE BE portfolio, NYSERDA is the statewide program administrator for the 1-4 family building segment, the upstate multifamily program, and affordable new construction programs statewide. In the non-LMI EE BE Program, NYSERDA is the statewide program administrator charged with workforce development, codes and standards, technical assistance/audits, purposeful demonstration pilots, and general consumer awareness and education.

[183] Note 148, *supra*, p. 5.

2.8. DATA SHARING

Context and Background

New York is transforming its electricity system to advance clean energy goals, increase system resiliency, and enhance customer experience. To accomplish the ambitious goals outlined by the governor and the Climate Leadership & Community Protection Act ("CLCPA") while maintaining affordability, utilities, distributed energy resources ("DER") providers, and other stakeholders need continued access to energy-related data. The availability of increasingly granular customer and distribution system data that is being applied to value-added use cases is accelerating the adoption and deployment of clean energy solutions across the state.

Con Edison continues to advance its data and information sharing capabilities to unlock benefits for a wide range of stakeholders. From the customer perspective, enhanced data access provides increased transparency into individual energy consumption patterns and trends. When paired with targeted communications on energy efficiency ("EE") and other energy saving measures, this transparency empowers customers to more actively manage their energy usage and can help manage energy costs.

From a program administration standpoint, improved data sharing capabilities offer increased visibility into real-time, customer load data. This enables Con Edison to more effectively monitor program performance, identify potential enhancements, optimize resource allocation, and leverage advanced analytics to tailor programs and services to specific customer segments and ultimately, improve overall customer satisfaction and engagement.

Expanded access to system and customer data also supports third party developers by providing insights into demand patterns and system constraints. This information can help identify optimal locations for DER projects which reduces risk and uncertainty for developers. It also enables developers to target areas where DER solutions can deliver the highest energy savings and system benefits.

Additionally, data is provided to state agencies, academic institutions, and other groups to analyze the impacts of policies, track emissions, and create action plans needed to support the state's energy goals.

Con Edison's data sharing capabilities, specifically supporting technologies and methods, have continued to mature with each Distributed System Implementation Plan ("DSIP"). During the 2023 DSIP cycle, efforts were focused on development of Phase I Integrated Energy Data Resource ("IEDR") use cases to make available information about consolidated hosting capacity maps, installed DERs, and planned DERs in the interconnection queue. As discussed throughout this section, Con Edison continues to actively explore ways to enhance data sharing tools and improve access to customer-specific and aggregated data.

Data sharing and adhering to privacy standards and cybersecurity protocols for this sharing has been the subject of several regulatory orders. In 2020, the Public Service Commission ("PSC") centralized data access topics in case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data.[184] In 2021, the PSC issued two important orders within this proceeding, the IEDR Order[185] and the Data Access Framework ("DAF") Order.[186]

[184] Case 20-M-0082, *Proceeding on the Motion of the Commission Regarding Strategic Use of Energy Related Data*, Order Instituting Proceeding (issued March 19, 2020).
[185] Case 20-M-0082, *Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data*, Order Implementing an Integrated Energy Data Resource (issued February 11, 2021).
[186] Case 20-M-0082, *Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data*, Order Adopting a Data Access Framework and Establishing Further Process (issued April 15, 2021).

The IEDR Order approved the phased design and implementation of a statewide IEDR Platform[187] to centralize data access in support of New York's clean energy goals. This included a Phase 1 budget, which enabled the development of at least five priority data use cases over 24-30 months, and a Phase 2 plan that will enable over 40 additional data use cases by Q1 2027.

The DAF Order aims to standardize cybersecurity and privacy protections, data quality standards, and customer consent processes for third party access to energy data. Within this Order, the PSC:

- Ordered the implementation of a statewide Data Ready Certification ("DRC") to be administered by a third-party vendor. The DRC will be used for third parties soliciting non-public information from the IEDR.
- Adopted data quality and integrity standards for data sets delivered by the utility to third parties.
- Adopted data performance metrics categories to measure effectiveness of data delivery.
- Removed registration for hosting capacity maps.
- Removed data fees for customer energy usage under 24 months old.
- Adopted a statewide data privacy aggregation standard of 4/50. This standard requires that a data set must include at least four customers, with no one customer accounting for more than 50 percent of the total consumption.
- Required eight joint and individual utility filings between July-September 2021.[188]

The Utility Energy Registry ("UER") was first established by a 2018 order[189] as a vehicle for providing streamlined access to anonymized aggregated community-level energy data. In August 2021, the PSC issued an order addressing New York State Energy Research and Development Authority ("NYSERDA") UER Status Report and directing NYSERDA to form a standing UER working group to manage and publish versions of the New York UER Protocols.[190]

In October 2023, the PSC issued an order that expressly directed the Joint Utilities to transfer defined customer data sets, such as customer contact information, customer billing, and energy usage to the IEDR Solution Architect and Development Team ("IEDR Administrator"). The order clarified that as this transfer is between data custodians (i.e., utilities, NYSERDA, IEDR), customer consent is not required.[191] In December 2024, the PSC issued an order related to the transition of utility reported community-scale energy usage data to the IEDR.[192] This order directed the utilities to cease

[187] The IEDR is a centralized state-wide platform that provides access to useful energy data and information from New York's electric, gas, and steam utilities, and other sources, to support new and innovative clean energy business models that serve to benefit New York energy customers.

[188] Filings under Case 20-M-0082*, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data*, include, among others: The Joint Utilities' Inventory of Available Data Points Omitted from Appendix A of the Data Access Framework Order (filed July 14, 2021); The Joint Utilities' Proposal for an Alternate Method of Account Identification (filed July 14, 2021); The Joint Utilities' Green Button Connect User Agreement and Onboarding Process (filed August 13, 2021); The Joint Utilities' Consent Process Assessment and Customer Consent Engagement Plan (filed September 20, 2021); and The Joint Utilities' Data Access Implementation Plan (filed September 20, 2021).

[189] Case 17-M-0315, *In the Matter of the Utility Energy Registry*, Order Adopting Utility Energy Registry (issued April 20, 2018).

[190] Case 17-M-0315, *In the Matter of the Utility Energy Registry*, Order Adopting Utility Energy Registry Modifications (issued August 12, 2021).

[191] Case 20-M-0082, *Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data*, Order Addressing Integrated Energy Data Resource Matters (issued October 13, 2023).

[192] Cases 20-M-0082, *Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data* and 17-M-0315, *In the Matter of the Utility Energy Registry*, Order Approving Transition of Utility Reported Community-Scale Energy Usage Data (Issued and Effective December 20, 2024).

with UER reporting responsibilities once the IEDR can produce and publish aggregated community-scale energy use data.[193]

Con Edison recognizes the value of increased data and information sharing. The Company has continued to work with stakeholders and the PSC to investigate more efficient and robust means of exchanging system and customer data through the IEDR and DAF efforts, under the conditions outlined in the Company's data privacy policy. As outlined below, Con Edison has implemented policy guidelines and reasonable organizational, technical, and administrative measures to safeguard customer information from unauthorized access or improper use.

Data Types

Con Edison considers three types of data sharing, 1) customer data (which is further differentiated as customer-specific non-aggregated or aggregated data), 2) distribution system data, and 3) rate plan data.

Customer Data

Customer data consists of customer energy usage data, customer-sited generation data, account information, and load profile information. Customer data can be customer-specific or aggregated, such as at the building or community level. Con Edison has significantly enhanced the types of customer data to be shared with the completion of its advanced metering infrastructure ("AMI") rollout of 4.85 million meters in June 2024, as discussed further in **Section 2.11 Advanced Metering Infrastructure**. AMI now enables customers to access and download their near-real time (i.e., 45-60 minutes after the interval ends) energy usage, empowering them to make informed energy decisions. The completion of the AMI rollout means data sharing, through Green Button Connect ("GBC") and other methods is available to all customers, giving them convenient access to granular data, and providing energy reports, savings tips, and ways to share their data with third parties.

The Company makes customer data available to authorized third parties through a variety of methods, including GBC under Share My Data, Electronic Data Interchange ("EDI") for DER developers, application program interfaces ("APIs") for Energy Service Companies ("ESCOs"), and is continuing to work closely with NYSERDA to develop and implement IEDR use cases. Additionally, Con Edison provides subscriber level data to Community Distributed Generation ("CDG") Hosts in support of CDG projects, including those participating in Net Crediting, described in greater detail in **Section 2.10 Billing and Compensation**. Moreover, building owners can obtain aggregated consumption data for EE benchmarking and compliance reporting, through the Company's Building Energy Usage Portal ("BEUP"). Additional details on the BEUP are described later in this section.

Distribution System Data

Distribution system data includes load, voltage, power quality, capacity, equipment, and operating details. Con Edison has made significant amounts of system data, including hosting capacity maps, available through the Company's public website. This increased visibility into system characteristics and needs is a response to developer requests and fosters DER market development. With increased transparency, developers can make more informed decisions about potentially high value DER interconnection areas and where there may be feeders that may require substation upgrades.

Con Edison, in collaboration with the Joint Utilities, continues its commitment to expand accessibility and improve presentation of system data on the Joint Utilities website and utility online portals to better support stakeholder data

[193] Cases 20-M-0082, *Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data* and 17-M-0315, *In the Matter of the Utility Energy Registry*, Department of Public Service Staff Proposal on the Transition of Utility Reported Community-Scale Energy Usage Data (filed November 8, 2023).

needs. Details of new system data included in the hosting capacity maps are described further in **Section 2.9 Hosting Capacity**.

Rate Plan Data

Con Edison's rate plan dataset, available on the public IEDR website in the Rate Plan Browser feature,[194] contains information on all the Company's rates and tariffs in a single location. Data available includes attributes for each rate plan and if the rate plans include retail supply, rate periods, time-of-use ("TOU") pricing, and demand charges. The public rate plan browser was implemented by the IEDR team as part of the Minimum Viable Product ("MVP") use cases in Phase 1.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Completed Phase 1 of the IEDR which included the development of the Initial Public Version ("IPV") and MVP use-cases.
  - Released IPV 1.0.1 which contains hosting capacity map data, a repository of installed DERs, and a repository of planned DERs.
  - The MVP added additional use cases related to DER siting, hosting capacity, DER map enhancements, and a rate plan data catalog.
- Provided access to an expanded range of customer-specific data through implementation of the Share My Data Platform, allowing third parties to access and download customers' near-real time energy usage.
- Increased the system data available through the hosting capacity maps including Electrification Load Serving Capacity Maps.
- Continued collaboration with ESCOs using APIs developed as part of the Share My Data Platform and implemented similar APIs for ESCOs and large customers.
- Continued discussions with stakeholders to identify the range of system data currently available and better understand who is using the data, for what purposes, and how often, to prioritize future enhancements.

Utility Capabilities Demonstrated (non-exhaustive)

Hosting & Registration: Con Edison's sharing of distribution system *data* provides valuable information to third parties evaluating potential *DER interconnection* opportunities while maintaining *cybersecurity* protections for Company systems and customer privacy.

Customer Programs: Improvements in *data* collection and sharing have made Con Edison more effective at monitoring and making improvements to *customer programs*.

Market Participation: Con Edison continues to increase the breadth and granularity of *data* available to *market participants* and expand the avenues available to access data (e.g., Share My Data, My Account).

[194] New York State, Integrated Energy Data Resource Rate Plan Browser: https://iedr.nyserda.ny.gov/rate-plan/.

Progress since the 2023 DSIP has focused on the expansion of data sharing capabilities, specifically historical customer billing account and AMI data. Customer billing and account data from January 2022 to present is available, as is AMI data from January 2023. The Company updates both data sets daily.

The IPV of the IEDR Platform was released on March 31, 2023,[195] following coordinated input from the Joint Utilities and stakeholders, and includes a detailed roadmap of upcoming releases including new or improved functionality. The MVP use cases, released on March 27, 2024,[196] marked the conclusion of Phase 1 of IEDR development. Additional details on Con Edison's IPV and MVP use cases are described in Table 29 and Table 30.

Table 29: Initial Public Version Use Cases[197]

Launch	Use Case	Description
IPV Q1 2023	Consolidated Hosting Capacity Maps	This use case supports DER developers, DER owners and/or utilities, allowing them to view all hosting capacity maps for the entire state in one map view with consistent data. This enables users to accurately site new DERs and monitor the state of DER development in New York. Foundational functionality was implemented in the IPV, with enhancements to hosting capacity maps expected to be developed in future releases.
IPV Q1 2023	Installed DERs	This use case supports Energy Service Entities ("ESE") and/or government staff members who want to view all installed DERs that utilities have data on (e.g., over 300kW). This allows them to site new DERs or monitor the state of DER development in New York. This use case also provides access to the necessary information pertaining to installed DERs, including attributes, location, and status in a consistent format across the entire utility service territory.
IPV Q1 2023	Planned DERs (Interconnection Queue)	This use case supports ESE and/or government staff members who want to view and monitor all planned DERs that utilities have data on (e.g., over 300kW). This allows them to site new DERs or monitor the state of DER development in New York. This use case also provides access to the necessary information that pertains to large planned DERs including attributes, location, and status in a consistent format across the entire utility service territory.

[195] New York State Energy Research and Development Authority, Integrated Energy Data Resource Program Quarterly Report through March 31, 2023 (issued April 27,2023)
[196] New York State Energy Research and Development Authority, Integrated Energy Data Resource Program Quarterly Report through March 31, 2024 (issued April 30,2024)
[197] NYSERDA, New York State Integrated Energy Data Resource Stakeholder Use Cases: https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program/Use-Case-Development.

Table 30: Minimum Viable Product Use Cases[198]

Launch	Use Case	Description
MVP Q1-2024	DER Siting – Environmental, Community, Terrain, Land, and Property Assessment	This use case supports local governments and community solar developers who want to accelerate the process for identifying, selecting, and negotiating site agreements for community solar projects, by providing access to environmental, community, and property data (in addition to electrical infrastructure information, which was foundationally covered in the IEDR IPV release). This allows users to reliably identify feasible sites for solar development, deploy available capital more quickly, and increase the amount of clean energy available to New York State ("NY State") electricity customers.
MVP Q1 2024	Electronic Infrastructure Assessment Tool ("EIAT") Hosting Capacity & DER Map Enhancements	This use case supports DER developers, DER owners, and utilities to better understand and accelerate the interconnection approval process for DER systems. It provides a clearer understanding and evaluation of the process of siting the location of a DER installation, so that DER projects can deliver clean energy to customers as soon as possible. Features that will enable the function of this use case include standardizing enhancements to existing hosting capacity maps, duration of the interconnection approval process, interconnection cost information, utility upgrade project information, and corresponding forecast of hosting capacity updates.
MVP Q1 2024	Efficient and Effective Access to Existing Customer Billing Data	This use case grants electronic access to a list of properties at the time of the energy manager and data services contract signing. It does not require additional on behalf of the customer for the data services provider to access those properties' data at a later point (within the authorized timeframe). Currently, separate actions are required for each customer account at the time of the authorization request. Ideally, customer consent can be granted both in advance and at the time of the request as well as via mobile phone. This use case also helps improve the timeliness of bill payment, reduce late fees, and verify customer savings.

[198] *Ibid*.

MVP Q1 2024	Find and Filter Rate Options Across NY State Investor-Owned Utilities ("IOU")	This use case allows ESE or government staff members to view a list of rates and tariffs across NY State utilities, filterable by key criteria (e.g., rate name, rate type, location, etc.), to quickly navigate to pertinent rate information. This use case also enables access to rate and tariff information in a consistent and machine-readable format, removing the need to manually review individual PDFs over time or visit individual utility websites to see the available rates. Users will be able to export the list to use it for analysis and integration with their own analysis tools.
MVP Q1 2024	Access to Basic Rate Data and Tariff Book for Individual Rate	This use case allows users to see all information about a single rate in one place; enabling those estimating energy customer bills to access relevant data more easily and precisely than they currently can. Specific features of this use case include making rate parameters that change slowly (e.g., rate periods, holidays, seasons, minimum and other fixed charges, and baseline allowances tiered block rates) available in structured format and facilitating easier navigation to the section of the tariff where parameters for a given rate can be found (which includes easier navigation to both the most recent version of the tariff book itself and historical versions of the tariff).

The Company met all data requirements for Phase 1 Use Case implementation by the IEDR Development Team (comprised of E-source, UtilityAPI, FluxTailor, TRC Companies, and HumanLogic) and, on March 28, 2024, NYSERDA announced the completion of Phase 1 of the IEDR. The Joint Utilities continues to work with the IEDR Development Team on the Phase 2 use cases, as prioritized by NYSERDA in the Phase 2 Roadmap.[199]

One recent addition to the IEDR platform is the integration of customer data via the GBC protocol. When combined with AMI data and historical billing information, this integration has facilitated the compilation of a comprehensive, three-year dataset of actionable information, including customer bills and internal meter readings. The incorporation of this dataset into the IEDR enhances visibility into customer consumption patterns and demographic trends that can be leveraged by third-party developers to support more informed planning and investment decisions.

The IEDR facilitates seamless data exchange between Con Edison and third-party developers, thereby supporting future grid planning efforts by providing access to accurate forecast data for use in DER planning. The availability of this data will further drive market development by reducing barriers to DER interconnection. Developers having access to utility and customer data will help inform decision-making and support directing clean energy infrastructure development to the areas of most need, by showing values such as locational system relief value ("LSRV").[200]

The Company also continues to increase the breadth and granularity of data available and expand other methods of accessing data. Ongoing investments in AMI, Share My Data, and My Account are resulting in additional data being

[199] NYSERDA, IEDR Program Timeline and Milestones: https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program/Program-Milestones.

[200] Refers to a component of the Value Stack that makes up compensation for DER under the Value of DER Structure. The LSRV is an added credit for DER installations in eligible areas where the utility grid would benefit from additional generation capacity. More details on LSRV are available in **2.11 DER Interconnections**.

available in a format that is more usable to customers and third parties. The Company also continues to provide guidance and support to third parties on how to register for data access and receive data through secure, machine-to-machine processes including Share My Data and EDI.[201] For building benchmarking, the Company continues to support a web service that automatically imports building data directly into ENERGY STAR Portfolio Manager® ("EPSM"), which is the Environmental Protection Agency's ("EPA") online tool for benchmarking energy and water consumption with similar buildings nationwide.[202]

Customer Data (Non-Aggregated)

Con Edison provides a wide range of customer-specific data to both customers and third parties through multiple data sharing mechanisms and platforms. Customers can access their account, billing, and usage data through the online My Account portal, or by calling the Company and requesting up to two years of billing statements. My Account also includes the option for customers to download their usage data to a spreadsheet via the Green Button Download tool.

Authorized third parties are able to access customer-specific data via Share My Data and EDI, which has historically been the mechanism for sharing data with ESCOs for purposes of retail access and was extended to DER providers by the PSC in late 2017.[203] Since 2020, the Company has implemented third-party enhancements to My Account Access, with the appropriate customer consent to view and export a customer's My Account profile, including billing, usage, and other customer information. All customer data sharing with DER providers is subject to the Uniform Business Practices for DERs ("UBP-DERs").

Share My Data

As required by the PSC,[204] the Company implemented its Share My Data Platform in December 2017. This platform enables customers to consent to authorized third parties retrieving their billing and interval data via API technology aligned with GBC specifications.

In August 2024, Con Edison achieved certification of the Share My Data platform by the Green Button Alliance, a non-profit organization that fosters the development, compliance, and adoption of the Green Button standard for easy, secure access and sharing of energy and water usage data. This certification followed the implementation of enhancements that improved standardization and customer ease-of-use of the platform.

As of May 2025, the data sets available include:

- Account number
- Meter number
- Service address
- Energy or net energy usage data (kWh, net kWh, Ccf)
- Reactive power (kVAR)
- Service classification
- Installed capacity

[201] Con Edison How to Access Customer Data website: https://www.coned.com/en/business-partners/access-customer-data.
[202] ENERGY STAR® website: https://www.energystar.gov/buildings/benchmark.
[203] Case 15-M-0180, *In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products,* Order Establishing Oversight Framework and Uniform Business Practices for Distributed Energy Resource Suppliers (issued October 19, 2017), p. 28.
[204] Cases 15-E-0050, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Order Approving Advanced Metering Infrastructure Business Plan Subject to Conditions (issued March 17, 2016).

- Total electric and gas bill costs
- Billing history
- Interval usage timestamp
- Reading type (actual versus estimate)
- Peak demand (kW)

Beyond these data sets, the Company routinely engages stakeholders to identify and evaluate additional data to include in Share My Data. For example, in response to stakeholder feedback, the Company intends on adding a "Load Forecast Zone" field in the near future.

In Q3 2024, the Company initiated additional enhancements to the Share My Data platform to further align with the Green Button Alliance's national standards. This involved integrating new data elements, optimizing system performance, improving APIs, and refining the web user interface and user experience. These modifications were driven by participant feedback from the Share My Data program, adherence to the Green Button Alliance's national standards, and the Company's ongoing dedication to support third-party clean energy initiatives.[205] Con Edison provides continual outreach and support to customers and third parties in promoting usage of the Share My Data platform. For example, the Company provides technical assistance, communicates the advantages of the platform through various forums, and is also represented on the Green Button Alliance Board.

Since the last DSIP filing, customer data sharing has expanded and is currently used by 45 authorized third parties. Approximately 70,000 customers have consented to sharing their data with authorized third parties, and that number is growing daily. The program has onboarded a municipal agency with a large volume of accounts to the Large Customer APIs, encompassing around 8,000 accounts and one ESCO has onboarded the ESCO APIs. The Company is also seeing growing interest in energy usage data for academic research, which reflects additional uses for the platform. On average, the Company receives more than 335,000 API calls daily, which highlights the value stakeholders place in these data sets.

The Share My Data platform makes it easy for customers to view and share their energy usage data with third-party companies. The additional data granularity also improves the quality of insights and recommendations from these companies on specific programs and/or services to increase energy efficiency and reduce overall energy costs.

Customer Data (Aggregated)

Aggregated customer data is available by whole building, municipality, and zip code, subject to the PSC's privacy standards for aggregated data, discussed below. To date, the primary use cases for aggregated customer data in Con Edison's service territory are whole building benchmarking, including compliance with Local Law 84 ("LL84") and requirements in New York City, Community Choice Aggregation Program development data, community planning, and greenhouse gas ("GHG") reporting at the municipal level. Each year, Con Edison provides New York City's largest building owners (i.e., larger than 25,000 square feet) and their authorized agents with aggregated building usage for purposes of complying with the city's benchmarking laws.

Building Energy Usage Portal

Under New York City's LL84 and LL97, owners of large buildings are required to annually report their energy and water consumption as part of a benchmarking process designed to assist building owners with EE planning. In response, Con Edison has implemented the BEUP to support uploading whole building aggregated energy consumption data to the U.S. EPA's ESPM and facilitate compliance with LL84 and LL97.

[205] Case 22-E-0064, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Strategic Customer Experience Portfolio Report Q3 2024 (filed November 29, 2024).

The BEUP replaced the Energy Efficiency Benchmarking ("EEB") portal in compliance with new requirements from the New York City Department of Buildings ("DOB"). The Company implemented a host of features and enhancements to the BEUP including:

- Increased data accuracy with consumption data now pulled from AMI to provide more stable, real-time data aggregations.
- Automation of data uploads to the EPSM for each property/meter.
- Improved estimation methodology to provide 12 months of continuous data.
- Improvements to property and meter reporting that enables users to view and download the most up-to-date aggregated consumption data within the Con Edison Portal.

Collectively, these enhancements have enabled building owners to track energy consumption trends to comply with LL84 and LL97. The DOB has been able to leverage this usage information to see which buildings and types of properties require the most attention in terms of energy reduction as well as informing their decisions on future limits. The BEUP was launched in February 2024 and with regular yearly updates, the program is continuing to expand with plans to improve functionality by utilizing AMI data that enables data transparency at a more granular level.

These enhancements have enabled customers to add and sync properties more easily and quickly than in the previous EEB. Coupled with more comprehensive guidance from the DOB and strong customer support through webinars, office hour help sessions and other customer engagement efforts have increased benchmarking compliance of LL84 and LL97 covered buildings from 74 percent to 87 percent over the 2024 benchmarking season. Over the 2024 season, the BEUP had 3,295 active users with 40,196 properties.

Development of the BEUP was facilitated by coordination with several stakeholders including the DOB, the PSC, key users identified from the EEB who had the largest portfolio of properties, and New York City Sustainability Help Center, among others. The Company held monthly meetings from the initial design stages of the BEUP which continue to run today. These meetings outlined progress on the BEUP, expected timelines and schedules, future enhancements, potential project risks, and further resources available for stakeholders to learn more about the portal which are easily accessible via the portal's Support page.[206]

Further enhancements to the BEUP made in 2024 included additional functionality to allow non-New York City users to access aggregated usage data and an automated 4/50 data privacy check to enable consumption availability for properties which are not on the most recent LL84 or LL97 Covered Buildings List.

The BEUP enables customers to reduce their energy consumption by equipping them with detailed and accurate energy usage data. Customers can use the data to see the efficacy of measures and programs they have implemented, thereby enhancing the customer experience and providing greater transparency.

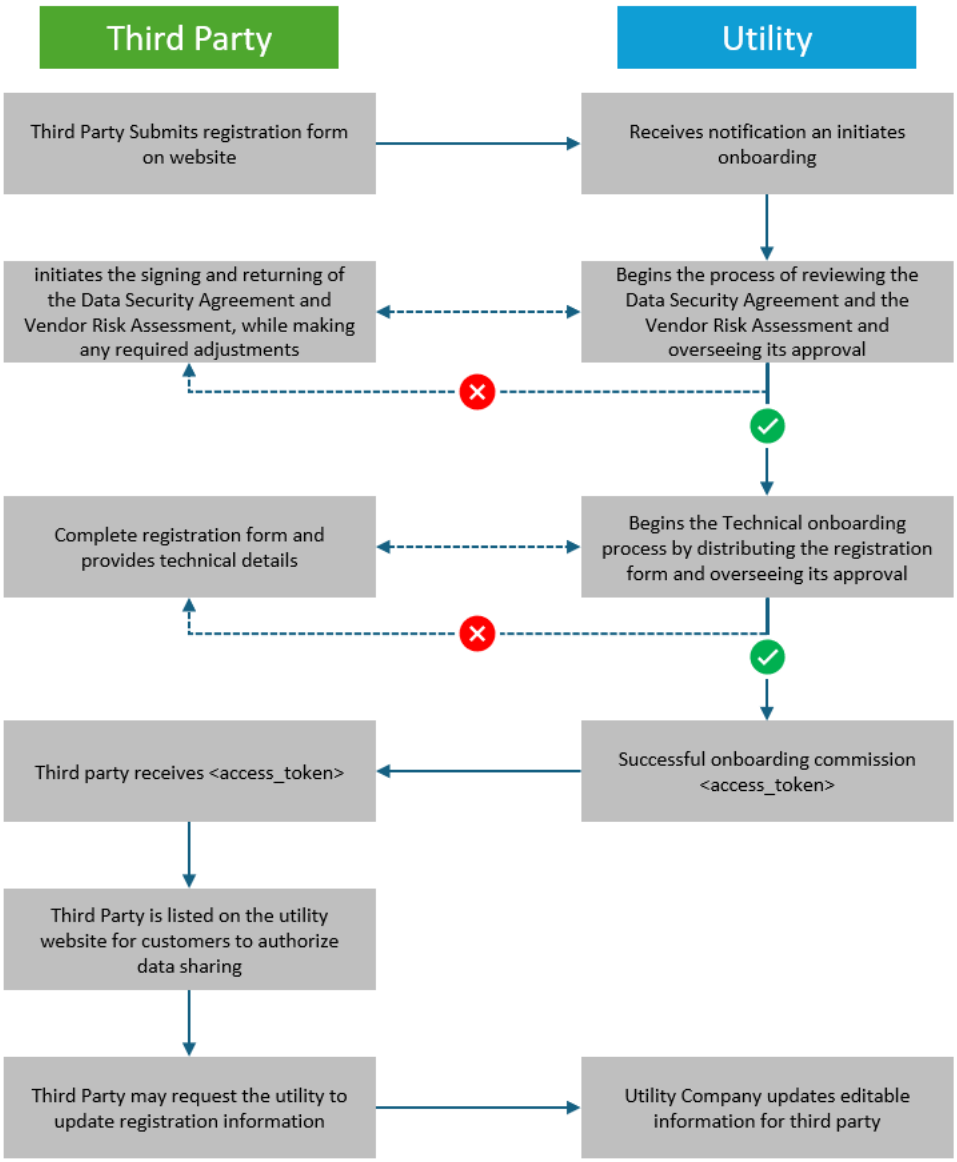
Privacy Standards and Protocols for Sharing Customer Data

Con Edison considers the protection of customer information, including personally identifiable information ("PII") and confidential customer usage and account data, an important and serious responsibility. For customer-specific data, the Company does not share information without customer consent to third parties except where required by PSC order or as described in the Company's privacy policy.

[206] BEUP Support page is accessible here: Building Energy Usage.

The Joint Utilities' GBC user agreement and onboarding process provides a guide for ESEs to establish the connections and authorizations necessary for receiving customer data.[207] In other words, the Company protects data through an authorization and data security attestation process before establishing the technical interface to exchange data, described in Figure 23.

Figure 23: GBC Initial Connection Setup



For access to customer-specific data via Share My Data or EDI, the Company requires parties to execute a Data Security Agreement ("DSA") and complete a technical onboarding and testing process prior to receiving customer data. The DSA includes a self- attestation form designed to expeditiously identify any material gaps in a third party's cybersecurity controls. The Company continues to collaborate with the Joint Utilities, stakeholders, and Department of Public Service ("DPS") Staff to strike a balance between advancing the State's clean energy objectives and protecting customer privacy

[207] The link for an ESE to register with Con Edison can be found here: https://www.coned.com/en/accounts-billing/share-energy-usage-data/become-a-third-party/registration-form.

and data security, using actual data user needs and requests to inform proposed privacy standards. The Company has been leveraging best practices and expertise for data privacy from other industries, such as banking, and continues to engage in robust discussions centered on these challenges. As Con Edison and the Joint Utilities continue to make more customer data available, the Company shares the PSC's interest and long-standing policy of protecting the confidentiality of customer information and carefully evaluating disclosure exceptions on a case-by-case basis.[208]

Additionally, Con Edison gives its customers choices in how their information is used and disclosed to third parties, as outlined in the Con Edison Privacy Statement.[209]

Data Privacy Standards for Aggregated Data

On April 20, 2018, the PSC adopted the Joint Utilities proposed 4/50 privacy standard for whole building data aggregations[210] and directed the utilities to file proposed uniform terms and conditions ("T&C") for building data. A 4/50 standard requires that a data set must include at least four customers, with no one customer accounting for more than 50 percent of the total consumption. The Joint Utilities filed proposed T&C on June 19, 2018,[211] which the PSC approved with modifications on January 2, 2020.[212] Con Edison has implemented these T&C as part of its building benchmarking program, and functionality has been developed in the BEUP platform described previously. In the DAF Order, the PSC established a statewide aggregated data set privacy screen of 4/50 to be applied generally to all aggregated data sets reporting monthly or annual energy usage totals. This 4/50 privacy screen will replace all existing PSC approved privacy screens.[213] The 4/50 screen will serve as the starting point from which use case specific screens may be developed, but no aggregated consumption use cases have been implemented thus far.

Distribution System Data

Con Edison currently provides extensive system data as part of its hosting capacity maps and the Joint Utilities' system data portal. Interested parties can locate the hosting capacity maps through multiple channels, including the Company's hosting capacity website,[214] the Joint Utilities website,[215] and internet searches. Con Edison's distribution system data website[216] is the entry point for the Company's hosting capacity maps, which allow users to access relevant system data by location.

The hosting capacity maps provide substation, feeder, and nodal level data requested by stakeholders, including substation name, queued and connected distributed generation ("DG"), substation peak load, New York Independent System Operator load zone, and 8,760 load profiles. In the May 2024 update, incremental enhancements were made to the photovoltaic ("PV") and storage hosting capacity maps in addition to the electrification load serving capabilities

[208] Cases 07-M-0548, *Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard*, Order on Rehearing Granting Petition for Rehearing (issued December 3, 2010), pp. 3-5, 17-21.
[209] Con Edison Privacy Policy website: https://www.coned.com/en/conedison-privacy-statement.
[210] Case 16-M-0411, *In the Matter of Distributed System Implementation Plans*, Order Adopting Whole Building Energy Data Aggregation Standard (issued April 20, 2018).
[211] Case 16-M-0411, *In the Matter of Distributed System Implementation Plans*, Joint Utility Aggregated Whole Building Data Terms and Conditions (filed June 19, 2018).
[212] Case 16-M-0411, *In the Matter of Distributed System Implementation Plans*, Whole Building T&C Approval Letter (issued January 2, 2020).
[213] In previous Orders, the Commission had approved 15/15 and 6/40 privacy screens, which the 4/50 screen now replaces.
[214] Note 45, *supra.*
[215] Note 46, *supra.*
[216] Con Edison Distributed System Platform website: https://www.coned.com/en/our-energy-future/our-energy-vision/distribution-system-platform.

through the expansion of the Electrification Map.[217] This data provides greater transparency into locations on the distribution system where DER integration may have higher value relative to other locations, by providing LSRV information, and greater visibility into system characteristics and needs, which in turn, fosters market development**.** A detailed description of hosting capacity map enhancements can be found in **Section 2.9 Hosting Capacity**.

A focus for 2025 is automating the transfer of hosting capacity and system information to IEDR. The current process involves manually sending the published maps to the IEDR. Because this process is susceptible to errors and/or delays, the Company is working to automate data quality and testing to maintain consistency between map releases and updates. In parallel on the IEDR side, E-source is working to automate processing new maps into its system. Third parties can also access system data from a central portal maintained by the Joint Utilities. The central portal includes company-specific links to an expanded range of useful information, including DSIPs, Capital Investment Plans, planned resiliency and reliability projects, reliability statistics, and hosting capacity maps.

Rate Plan Data

Con Edison's rate plan dataset, available on the public IEDR website in the Rate Plan Browser feature, contains information on all the Company's rates and tariffs in a single location. The purpose of this view is to enable public access to all rate and tariff information in a consistent and machine-readable format. This reduces the amount of time required for customers or other stakeholders to manually review individual PDFs and/or visit individual websites to view information on available rates. This data includes attributes for each rate plan and whether the rate plans include retail supply, rate periods, TOU pricing, and demand charges. This dataset is manually updated, as needed, when changes to rates and/or tariffs take effect. The public rate plan browser was implemented by IEDR team as part of the MVP use cases in Phase 1.

Future Implementation and Planning

Summary of Future Actions

- Expand and enhance the initial IEDR implementation through development of Phase 2 use cases.
- Continue to develop the Hosting Capacity Roadmap and prioritize use cases based on stakeholder feedback.
- Merge shared maps that have been provided to IEDR across all NY utilities to create a cohesive statewide map, currently being implemented by the NYISO.
- Collaborate with NYSERDA through the IEDR Advisory Committee and Utility Coordination Group ("UCG") to develop MVP use cases.
- Continue to iterate through IEDR enhancements in support of Phase 2 use case implementation.
- Consider additional Share My Data datasets as need arises based on stakeholder feedback.
- Continue to develop and implement BEUP enhancements for the 2025 Season and beyond, including work that will leverage AMI data to provide hourly aggregated consumption details.
- Engage stakeholders, in collaboration with the Joint Utilities and the Information Sharing Working Group ("ISWG") to continue expansion of the statewide data sharing best practices.

[217] Joint Utilities of New York, Joint Utilities of New York Hosting Capacity Stakeholder Webinar held on May 23, 2024: https://jointutilitiesofny.org/sites/default/files/5.23%20-%20Integrated%20Planning%20Stakeholder%20Session%20%2B%20FollowUp%20Items.pdf.

The Company will continue to enhance its data sharing capabilities based on stakeholder feedback while complying with approved customer data protections and actively participating in customer data-related proceedings.

Con Edison will continue to engage in the various IEDR Working Groups (e.g., Information Sharing Working Group ("ISWG"), Utility Coordination Group ("UCG"), Customer Consent Working Group ("CCWG"), Interconnection Technical Working Group, and Legal Working Group ("LWG")) which focus on updates to online portals and refining and/or expanding system data use cases to better meet stakeholder needs. As the centralized data resource, the IEDR use cases will be the source of most near-term future actions.

On January 19, 2024, the PSC approved capital funding for the design, build, testing, and deployment of Phase 2 use cases which include data sourcing and processing resources, materials, overheads, and other costs. Phase 2 of the IEDR development began on April 1, 2024, and is expected to run through Q1 2027. This phase will expand and enhance the initial IEDR implementation to incrementally enable approximately 40 additional use cases. As outlined in the 2024 Q4 IEDR Quarterly Report,[218] the focus for 2025 will be automating the data transfer process with tools that provide real-time feedback on the quality of data being ingested into the IEDR platform. The Company will also focus on collaboration with the IEDR Development Team on discovery for future use cases and providing additional required fields to meet IEDR Phase 2 delivery deadlines.

Business Energy Usage Portal

In addition to the Company's IEDR efforts, work is underway to further enhance Con Edison's BEUP platform. For the 2025 season and beyond, the Company intends to leverage AMI data to provide hourly aggregated consumption details in support of LL97 and address other stakeholder requests. The BEUP initiative will also continue the Company's efforts to share benchmarking data. Con Edison will complete work in phases, to be put in service sequentially and add value in each developmental stage.

- Phase 0: Assess the present and future known needs for energy usage data, limitations of the current BEUP, and how to add more flexibility for future regulatory requirements and program qualifications. End user goals will define how the platform delineates and models data so that they serve a variety of benchmarking data needs.
- Phase 1: Define product requirements for the new data architecture, conduct software and data build, testing, and releases. For example, regulation changes require customers to benchmark using the Building Identification Numbers ("BIN") of their property as opposed to the Building Block and Lot structure used up until 2025. Con Edison will re-architect building data models to accommodate multiple input types including the new Borough Block and Lot Structure, Service Address, BIN, Meter ID, and pair with EPSM.
- Phase 2: Optimize data sources between the Meter Data Management System (which is the system of record for AMI data), Customer Care and Billing system (which is the system of record for customer/billing data), and the Company's C3.ai system (which is the current source for BEUP).
- Phase 3: Allow for daily or hourly aggregated demand data, rather than monthly as required by the New York City Housing Preservation and Development agency for financing.
- Phase 4: Adjust system to deliver "whole picture" results and trends of energy usage that incorporate multiple complex factors including solar crediting, DG, campus sharing, and fuel switches. This phase will also feature a dashboard that will show quantitative metrics and a "behind the meter" view into a building's metering setup to evaluate DER.

Further details on the development of the BEUP are outlined within the 2025 Con Edison rate case proceeding.

[218] Case 20-M-0082, *In the Matter of Strategic Use of Energy Related Data*, IEDR Utility Quarterly Report Q4 2024: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B9068B794-0000-C51C-8888-F26A5BD558AC%7D.

In 2024, the Company developed a new data sharing platform, which has been certified by the Green Button Alliance. The legacy platform will remain supported through 2025, and the Company will continue migrating users from the legacy platform to the new platform, which will support the following focus areas:

- Authorization and authentication enhancements
- Optimized data handling and queries
- Advanced reporting and dashboard features
- Improved batch processing and API capabilities
- Enhanced data standardization and compliance

The continued advancement of Con Edison's data management tools will enable greater future data sharing capabilities and processes and support the ongoing development of the Company's comprehensive Distributed System Platform.

These enhancements will strengthen the underlying system infrastructure, positioning Con Edison to more effectively integrate flexible resources into grid operations and better understand data that can be provided by aggregators participating in programs. In parallel, improved access to timely and accurate data will support customer-facing initiatives, including more precise billing and expanded affordability measures, and further enhance the overall customer experience to promote equity in the clean energy transition.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Loss of customer data during transmission and storage from utility to IEDR platform	• Work with the Joint Utilities to develop data sharing standards and requirements to better safeguard data. • As directed in the 2023 DAF Order, the Company has filed utility-specific tariff changes that eliminate liability for any improper access or sharing of customer data sets by the IEDR Administrator.219
Cybersecurity threats to customer data	• Continue utilizing Cyber and Privacy Framework developed in coordination with the Joint Utilities to protect data.220 The framework focuses on people, processes, and technology as being the foundation for comprehensive cybersecurity and privacy governance program. • Continue to follow robust cybersecurity practices and protocols to protect all sensitive data, particularly customer data.
Improper third-party access to customer data	• Continue to require third parties and non-contracting parties to sign a DSA to access customer data which dictates specific data security procedures that must be met.

[219] Note 191, *supra.*

[220] Case 18-M-0376, *Proceeding on Motion of the Commission Regarding Cyber Security Protocols and Protections in the Energy Market Place*, Order Establishing Minimum Cyber Security and Privacy Protections and Making Other Findings (issued October 17, 2019)

Stakeholder Interface

Con Edison will continue to engage with stakeholders through the Joint Utilities ISWG to provide updates on customer data sharing mechanisms and implementation updates and to gather feedback on processes or new data requests. In addition, the Company, as part of the ISWG, has opportunities for one-on-one stakeholder meetings to explore additional use cases that advance DER market development.

The Company participates in the monthly Joint Utilities IEDR Technical Working Group meetings which provide a forum to share approaches to data architecture and data transfer and discuss questions to guide IEDR design and implementation. In addition, Con Edison participates in Joint Utilities LWG and CCWG meetings to create a unified approach for legal agreement(s) between the utilities and the IEDR platform vendors as well as the data transfer processes and considerations related to customer privacy and security. The Company also chairs the UCG, the IEDR Advisory Committee, and actively contributes to stakeholder meetings, workshops, webinars, technical conferences, and working groups associated with IEDR efforts. Con Edison, as part of the Joint Utilities, worked with the IEDR Development Team to map utility processes necessary to improve customer data transfers by focusing on data quality assurance and bulk data exchanges.

Through its participation and leadership in these organizations, Con Edison gathers information and insights into the goals and needs of key stakeholders. These stakeholder groups include the DER development community who are seeking to optimize development opportunities and performance, customers for whom data privacy is of paramount concern, other New York utilities, and NYSERDA who is responsible for implementation of the IEDR and other data sharing platforms.

Additional Detail

This section responds to the questions specific in the DPS guidance to data sharing.

1) **Provide a functional overview of the planned IEDR;**

On February 11, 2021, the PSC issued an order approving the design and implementation of a statewide IEDR platform to centralize data access, including utility data (customer and system data) and other energy-related data (i.e., Electric Vehicle registration, building characteristics, DER operations) in support of New York's clean energy goals. The order approved a Phase 1 budget of $67.5 million for the utilities and NYSERDA, and described a program schedule, governance structure, and reporting requirements. Phase 1 enabled the development of five priority data use cases which were completed on March 30, 2024. On Jan 19, 2024, the PSC issued an order approving a Phase 2 budget for NY State for $36.4 million,[221] which began April 1, 2024, and will enable 40 additional data use cases over 30-36 months through 2027. NYSERDA was identified as the program sponsor for this effort and formed the Steering Committee with DPS Staff.

2) **Provide an overview of NYSERDA's IEDR implementation program, including information pertaining to stakeholder engagement;**

The IEDR Program Team selected and completed the following use cases in Phase 1:

- Installed DERs
- Planned DERs
- Consolidated Hosting Capacity Maps

[221] Case 20-M-0082, *In the Matter of Strategic Use of Energy Related Data*, Order Approving Integrated Energy Data Resource Phase 2 Budgets (Issued January 19, 2024).

- DER Siting – Environmental, Community, Terrain, Land, and Property Assessment
- EIAT Hosting Capacity and DER Map Enhancements
- Efficient and Effective Access to Existing Customer Billing Data
- Find and Filter Rate Options Across NY State IOUs
- Access to Basic Rate Data and Tariff Book for Individual Rate

The Joint Utilities continues to work with the IEDR Development Team on the Phase 2 use cases as prioritized by NYSERDA in the Phase 2 Roadmap.

The Development Team, led by E Source, includes UtilityAPI, Flux Tailor, TRC Companies, and HumanLogic. Together, the team is responsible for designing, building, and operating the IEDR platform to accomplish the policy goals and program outcomes as described in the PSC's IEDR Order in a cost efficient and expeditious manner. The Development Team leverages E Source's OneInform and UtilityAPI's GBC offerings to enable the data access, governance, querying, analysis, and consent processes that are required to deliver the full benefit of stakeholder submitted use cases.

3) Provide the web link to NYSERDA's IEDR home page along with a summary of the information provided therein;

A list of NYSERDA's IEDR homepage resources are outlined below in **Table 31.**

Table 31: NYSERDA IEDR Home Page Resources

Type of Information	Link
IEDR Program - NYSERDA	https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program
Milestone Schedule	https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program/Program-Milestones
Use Case Development	https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program/Use-Case-Development
Meetings	https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program/Get-Involved
Program Participants	https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program/About-IEDR/Program-Participants
IEDR Resources	https://www.nyserda.ny.gov/All-Programs/Integrated-Energy-Data-Resource-Program/IEDR-Resources

4) Describe the utility's role in supporting IEDR design, implementation, and operation;

The Company participates in the UCG established by the NYSERDA and DPS Staff to "provide a venue for collaboration, coordination, and oversight of the utility activities related to the design and implementation of the IEDR and alignment with the schedules and activities of the DAF proceeding."[222] NYSERDA has retained vendors collectively called the IEDR Program Team (Deloitte Consulting, Pecan Street) and the IEDR Development Team that participate in UCG meetings.

Since the last DSIP filing in June 2023, the Company has actively participated in virtual UCG meetings. Topics covered during these meetings through Q1 2025 have included:

[222] Case 20-M-0082, *Proceeding on the Motion of the Public Service Commission Regarding Strategic Use of Energy Data*, Integrated Energy Data Resource Program Consolidated Program Charter Pertaining to the IEDR Steering Committee, Advisory Group, and Utility Coordination Group Final Report (August 2021), p. 17.

- Overall progress on IEDR use-cases and platform.
- Development of a GBC milestone schedule and deployment plan, including preparation for the Alpha+ testing stage and testing and configuration of single sign-on.
- Development of the rate plan use-case and related support activities.
- Analysis of utility processes related to the UER and hosting capacity maps.
- Ongoing discussion on data validation and quality controls.
- Review of data specification updates and milestones for customer data, network data, and rate plan data documents.

Additionally, the Companies and the IEDR Development Team met four times for deep-dive one-on-one session covering topics including:

- EE benchmarking use-cases and Con Edison's experience with load aggregation for New York City LL compliance (meeting with Esource on October 1)
- Customer Data (meeting with Esource on October 29)
- UER reporting (meeting with Esource on November 8)
- GBC SSO testing (meeting with UtilityAPI on November 8)

5) Describe the utility's progress, plans, and investments for generating and delivering its system and customer data to the IEDR;

The Company helped develop and enhance the architecture designed for IPV and MVP use case data delivery by working closely with the IEDR Development Team to refine the delivery method and formatting. Several enhancements have been added, developed by both employees and additional contracted labor, which include the ability for the platform to not only support ingestion and manipulation of data but also to output data on a schedule and in a greater variety of file formats.

IEDR contains customer billing and account data from January 2022 to present and AMI data from January 2023 to present. The Company updates and delivers both data sets daily. Customer data sets are sourced from the Company's billing system and delivered as required by the IEDR functional specifications.

The Company anticipates active engagement with stakeholders throughout the development of Phase 2 use cases and will continue to work with the IEDR Development Team to refine and further develop data transfer processes and protocols. Con Edison also continues to coordinate with the Joint Utilities to standardize and benchmark, as needed.

6) Identify and characterize each type of data to be delivered to the IEDR;

The customer data Con Edison has and will deliver to the IEDR, pending data sharing agreements, includes legacy interval, AMI, and/or register-read meters, customer account details, and billing data. There are differences in the type and granularity of the customer load and supply data the Company acquires based on customer type and metering configuration. In some cases, generally commercial & industrial customers, the Company will acquire additional data, such as demand (kW) and reactive power (VAR) data, as required for billing under the applicable tariff.

The IPV use cases harnessed hosting capacity and planned and installed DER system data. Future use case iteration using system data delivered to the IEDR, which is also available on the Company's data sharing portal, could include:

- Planned resiliency and reliability projects
- Reliability statistics
- Hosting capacity
- Beneficial locations

- Load forecasts
- Historical load data
- Non-wire-solutions opportunities
- Queued and installed DG
- Standardized Interconnection Requirements pre-application information

7) Describe the resource(s) and method(s) used to deliver each type of data to the IEDR;

All datasets are sent to IEDR via secure file transfer protocol. Con Edison works with the IEDR Development Team to refine data exchange specifications for each dataset and then coordinates with internal subject matter experts to source and transform the data from internal systems. Field elements containing specific locations such as substation address were omitted from the scope. The Company also accounts for privacy and security concerns by masking certain fields in the customer dataset.

8) Describe how and when each type of data provided to the IEDR will begin, increase, and improve as IEDR implementation progresses; and,

The Company began sending customer data, network data, and rate plan data to the IEDR on January 9th, 2024. Customer data, specifically daily DER information, is updated monthly. Hosting capacity data is updated annually, typically in April, as part of the Joint Utilities map refresh effort, and the Company completed its most recent update in April 2025. As previously described, rate plan data is refreshed on an ad-hoc basis whenever there are changes to rates and/or tariffs.

Various data management tools and measures have been implemented to validate data quality, including statistics related to each data set and dashboards to indicate the health for each data field.

9) Identify and characterize any existing and future utility efforts to share system and customer data with customers and third parties through means that are separate from the IEDR.

The Company continues to employ a suite of customer data sharing technologies to securely share data with third parties and DER providers including Share My Data, EDI, third party access to My Account, and the BEUP. In 2024, Con Edison implemented a redesign of the BEUP with utilization of AMI data to provide aggregated building consumption details in support of LL97. This enhanced capability enables the platform to scale for future benchmarking and data sharing requirements. Additional details on platform technologies are discussed in greater detail above.

For distribution system data, the Company published new hosting capacity map elements in October 2024, including sub-feeder level data for the storage hosting capacity map, nodal constraints (criteria violations) on PV solar and hosting capacity maps, and a new field to reflect DG connected at the feeder and substation level since the last hosting capacity refresh. Additional details on hosting capacity maps and functionality are discussed in **Section 2.9 Hosting Capacity**.

2.9. HOSTING CAPACITY

Context and Background

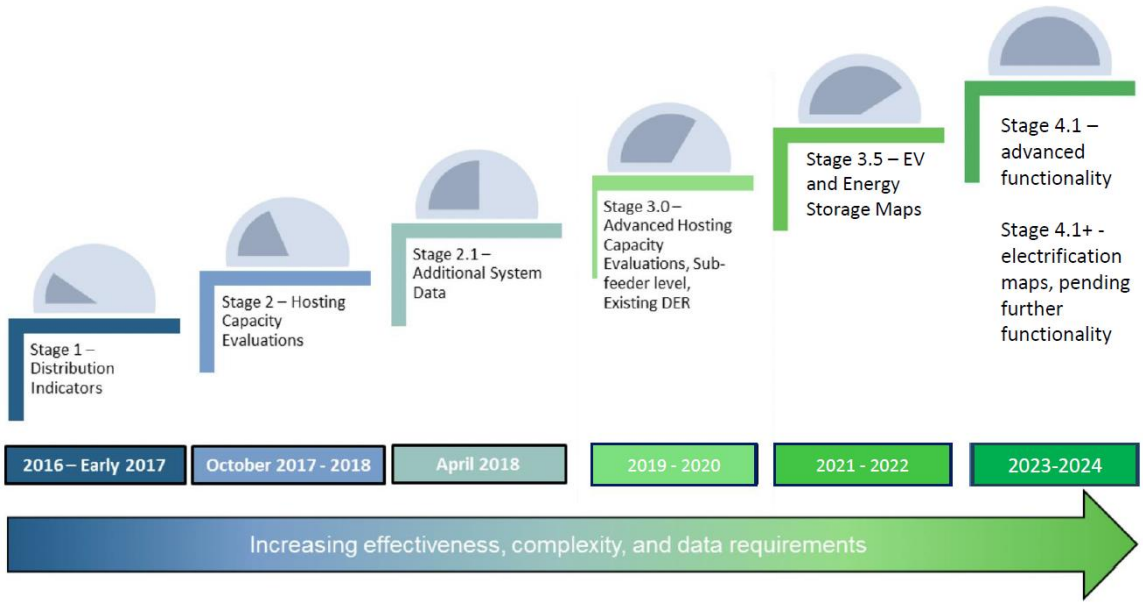
Con Edison continues to advance its hosting capacity capabilities and make additional system data available to third parties in support of state policy goals and the Public Service Commission ("PSC") Staff guidance for the original Distributed System Implementation Plan ("DSIP") in 2015.[223] These actions support distributed energy resource ("DER") integration and market growth by guiding investments to areas of the grid where the cost of interconnection is lower. By showing available hosting capacity, existing distributed generation ("DG"), voltage constraints, and other data, prospective interconnection customers can make informed business decisions prior to committing resources to an interconnection application.

Hosting capacity is defined as the amount of DERs that can be accommodated on a certain part of the electric grid without adversely impacting power quality or reliability under existing control configurations and without requiring infrastructure upgrades to the primary line voltage and/or secondary network system.[224] When hosting capacity maps were first introduced in 2016, the Joint Utilities calculated each circuit's hosting capacity by evaluating the potential power system criteria violations as a result of interconnecting large photovoltaic ("PV") solar systems to three-phase distribution lines.[225] Since then, the Joint Utilities have expanded this analysis to include energy storage systems ("ESS") and the capacity available to serve electrification loads, using this approach to deliver transparent and usable information in a timely manner to the DER developers most active in the state.

Figure 24 shows the Joint Utilities' multi-phase approach for developing hosting capacity analysis ("HCA") capabilities, which is paced with the evolution of hosting capacity tools, models, and processes. Within this framework, Con Edison is deploying region-specific content to support overall HCA functionality. For instance, Con Edison provides hosting capacity maps for both its network and non-network systems,[226] which each have their own operating characteristics. With each stage comes not only increased granularity but also complexity.

[223] Case 14-M-0101, *Proceeding on Motion of the Commission in Regard to the Reforming the Energy Vision*, Staff Proposal for Distributed System Plan Guidance (dated October 15, 2015).
[224] Electric Power Research Institute (EPRI), Defining a Roadmap for Successful Implementation of a Hosting Capacity Method for New York State, Report Number 3002008848: http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=000000003002008848, (June 2016), p. 2.
[225] This refers to solar generation with an AC nameplate rating starting at and gradually increasing from 300 kW.
[226] The Company's network system (i.e., underground) serves 86 percent of Con Edison's electric customers via 99,300 miles of underground transmission and distribution lines, over 268,000 underground vaults, and 43,000 underground transformers. While the non-network system (i.e., overhead) supplies the remaining 14 percent of customers via 36,500 miles of overhead lines, 270,000 utility poles, and 53,000 overhead transformers.

Figure 24: Joint Utilities Hosting Capacity Roadmap



Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Published Stage 3.5 of the storage hosting capacity data including feeder-level hosting capacity, downloadable feeder level summary data, existing DERs, and sub-transmission lines available for interconnection.
- Published Stage 4.1 of the storage hosting capacity data including sub-feeder level data and additional map updates including Representational State Transfer Application Programming Interface ("REST API") data, criteria violations on PV and storage maps, DG connected since last refresh, and Cost Sharing 2.0 information.
- Published a network storage hosting capacity map that quantifies how much feeder support, in MW, there is for battery storage integration within Con Edison's network system.
- Implemented electrification capacity map that captures available hosting capacity for heating electrification and for potential electric vehicle ("EV") charging sites.
- Continued to host stakeholder meetings to familiarize stakeholders with the latest upgrades to hosting capacity map updates and tools.
- Continued roadmap progression with definition of Stage 4.1+ and plan for delivery.
- Continued to make enhancement to the Company's hosting maps.

Utility Capabilities Demonstrated (non-exhaustive)

Hosting & Registration: Con Edison has improved the accuracy, timeliness, and amount of *hosting* capacity data available to third parties, allowing them to make more informed *DER interconnection*-related decisions.

Market Participation: Con Edison has supported the advancement of DER interconnection and market growth through hosting capacity data that can guide investment to grid locations where the *cost* of DER interconnection is potentially lower.

Providing an electric distribution system with the capacity to host large-scale DER integration is a key part of New York's energy vision. Con Edison is committed to enabling the state's energy transition, part of which is preparing for an increase in renewable energy produced by customers' rooftop solar and ESS. A key means of enabling DER developers and providing transparent insight into system data is the Company's hosting capacity web application. This hosting capacity tool supports the advancement of DER integration and DER market growth by guiding investment to grid locations where the cost of interconnection is potentially lower. Developers can access this visual aid before committing resources to an interconnection application. Con Edison continues to add new functionalities to the hosting capacity platform, with the goal of maximizing the value of the hosting capacity map to developers. Con Edison has been collaborating with developers and other stakeholders for years to enhance the value of these maps, described in the sections below.

Con Edison Hosting Capacity Web Application Tabs

Within the hosting capacity maps, information is organized from the developer's perspective to focus on the type of resource and the location within Con Edison's service territory. The hosting capacity web application includes:

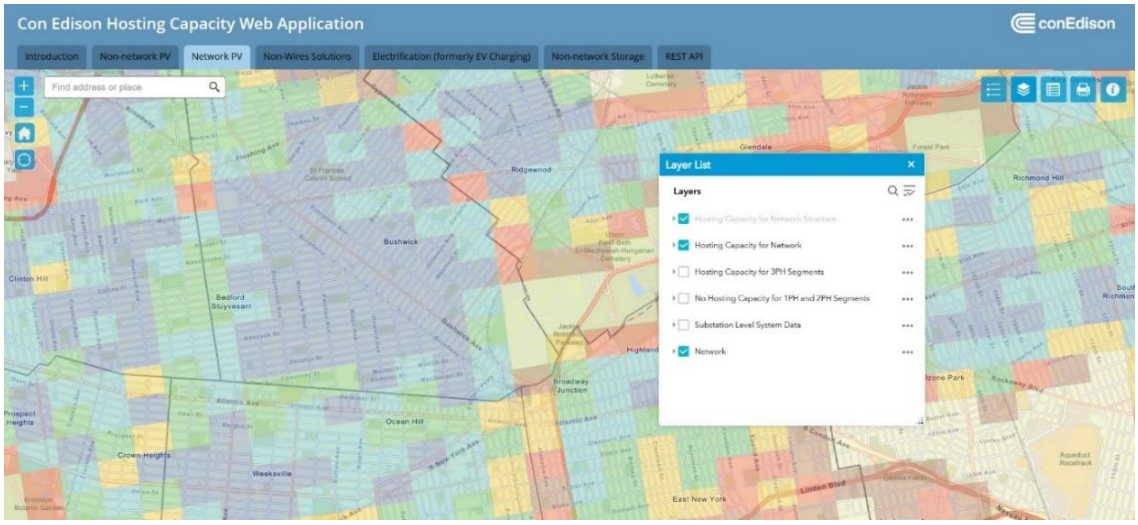
- Network PV
- Non-Network PV
- Locational System Relief Values ("LSRV") View
- Non-Wires Solutions ("NWS")
- Non-Network Storage
- Cost Sharing 2.0
- Electrification - formerly EV Charging
- REST API

The following figures illustrate key information from the hosting capacity maps platform that is available to support developers in bringing DERs online in the Con Edison service territory.

Network PV View

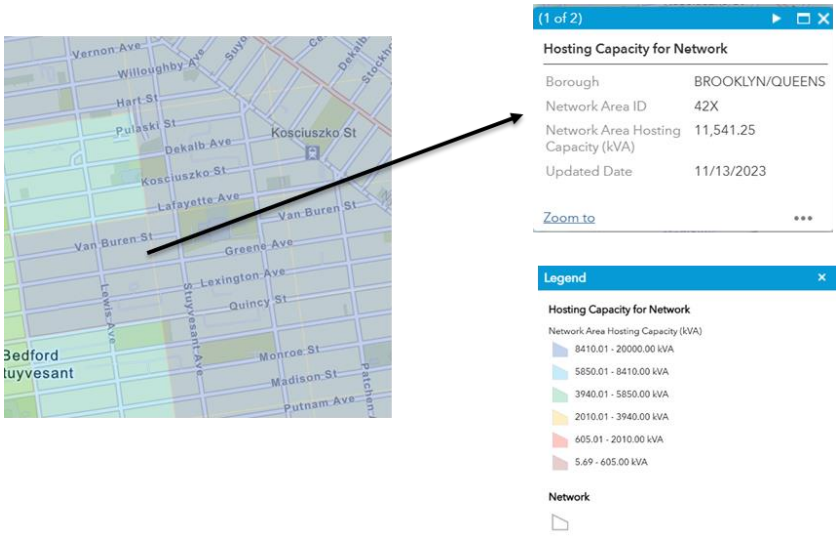
The network map is based on site-specific load flow studies and presents hosting capacity at the service box and secondary service level, making it the only hosting capacity map in the country for network systems. Developers can narrow searches to specific, available customer or project locations instead of receiving high-level distribution network values that may or may not accurately reflect the observed values at the true point of interconnection. An overview of the network hosting capacity maps is shown in **Figure 25**.

Figure 25: Network Hosting Capacity Map



The colored squares visible in Figure 25 above and Figure 26 below provide a view of the main and service ("M&S") plate. M&S plate calculations are based on the locational capacity of distribution transformers geographically located in that area. By clicking on the desired square, a user can access additional data at that network level, including hosting capacity and available system data.

Figure 26: Network Hosting Capacity View at the M&S Plate Level



Users can further zoom in on the network area to view hosting capacity for individual structures, as shown in Figure 27.

Figure 27: Hosting Capacity for Individual Network Structures

Non-Network PV View

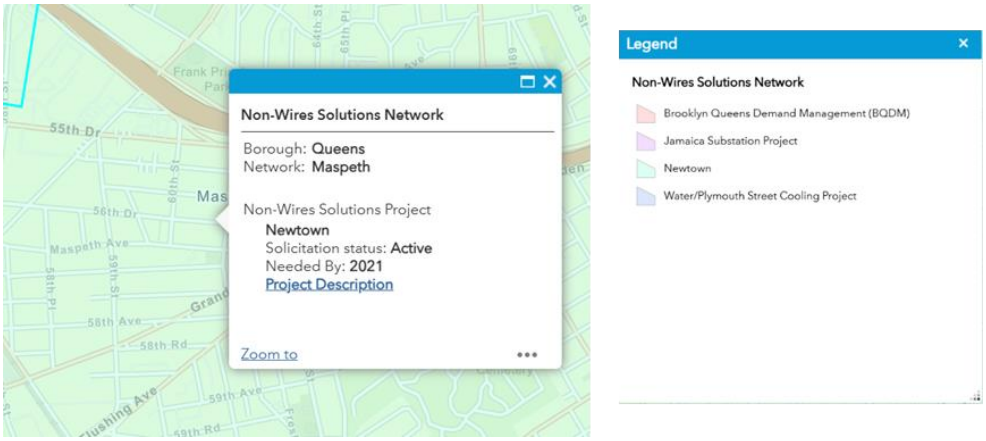
Con Edison has provided hosting capacity values for the three-phase sections of non-network (overhead) feeders greater than 4kV. As shown in Figure 28 below, feeders are highlighted in accordance with their maximum hosting capacity value. For example, if the min/max range on a feeder is 1MW – 5MW, then the feeder color will correlate with the maximum MW value; in this case, 5MW, in the map legend. In addition to the circuit level attributes, users can view 8,760 historical loads and 24-hour minimum and maximum load curves.

Figure 28: Non-network PV Hosting Capacity Maps and Data

Non-Wires Solutions View

In addition to granular network and non-network hosting capacity, the platform displays active NWS program territories, which provides a more comprehensive view of beneficial locations. As shown in **Figure 29** below, the NWS tab of the hosting capacity map displays an NWS-eligible area at the network level, the affected feeders, and the relevant system information, as well as a link to the project description.

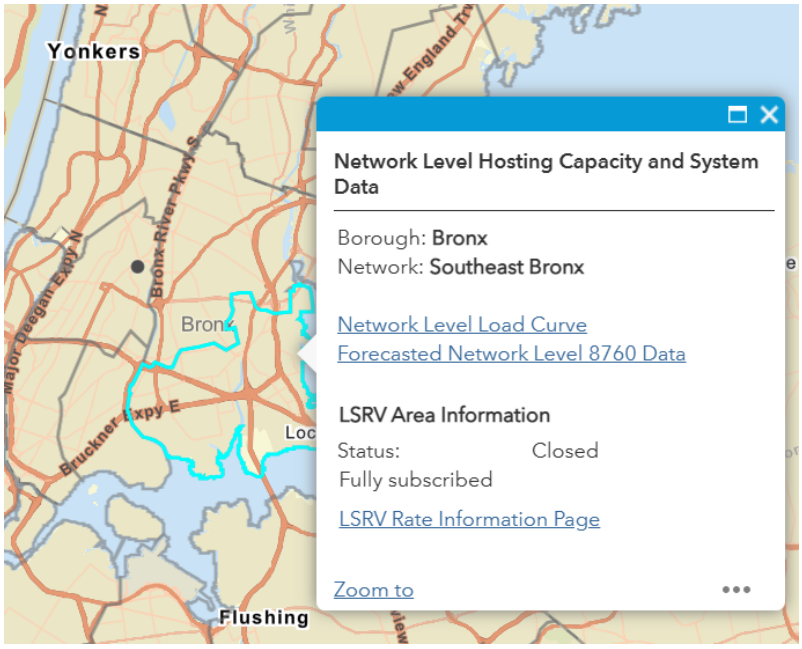
Figure 29: NWS View



Locational System Relief Values View

As shown in **Figure 30** below, the Company provides LSRV information on the network PV tab, including eligibility status and a link to the rate information page on the Company's website.

Figure 30: LSRV View

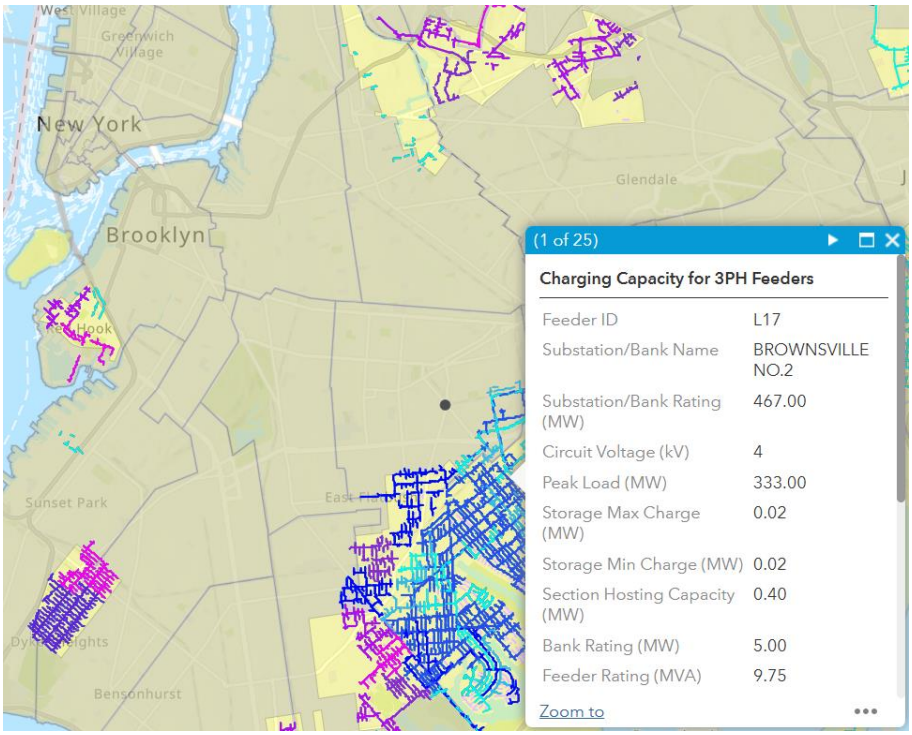


Providing this multi-faceted view allows developers to more readily see where there is higher potential value to be captured across the Con Edison distribution system, through supplemental LSRV value streams as part of the Value of Distributed Energy Resources ("VDER") tariff and compare that to the hosting capacity of those areas for a more complete assessment of business opportunities. For additional information on VDER, please see **Section 2.10 Billing and Compensation.**

Non-Network Storage View

The non-network storage tab has separate displays for load and generation and is color-coded based on the maximum feeder hosting capacity value. The minimum level of the hosting capacity appears on the draw-down pop-up in **Figure 31.**

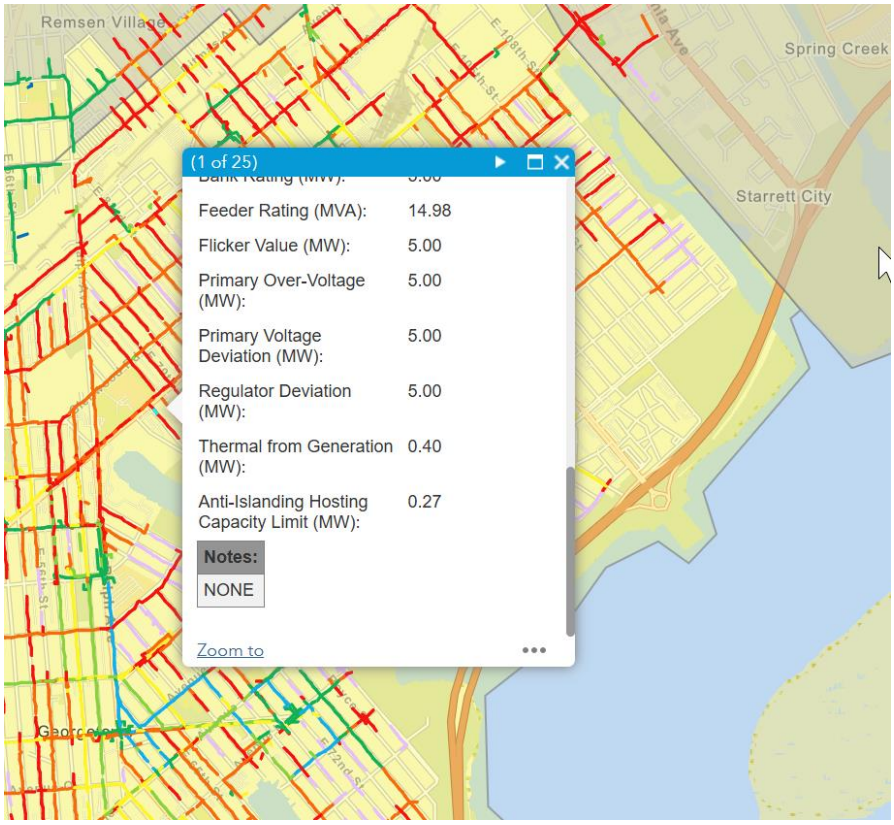
Figure 31: Storage Hosting Capacity View



New features for the hosting capacity maps, included on the non-network storage and PV maps, include sub-feeder level data for the storage hosting capacity map, nodal constraints (criteria violations) on PV solar hosting capacity maps, and a new field to reflect DG connected at the feeder and substation level.

Nodal constraints on PV solar and storage hosting capacity maps, depicted in **Figure 32**, are displayed by color range for daytime minimum load and peak. As is consistent with the PV map, colors reflect the minimum value of hosting capacity, and the nodal pop-up provides a more detailed breakdown of criteria violations.

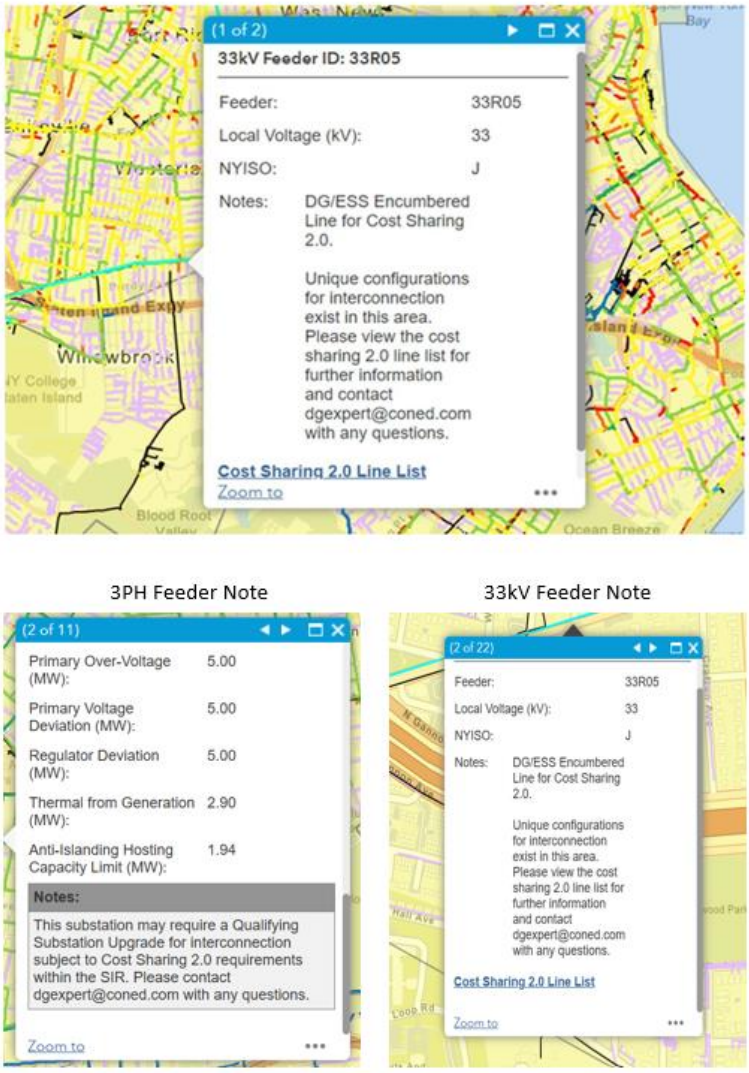
Figure 32: Criteria Violation Nodal View



Cost Sharing 2.0 View

Cost Sharing 2.0 is a mechanism that helps spread the cost of system upgrades equitably to each DG and ESS project interconnecting on the same substation and provides cost certainty at the outset of each project. Cost Sharing 2.0 applies to both utility-initiated and market-initiated DG/ESS upgrades. Information on Cost Sharing 2.0 projects is available for relevant feeders as shown in **Figure 33**. The Cost Sharing 2.0 methodology is described further in **Section 2.11 DER Interconnections**.

Figure 33: Cost Sharing 2.0 View & Feeder Notes



Electrification View

Electrification view maps are the most recent enhancement to the Hosting Capacity Web Application and provide an estimate of the remaining circuit load capacity to help guide both EV charging developers and electric clean heat providers to areas where load capacity headroom exists.

The PSC issued two key orders in 2023 that led to the development of the electrification view maps and integration of the EV load capacity maps. The first was the Order Directing Energy Efficiency and Building Electrification Proposals issued on July 20, 2023[227] that instructed utilities to expand hosting capacity maps by showing additional data beyond EV chargers such as winter and summer capacity ratings. By showing this data, developers may infer building electrification capacity. The second was the Order Approving Midpoint Review Whitepaper's Recommendations with Modifications issued on November 16, 2023.[228]

[227] Note 167, *supra.*
[228] Note 90, *supra.*

As shown in Figure 34 below, the electrification capacity maps show transformer capacity data, including the difference between the rated capacity of both summer and winter peak load of the past year for Con Edison's underground network electrical system. The feeder-level capacity data shows the difference between the rated capacity at the feeder head and both the summer and winter peak of the past year for the non-network system.

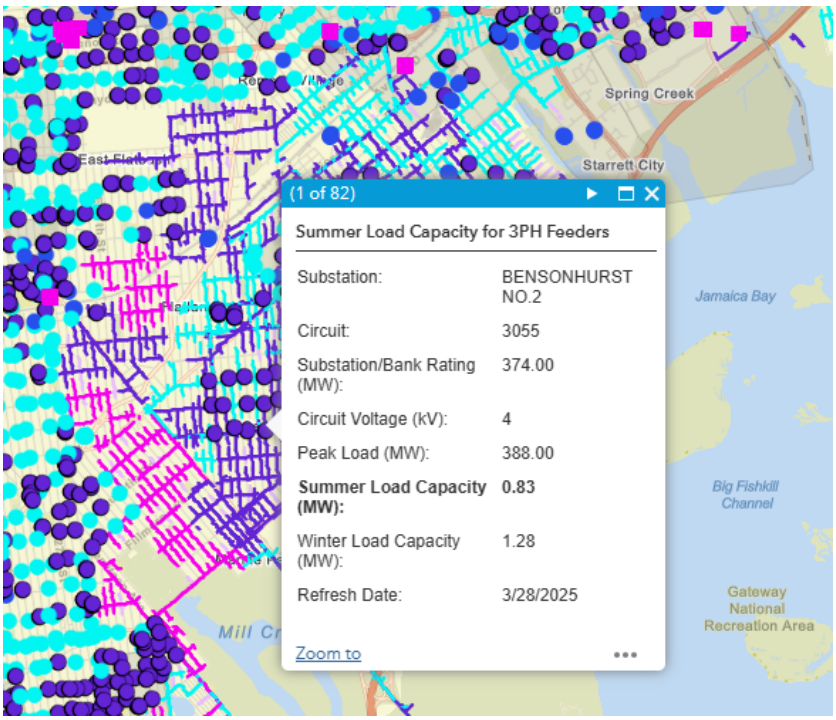
The map displays the transfer- and feeder-level electrification capacity in both winter and summer. Summer ratings are appropriate for use in estimating available capacity for EV charging. Winter ratings can be used in combination with summer ratings to determine available capacity for building electrification. The map shows four levels of transformer capacity:

- Less than 200 kVA
- Up to 499 kVA
- Up to 1,000 kVA
- More than 1,000 kVA

Feeders are listed by approximate existing capacity in three different tiers:

- Less than 600 kW
- Up to 1,500 kW
- Above 1,500 kW

Figure 34: Electrification View

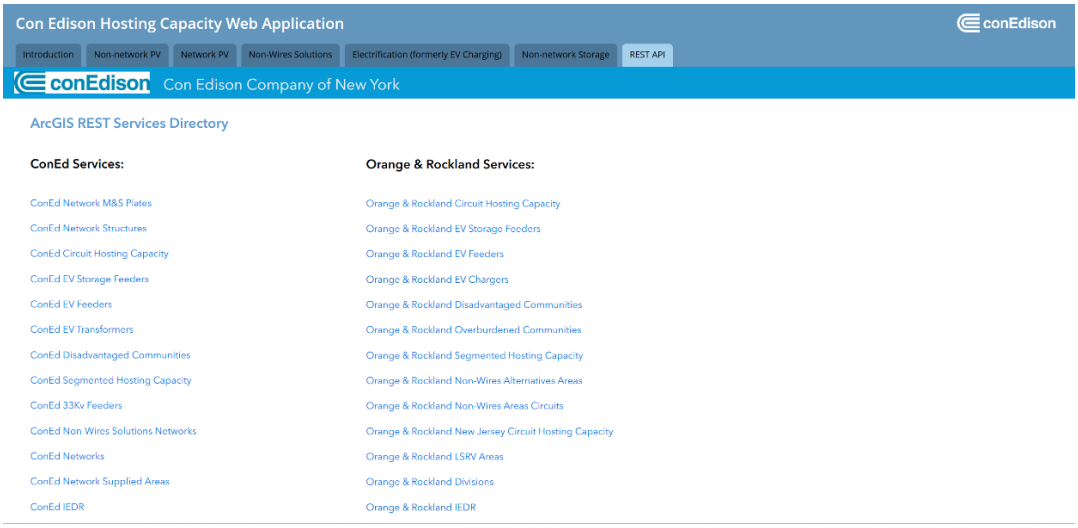


An additional feature of the electrification view maps is an illustration of New York's Disadvantaged Communities ("DACs"). These show where public fast-charging stations and Level 2 stations in multifamily buildings are eligible for higher incentives in the Light Duty Make Ready Program.

REST API

Con Edison provides the REST API tab, allowing third parties to overlay existing hosting capacity data with their own geographic information system ("GIS"), as shown in **Figure 35** below. Under the Services Directory in the REST API tab, stakeholders can select the desired data and layers to import from the hosting capacity maps.

Figure 35: Con Edison REST API Tab View



Beyond the examples above, recent enhancements made to maps as of the April 2025 refresh include:

- The addition of voltage information per feeder within the electrification map to enable stakeholders to better assess grid capacity.
- The addition of a note to the pop-up disclaimer on all the maps, identifying that transmission level data is not represented on the maps.
- The addition of a note to 4kV feeders that are now considered constrained areas, stating that the identified line may not be able to accept additional projects over 50kW. This enhancement is supplemental to the updates previously agreed upon by the Joint Utilities

Con Edison has also published a new Network Storage Map as of May 2025. This map provides feeder capacity data that shows charging capacities at the M&S plate level, though it does not reflect or factor in area substation capacity constraints. Displaying the data at this level will quantify how much feeder support, in MWs, there is for battery storage integration. This analysis reflects the available capacity representative of an N-1 interconnection.[229]

As described in more detail in the *Future Implementation and Planning* section, Con Edison, in coordination with the Joint Utilities, is advancing the functionality of hosting capacity maps with the goal of fully automating updates in the future. This effort supports a broader initiative to enable real-time visibility into the capacity of all network resources across the service territory. Through the integration of analytics and time-series modeling, the Company can assess both planned DERs and system capacity needs. Ultimately, the objective is to unify developer tools and customer offerings, thereby enhancing operational efficiency and delivering greater customer value.

[229] N-1 refers to the planning and operational standard used to analyze whether the electric grid can withstand the failure of any single component.

Summary of Future Actions

- Implement hosting capacity map upgrades as identified in Stage 4.1+ of the Roadmap.
- Continue annual refresh of hosting capacity maps.
- Develop and implement a Con Edison network storage map.
- Conduct stakeholder engagement and training sessions.
- Incorporate feedback from stakeholder engagement meetings into decisions for further defining the details and assumptions used in Stage 4.1 and beyond.
- Continue to explore avenues to advance the Hosting Capacity Roadmap and enhance the value of the information provided.

Several factors are influencing Con Edison's future actions in hosting capacity. First, the Company will continue to work with stakeholders to identify enhancements to its hosting capacity map application and will periodically update the information presented in the application. Simultaneously, the Company is identifying and characterizing the locations in the Company's service territory where limited hosting capacity is a barrier and looking to enhance and automate the analysis of hosting capacity information as it is presented back to developers and customers. As more flexible resources are integrated with the system at scale, the available hosting capacity will become a more dynamic and actively managed value. Flexible resources can adjust to the fluctuating amount of available hosting capacity. The ability of these resources to adjust to grid needs, through programs, incentives, and harmonized price signals will be an important facet of Con Edison's work in the Grid of the Future ("GOTF") Proceeding.

Enhancements to the Hosting Capacity Applications

To continue providing transparent system information to customers and developers, Con Edison will continue its annual refresh of the maps. All maps are updated in April, except the network PV maps which are updated in October. In addition to refreshed data, these annual updates also represent an opportunity for the Company to provide enhancements to the maps, such as the upstream substation constraints and inclusion of voltage values for electrification maps launched in the April 2025 update.

Con Edison, in association with the Joint Utilities, is working to expand the use cases for the electrification hosting capacity maps to better support the strategic siting of electrification projects. This potential enhancement could focus on identifying suitable locations with sufficient hosting capacity for deployment of school bus charging infrastructure and public EV charging stations.

Con Edison, working alongside the Interconnection Policy Working Group and Interconnection Technical Working Group ("ITWG"), is exploring potential updates to the battery energy storage hosting capacity maps to include charge and discharge schedules. The goal of this collaboration is to align any changes to the hosting capacity maps with the Standardized Interconnection Requirement ("SIR") process, making the maps even more useful for developers.

The Joint Utilities may also evaluate potential options for forecasting hosting capacity that consider the accuracy of such an analysis given the uncertainty in the location, timing, and configuration of DER adoption forecasts, projected changes to individual customer loads, and any upgrades or changes to the utility system. The roadmap for forecasting hosting capacity must incorporate models of future utility system configurations, gross load forecasts, and DER forecasts. Each of these items has its own roadmap and consideration of scenario-based planning, probabilistic, and deterministic approaches. These concepts should be integrated in producing a forecast, with the appropriate level of granularity. Given uncertainty in various inputs, a higher level of granularity could produce significant uncertainty.

The anticipated enhancements to hosting capacity are expected to further streamline interconnection approval processes and enable integration of greater flexible resource capacity into Con Edison's distribution grid. Green Button Connect, a platform that enables sharing of customer energy usage data, has facilitated sharing of more granular advanced metering infrastructure data. Providing developers with near real-time data facilitates more informed and effective project planning. Increased data transparency and access among key stakeholders will additionally foster improved program design, optimize resource utilization, and ultimately support a more flexible and reliable grid. Con Edison remains committed to increasing the maturity of hosting capacity capabilities in the pursuit of a modernized Distributed System Platform that aligns with the PSC's vision for the GOTF.

Developing Capabilities for Expanded Hosting Capacity and Enhanced Analysis

Con Edison is investing in its capabilities to expand the hosting capacity of the Company's distribution grid and enhance its ability to present useful information to DER developers. These enhancements require the ability to dynamically model distribution circuit capacity based on existing load, planned installations of flexible technologies, and other circuit characteristics. The Company's proposed investments in the platform of distributed energy resource management system ("DERMS") applications and modules advance DER connection to the grid in several key ways. In the near term, they will enhance DER modeling and simulation capabilities by automating portions of the hosting capacity map updates based on load flow and interconnection studies. This will enable time-series modeling (i.e. simulations of load and generation patterns over time to assess grid impacts) for both planned DERs and additional capacity on the system. In the longer term, DERMS provides a platform to actively manage aggregated DERs, expanding the available hosting capacity of the system through flexible interconnection and coordinated program management.

Risks and Mitigations

New York utilities have consistently provided comprehensive hosting capacity information over an extended period, demonstrating a significant investment in the process. Given the substantial groundwork already established, the future enhancements or modifications planned are incremental in nature. Consequently, the potential risks associated with these upcoming changes are minimal.

Risk	Mitigation
System integration risk	• Continue to engage with Electric Power Research Institute ("EPRI") and DERMS vendors and integrators to identify dependencies and coordinate scheduled releases.
Need arises for additional resources for research, design, and implementation of proposed enhancements	• Continue advancing map improvements incrementally and prioritize stakeholder needs.
Providing highly granular information may lead users to misinterpret information and attempt to bypass engineering studies	• Increase collaboration with working groups and stakeholders to incrementally evolve maps such that they provide valuable information without implying guaranteed outcomes.

Stakeholder Interface

The Joint Utilities collaborate with stakeholders to introduce updates to hosting capacity maps and gather input on desired features by holding stakeholder engagement sessions twice a year that provide developers and other users an opportunity to offer feedback and learn about planned upgrades. The Joint Utilities will continue to engage stakeholders to further inform the continued expansion of the Hosting Capacity Roadmap and deliver the highest value maps for users.

Hosting capacity maps serve developers, regulators, cities, and local municipalities. They are an early screening tool for developers to identify optimal project sites and estimate interconnection costs. In addition, hosting capacity maps give stakeholders a transparent window into the state of the distribution system. This can provide policy makers with information to use in their oversight of utility planning. By visualizing how much more PV, storage, or electrified load each part of the grid can handle, policymakers can track system capacity and identify where constraints are emerging. This helps in planning initiatives to relieve bottlenecks and in measuring progress toward state energy goals.

The inclusion of Environmental Justice ("EJ") or DAC overlays on these maps can help enable equity in the energy transition. By overlaying EJ demographic data on hosting capacity maps, stakeholders can see whether high-need communities have the grid capacity to support electrification of heating, vehicular transportation, and other technologies and can target deployment of investments and programs where they are needed most.

Cities and local governments can use electrification hosting capacity maps to guide transportation electrification planning. Public transit agencies, school districts, and municipal fleets need to know where the grid can support large EV charging deployments, such as bus depots or public fast-charging hubs. The maps provide this insight, showing the available load-serving capacity on each feeder.

Additional Detail

This section responds to the questions in the DPS guidance specific to hosting capacity.

1) **Describe the utility's current efforts to plan, implement, and manage projects related to hosting capacity. Information provided should include:**

    a. **a detailed description of each project, existing and planned, with an explanation of how the project fits into the utility's long-range hosting capacity plans;**

Con Edison has an internal hosting capacity project team that is responsible for translating the Joint Utilities' Hosting Capacity Roadmap into work streams and deliverables. The cross-functional team is made up of subject matter experts familiar with relevant policy goals and standards, distribution planning, and engineering, as well as the mapping and visualization platforms needed to externally present calculated data points. A description of the team's existing and planned projects is below.

Con Edison continues to iterate and refine hosting capacity processes that fall into two main groups – calculation methodology and geospatial visualization. Currently, efforts around calculation include progress toward automation as well as model and data refinement and cleanup. To supplement the Company's current approach to calculation of hosting capacity, additional work on the methodology will include, but is not limited to, the incorporation of additional use cases and evolving technologies that may require a different definition of what a "costly upgrade" may constitute. For instance, the Joint Utilities required all Underwriters Laboratory 1741 SB smart inverters to be certified by July 31, 2025, which will impose additional costs that may or may not currently fall under the definition of a "costly upgrade." Con Edison's visualization team continues to improve the mapping databases and portal production processes, as these efforts are folded into the longer-term roadmap for GIS functionality.

Stage 2.0 Radial Hosting Capacity

Con Edison published a full streamlined HCA for overhead circuits operating at a voltage class greater than 12 kV in October 2017, followed by analysis for 4 kV circuits in December 2017.

In addition to traditional utility load flow modeling, the Company worked on the mapping and visualization platforms necessary to refine the data elements needed to present hosting capacity in a geospatial environment. This is an ongoing effort throughout future stages of HCA.

Network Level Hosting Capacity

Con Edison's network level map was released in June 2018 and allows the user to navigate different sections of a network by hosting capacity color (corresponding to varying levels of available hosting capacity in kVA) and view existing and queued DG capacity values. Once users locate a larger geographic area of interest, they can navigate to the street level and observe values at the various points that would be available for interconnection. Users can also search by prospective project address to view these more detailed values.

Stage 2.1 Hosting Capacity

Throughout the 2017 stakeholder engagement sessions for both hosting capacity and system data, developers requested values for queued and connected DG projects, total DG (i.e., the sum of queued and connected DG), historical peak load values, and status of zero sequencing voltage upgrades (i.e., scheduled and completed) at the substation level.[230] During spring 2018, Con Edison, along with the Joint Utilities, prioritized this work as "Stage 2.1" and Con Edison published its available data to the hosting capacity and system data portal in April 2018.

Stage 3.0 Hosting Capacity

On October 1, 2019, Con Edison released its Stage 3.0 HCA, which presented results at the sub-feeder level to increase granularity and considered existing solar PV to improve accuracy. The Stage 3.0 map shows changes in hosting capacity along a feeder using the previous color coding. The sub-feeder hosting capacity is noted as "Local Hosting Capacity for PV" when line segments are selected in the displays. The analysis also explicitly modeled existing PV and other installed DG in the circuit load curves and load allocations, which provides a more accurate view of available capacity.

Stage 3.1 Hosting Capacity

The Joint Utilities released Stage 3.1, which makes available downloadable .csv or .xlsx files of feeder-level summary data currently included in the map pop-ups. Con Edison preceded the Joint Utilities in this functionality, incorporating it into a 2018 release. Con Edison also made incremental adjustments as part of Stage 3.1, including adding notes on circuit-specific conditions for greater clarity and explanation.

Stages 3.2-3.4 Hosting Capacity

The next several iterations of hosting capacity functionality updates covered a broad spectrum of platform enhancements including NWS, LSRV, EV charging capacity, and REST API views. Each view and its associated level of functionality are covered in greater detail above in the *Current Progress* section.

[230] Zero sequencing voltage upgrades are not applicable to Con Edison's network system.

Stage 3.5 Hosting Capacity

In the spring of 2022, the Joint Utilities released the initial iteration of storage hosting capacity maps as part of the Stage 3.5 HCA. The storage hosting capacity maps were finalized in April 2023. Additional information on the Stage 3.5 release can be found in the *Current Progress* section above.

Stage 4.1

The Joint Utilities released Stage 4.1 of hosting capacity maps in April 2023 which focused on advanced functionality. The latest update in 2024 added electrification load serving capacity maps. Further details on this update are as follows:

- Sub-feeder level information for storage hosting capacity maps
- DG connections since the last hosting capacity refresh
- Nodal constraints (criteria violations on PV and storage maps)
- Cost share 2.0 items on PV and storage maps

Additionally, the Joint Utilities provided six-month updates for circuits with DG increases greater than 500kW on PV maps, links to access 8,760 data, and made storage hosting capacity data available via API. This update is separate from the Company's annual update.

Future Stages of Hosting Capacity

Subsequent stage releases will further enhance the information provided on the hosting capacity portal. The Joint Utilities are evaluating options to further improve the analysis and will continue to solicit input from stakeholders on the continued development of the Hosting Capacity Roadmap. To enhance stakeholder understanding and enable broad accessibility of the Hosting Capacity Maps, the Joint Utilities will circulate a stakeholder newsletter in the spring 2025 and offer targeted training sessions in fall 2025. Recognizing the critical role of stakeholder feedback in developing effective training content, the Joint Utilities are actively gathering input through a stakeholder survey. This feedback will directly inform the curriculum, covering map content, navigation techniques, and practical applications of the data. This initiative emphasizes the Joint Utilities' commitment to meaningful stakeholder collaboration, supporting both experienced and new stakeholders in effectively utilizing these foundational resources for electrification and interconnection projects.

Possible enhancements in upcoming stages include:

- Additional map functionality
- Forecasted hosting capacity
- Circuit reconfiguration assessments and operation flexibility
- Increased temporal granularity
- Annotated circuit notes, including additional system data on upstream constraints

The Joint Utilities are also considering expanding the use cases for the electrification maps to better support the strategic siting of electrification projects. This potential enhancement could focus on identifying suitable locations for school bus charging infrastructure and public EV charging stations. By incorporating these specific use cases, the maps could provide insights for fleet operators, municipalities, and charging providers, and help them align electrification efforts with grid readiness.

Concurrently, efforts continue within the Integrated Planning Working Group and the ITWG to potentially enhance the ESS hosting capacity maps. These improvements may incorporate ESS operational schedules, providing increased detail and practicality while considering alignment with the established SIR, Coordinated Electric System Interconnection

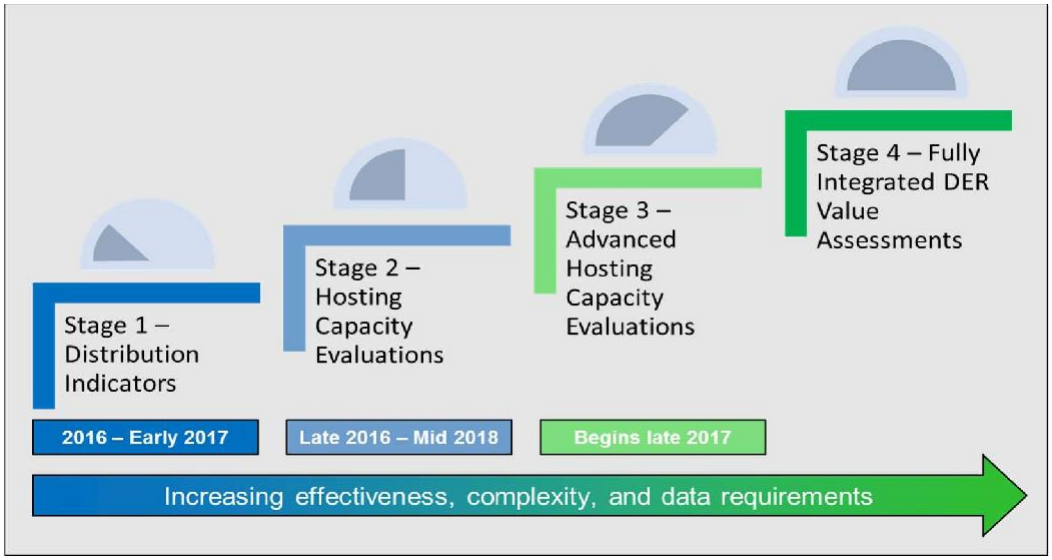
Review ("CESIR"), and related processes. Such enhancements would aim to assist developers by offering clearer insights and streamlining navigation through the interconnection process. These schedules provide insight into how storage systems may operate at different times and could help improve interconnection planning, CESIR evaluations, and system impact assessments. However, the utilities and industry stakeholders are still determining how these schedules should be used and whether they should be reflected in the ESS hosting capacity maps.

To advance from the current hosting capacity maps to the enhancements envisioned, the Joint Utilities will continue investing in stakeholder engagement and feedback processes, data analysis, and ongoing collaboration across working groups. This collaborative approach allows future updates to remain responsive to stakeholder needs and effectively support strategic electrification and interconnection planning.

b. the original project schedule;

The Joint Utilities adopted a multi-phased approach for developing HCA capabilities that are paced with the evolution of hosting capacity tools, models, and processes. Figure 36 details the original project schedule as included in the supplemental DSIP filed in 2016.

Figure 36: Joint Utilities' Original Hosting Capacity Roadmap from Supplemental DSIP[231]



c. the current project status;

Con Edison completed Stage 4.1 of the current Hosting Capacity Roadmap with additional map updates including REST API data, criteria violations on PV and storage maps, DG connected since last refresh, and Cost-Sharing 2.0 information.

The Company, along with the Joint Utilities, is evaluating further refinement of Stage 4.1+ based on stakeholder needs and ongoing tool development.

d. lessons learned to-date;

The hosting capacity work streams have created numerous processes for not only the refinement of data, but also the ways in which it is exchanged between systems and utilized for calculations and visualization. Con Edison used lessons learned from Stage 2 to inform the more granular Stage 3 calculations and visualizations at the line segment level.

[231] Note 18, supra, p. 48.

Lessons from Stage 3 implementation, including reconciliation processes between mapping and modeling data, are also expected to inform future hosting capacity development by allowing greater automation, timeliness of updates, and identifying areas in datasets that will be further refined on the GIS Roadmap. More granular Stage 3 calculations and visualizations led to further refining data quality controls within Stage 4. Continued collaborative efforts with the IEDR[232] in Stage 4 allowed Con Edison to participate in working sessions on data defects and report hosting capacity dataset issues in IEDR for prompt resolution. The continued requests from stakeholders signaled the need to understand where the grid can accommodate new EV chargers and building electrification loads, prompting the Joint Utilities to include the electrification map in Stage 4 of the hosting capacity roadmap.

Con Edison has been able to leverage the calculation and visualization tools developed throughout the hosting capacity process in creating not only secondary screening tools for interconnection, but also applications that can be used by engineers when performing system impact studies at various stages in the SIR process. Additionally, many of the database and visualization learnings have been direct inputs into the design and structure of the DERMS project. The lessons learned regarding systems of record and data formats provided a foundation for the Company's work developing the DER asset repository[233] and the application of this data in analytical modules, currently under development, which require this refined data.

The consistent use across the Joint Utilities of the Environmental Systems Research Institutes' ArcGIS tool for displaying hosting capacity has also facilitated additional knowledge sharing on best practices and implementation challenges.[234] Con Edison continues to coordinate with the other utilities on a consistent coloring scheme for each utility's hosting capacity map, making it easier for developers to interpret information for each utility.

Additionally, by engaging directly with stakeholders and monitoring activity within the hosting capacity maps, Con Edison learned that while some developers leverage the hosting capacity maps to inform business development activities, others rely primarily on the interconnection process to meet business needs. Given the Company's simultaneous efforts to enhance the interconnection process, Con Edison learned that, in many cases, the timely results achievable through the interconnection process obviate the need for developers to utilize the hosting capacity maps.

e. project adjustments and improvement opportunities identified to-date; and

In addition to lessons learned through internal work, Con Edison has benefited from stakeholder input, as noted above. One recurring element of feedback from the development community is the emphasis on the value of data visualization. In response to stakeholder feedback, Con Edison and the Joint Utilities prioritized the analysis and development of sub-feeder level hosting capacity as part of Stage 3.0. Furthermore, substation data was added to the electrification maps in 2024. These improvements complemented the previous incorporation of NWS, LSRV areas, and various system data elements into the hosting capacity and system data mapping environment. Achievement of Climate Leadership and Community Protection Act goals will require greater reliance on such stakeholders to provide valuable data and input from community and municipality perspectives. This will help guide projects to areas that not only may have economic value for a developer but also may meet the energy needs and values of the communities where these projects reside in an effort to promote EJ.

f. next steps with clear timelines and deliverables.

Per the annual cycle, Con Edison conducted a refresh its HCA in April 2025. The Company plans to review additional features based on the ITWG collaboration with stakeholders, working toward advancing its datasets and enhancing granularity throughout the next stages of the Storage Hosting Capacity Roadmap.

---

[232] Note 187, *supra.*

[233] This is a consolidated source of high-quality DER data, managed internally by Con Edison.

[234] Esri ArcGIS landing page: https://www.esri.com/en-us/arcgis/about-arcgis/overview.

2) **Describe where and how DER developers/operators and other third parties can currently access the utility's hosting capacity information.**

Information regarding hosting capacity and access to the hosting capacity and system data portal can be found on the Company[235] and Joint Utilities[236] hosting capacity websites, respectively.

3) **Describe how and when the existing hosting capacity assessment information provided to DER developers/operators and other third parties will increase and improve as work progresses. This should include discussion of the transition of hosting capacity information access from the utility's current hosting capacity information portal to the statewide hosting capacity solution in development on the Integrated Energy Data Resource ("IEDR").**

Responding to requests from the developer community, Con Edison has delivered EV capacity, energy storage capacity, electrification and REST API data in the hosting capacity portal. Con Edison also anticipates that continued model and data refinement will further clarify existing hosting capacity values as work progresses to meet these objectives.

The Company continues to transmit and share data from its hosting capacity maps with the IEDR as part of the annual refresh that occurs every April. The Company also shares data from Network Storage Maps with the IEDR once they have been published. The IEDR Administrator is continuing to build out its Electric Infrastructure Assessment Tool which, when operational, will provide the most recently updated hosting capacity maps. Further details on the IEDR are available in **Section 2.8 Data Sharing**.

The current IEDR functionality is more limited than the Company's hosting capacity portal. Con Edison anticipates that IEDR functionality will continue to improve but also expects that its customers and interested stakeholders will continue to look to its hosting capacity portal for desired information.

4) **Describe the means and methods used for determining the hosting capacity currently available at each location in the distribution system.**

Con Edison, along with the Joint Utilities, employed a streamlined approach to hosting capacity calculations that focused on the siting of larger commercial PV installations. This decision was made to guide developers toward areas on the distribution system that would be more accommodating to commercial-scale projects. The values produced on a circuit-by-circuit basis can also be valuable to site smaller rooftop solar projects as well.

The Joint Utilities validated and utilized the Distribution Resource Integration and Value Estimation ("DRIVE")[237] tool to facilitate the calculation of the overhead and radial portions of the service territory. Con Edison created and refined minimum load flow cases based on historically observed values at the area substations and distribution transformers, where applicable. The minimum daytime load is used to most accurately simulate a low-load condition when PV generation is generating a significant portion of its nameplate capacity in order to determine the hosting capacity limit during "worst case" conditions. These minimum load cases were coincident with peak PV output times between 11:00 a.m. and 2:00 p.m. The resulting datasets from these load flow simulations were exported to the DRIVE tool, where centralized DERs were applied until the circuits reached excursion thresholds for voltage, loading, and protection concerns. To support consistency in approach, the Joint Utilities adopted a common set of specifications to inform the analysis.

[235] Note 45, *supra*.
[236] Note 46, *supra*.
[237] Distribution Resource Integration and Value Estimation (DRIVE) is an EPRI-developed software tool that provides distribution engineers with new planning methods for the electric grid of today and tomorrow.

Con Edison validated the results of the DRIVE tool during the overhead calculation process and worked to incorporate the specification and threshold elements of the tool into the Company's network-level HCA. The DRIVE tool is not built to evaluate secondary mesh distribution systems. However, Con Edison was able to incorporate the same thresholds and methodologies into the utility load flow program to produce results consistent with the overhead analysis. The load flow tool builds the same minimum load case (11:00 a.m. to 2:00 p.m.) based on historical interval data that is observed at the distribution transformers. For structures in the network that would accommodate an interconnection application, nearby distribution transformer loads are analyzed and algorithmically distributed to the various sites for analysis against potential PV. The program compares the load flows to the same EPRI values or voltage, load, and protection excursions to determine a maximum hosting capacity value.

For the storage hosting capacity maps, each circuit's hosting capacity is determined by evaluating the potential power system criteria violations as a result of charging and discharging systems. The analyses represent the overall feeder level hosting capacity only, and do not account for all factors that could impact interconnection costs. To calculate the hosting capacity, the output change for voltage deviation was input as 100 percent and therefore assumes the ESS will not operate at a full power flow charge (i.e., full charge to full discharge). The analyses also assume energy storage operation between 10am-8pm only.

5) **Describe the means and methods used for forecasting the future hosting capacity available at each location in the distribution system.**

Consistent with the 2023 DSIP Guidance, the Joint Utilities will continue to evaluate options for forecasting hosting capacity that consider the accuracy of such an analysis given the uncertainty in the location, timing, and configuration of DER adoption forecasts, projected changes to individual customer loads, and any upgrades or changes to the utility system. When forecasting hosting capacity, the addition of generation at various points on a feeder can significantly impact the circuit-level hosting capacity. Additionally, it is more complex to forecast hosting capacity down to the individual property level, as HCA can be sensitive to changes in a single customer's load.

The roadmap for forecasting hosting capacity must incorporate models of future utility system configurations, gross load forecasts, and DER forecasts. Each model has its own roadmap and consideration of scenario-based planning as well as probabilistic and deterministic approaches. These concepts must be integrated to produce a hosting capacity forecast with an appropriate level of granularity. Given uncertainty in various inputs, a higher level of granularity could produce significant uncertainty. Going beyond the initial HCA to forecast these values will require an even greater level of complexity on top of a process that already entails high levels of variability in results.

The increasing complexity of DER adoption, electrification, and evolving customer behavior poses new challenges for forecasting grid needs. Existing forecasting models, while effective for long-term planning, may not fully account for real-world DER performance and emerging load patterns, such as rapid EV adoption and high-density charging loads.

6) **Describe how and when the future hosting capacity forecast information provided to DER developers/ operators and other third parties will begin, increase, and improve as work progresses.**

The Joint Utilities continue to hold stakeholder engagement sessions to solicit input from developers on additional enhancements to the hosting capacity portal, including increasing the frequency of updates to the analysis and providing additional information such as displaying forecasted hosting capacity. The stakeholder engagement sessions furthered the considerations of providing hosting capacity forecasts and the timing of its release. Forecasted hosting capacity and other enhancements will continue to be discussed with stakeholders for inclusion in subsequent releases through 2025 and beyond.

The Joint Utilities' internal planning discussions have likewise evolved to tackle emerging challenges associated with high DER and electrification growth. Through a new sub-working group, the Joint Utilities have identified key focus areas

including flexible interconnection, forecasting evolution, cost-sharing, and advanced technology and tools. Through these discussions, the Joint Utilities identified key gaps, such as technical requirements, operational considerations, and regulatory alignment, which must be addressed to move from conceptual solutions to practical implementation.

7) Summarize the utility's specific objectives and methods for:

a. identifying and characterizing the locations in the utility's service area where limited hosting capacity is a barrier to productive DER development, directing users to the CGPP filing for further information; and

Con Edison's experience indicates that the dense urban nature of its load area is a primary factor in considering the capacity to host DG. Given the load density, Con Edison can host a significant amount of DG without hitting system constraints. That said, the urban environment also limits the land and structures available to cost-effectively site larger DG systems. While land and roof space may be more available in Con Edison's outlying suburbs, these areas are often characterized by a distribution design using 4 kV feeder circuits, which can limit hosting capacity.

Con Edison's low voltage meshed grid in its dense urban areas requires separate review given the different constraints involved with limiting hosting capacity. In these areas, the primary constraint involves tripping a local breaker when reverse power flow occurs in a distribution transformer. Con Edison has taken innovative steps in research and design to accommodate this reverse power flow due to PV systems and thus, has significantly increased hosting capacity.

Hosting capacity focuses on the amount of DER accommodation that will not adversely impact power quality or reliability and will not require infrastructure upgrades. Where limited hosting capacity exists in the Company's service territory, the Coordinated Grid Planning Process ("CGPP") will help address electric grid expansions that will enable the unlocking of renewable generation capacity. The CGPP is also providing headroom analyses available on the existing local transmission and distribution systems and additional capacity and energy headroom that would be created by implementing solutions on local system constraints. The current CGPP Proposal[238] and associated cycle implementation provides a detailed approach to the State's electric grid using a 20-year planning horizon. An initial report is being prepared and will be filed in the first half of 2026.

b. timely increasing hosting capacity to enable productive DER development at those locations, directing users to the IEDR platform when applicable for more information.

As discussed above in the response to "7) a", the Company has introduced new design standards in low voltage meshed designs to allow for bi-directional power flow in these systems, typical in dense urban areas. This innovative design change to the network protector relay standards will result in an increase in hosting capacity. The Company has an active program to upgrade protective relays in support of its Grid Modernization Plan.[239]

The Company has also begun internal efforts to evaluate smart inverter functionality as a potential solution for monitoring and autonomous management that may alleviate the need for more costly solutions. The Company is transmitting and sharing all its hosting capacity data with the IEDR. The Company's customers continue to use the current Hosting Capacity Web Application site in the near-term.

[238] Note 23, *supra*.
[239] Note 63, supra.

2.10. BILLING AND COMPENSATION

Context and Background

Customer billing is the primary channel by which Con Edison engages with its customers. Through this channel, the Company must translate complex energy transactions, tariffs, compensation mechanisms, and regulatory mandates into a format that is understandable and provides sufficient information for customers to make informed decisions. An effective bill organizes the various utility services and cost components into a clear statement that provides the customer with confidence in its accuracy. It also serves as a valuable channel to provide information on programs or alternative rate options that could help reduce energy costs.

Also included in some customer bills is information that details the customers' interactions with distributed energy resource ("DER") providers and/or other utility programs. Compensation for DERs and related services is among the most critical aspects of enabling DER development in support of the state's clean energy goals, specifically the Climate Leadership and Community Protection Act ("CLCPA").[240] Supporting these goals requires Con Edison to accurately track and clearly communicate DER-related compensation to customers.

Identifying the locational and temporal value of DER to the electric distribution system has long been a focus of the Reforming the Energy Vision ("REV") Proceeding and will continue to be explored in the Grid of the Future Proceeding through compensation and granularity of price signals. In general, the value of a DER is higher in constrained areas and during times of the system peak relative to the same type of DER deployed in an unconstrained area operating off-peak. The Company has proactively engaged with DER providers and New York State ("NY State") Department of Public Service ("DPS") Staff to develop and implement compensation for DER programs that reflect their value to the electric system.

Regulatory Proceedings

New York utilities, including Con Edison, utilize the Value of Distributed Energy Resources ("VDER" or the "Value Stack"), to determine compensation for DERs based on the value they provide in injecting energy into the utility's system. The Value Stack methodology compensates DERs for the following five calculable benefits:

1. Energy Value: The day-ahead wholesale energy price as determined by the New York Independent System Operator ("NYISO"). It changes hourly and is different according to geographic zone.
2. Capacity Value: The value of how well a project reduces NY State's energy usage during the most energy-intensive days of the year.
3. Environmental Value: The value of how much environmental benefit a clean kilowatt-hour brings to the grid and society. The environmental value is locked in for 25 years.
4. Demand Reduction Value ("DRV"): Determined by how much a project reduces the utility's future needs to make grid upgrades. DRV is locked in for 10 years.
5. Locational System Relief Value ("LSRV"): Available in utility-designated locations where DERs can provide additional benefits to the grid. The LSRV is locked in for 10 years.

Value for each of the above components is calculated based on the overall utility costs that DERs offset, and compensation is in the form of bill credits.

The New York Public Service Commission ("PSC") issued the Value Stack Transition Order on March 9, 2017, enabling the "transition to a distributed, transactive, and integrated electric system by compensating DERs based on the actual value

[240] Note 4, *supra*.

provided by those resources"[241] as envisioned in the REV Proceeding.[242] Under the VDER Transition Order, the PSC established guidance for the Joint Utilities to transition from the net energy metering ("NEM") tariff to the VDER Phase One tariff. Further guidance on Value Stack methodology was issued on April 18, 2019, when the PSC issued the Order Regarding Value Stack Compensation.[243] That order adopted a number of DPS Staff recommendations to include DRV, LSRV and capacity value calculation and compensation.

Since the Order Regarding Value Stack Compensation, there has been increasing focus on the methodologies used in calculating DRV and LSRV. The PSC noted in the order that marginal cost of service ("MCOS") studies are important to inform updates to the VDER Value Stack but that significant variations existed in how MCOS studies were conducted across the Joint Utilities. Staff released a whitepaper regarding MCOS methodologies on March 27, 2023[244] recommending MCOS estimates be reflective of the costs that the respective utility would be expected to incur as a result of increases in customer demand and calling for greater consistency in methodology to estimate marginal cost. The whitepaper further required the Joint Utilities to demonstrate how its marginal cost studies tie back to actual and forecasted capital spending, and operation and maintenance cost data.

The PSC issued the Order Addressing Marginal Cost of Service Studies on August 19, 2024, that established a methodology for estimating marginal costs to inform system wide applications such as DRV. The PSC directed the Joint Utilities to file MCOS studies contemporaneously with their next round of Distributed System Implementation Plan submissions due on June 30, 2025. For more information on where to find the updated MCOS study, see **Section 3.2 MCOS Study**.

The Consolidated Billing for DER Proceeding[245]defined compensation for Community Distributed Generation ("CDG") projects. On December 12, 2019, the PSC issued its Order Regarding Consolidated Billing for CDG,[246] directing the Joint Utilities to implement net crediting as a consolidated billing option for both existing and new CDG projects.

Under the net crediting model, CDG Sponsors,[247] or developers of eligible generation projects such as solar PV, are paid a monthly subscription fee by members sharing a particular CDG project, which could consist of fixed or variable rates. When a CDG Sponsor's project injects electricity into the utility's distribution system, the utility will apply a credit to the customer's or CDG Member's[248] bill commensurate with the CDG savings rate designated by the sponsor. The utility also adds the CDG Sponsor's monthly subscription fee to the customer's bill. Net crediting is intended to reduce customer acquisition and financing costs, particularly enabling low-income customers' participation in the state's clean energy efforts.

---

[241] Case 15-E-0751, *In the Matter of the Value of Distributed Energy Resources*, Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters (issued March 9, 2017).
[242] Case 14-M-0101, *Reforming the Energy Vision*, *Order Adopting Regulatory Policy Framework and Implementation Plan* (issued February 26, 2015); *Order Adopting a Ratemaking and Utility Revenue Model Policy Framework* (issued May 19, 2016).
[243] Case 15-E-0751, *In the Matter of the Value of Distributed Energy Resources*, Order Regarding Value Stack Compensation (issued April 18, 2019).
[244] Case 19-E-0283, *Proceeding on Motion of the Commission to Examine Utilities' Marginal Cost of Service Studies*, Whitepaper Regarding Marginal Cost of Service Studies (filed March 27, 2023).
[245] Case 19-M-0463, *In the Matter of Consolidated Billing for Distributed Energy Resources*, Matter Master
[246] Case 19-M-0463, *In the Matter of Consolidated Billing for Distributed Energy*, Order Regarding Consolidated Billing for Community Distributed Generation (issued December 12, 2019).
[247] As described in Version 3 of Con Edison's Value Stack CDG Net Crediting Manual published in July 2024, a CDG Sponsor is a non-residential customer who owns or operates electric generating equipment eligible under the CDG Net Crediting Tariffs and whose net hourly injected energy produced by its generating equipment is applied to the accounts of CDG Satellites. CDG Satellites are a Con Edison electric distribution customer taking service under the tariff who is allocated Value Stack Credits from its CDG Sponsor in accordance with CDG Net Crediting Tariffs.
[248] CDG Member refers to an electric customer of Con Edison who is participating in the CDG Project.

On September 15, 2022, the PSC issued its Order Establishing a Process Regarding Community Distributed Generation Billing.[249] This order directed utilities to file implementation plans regarding the automation of CDG billing and established a process for the development of CDG billing performance metrics. This order further directed utilities who have filed tariffs related to CDG to file implementation plans associated with automated CDG billing. These implementation plans include: (1) the current billing system constraints preventing full CDG billing automation; (2) the billing system changes necessary to effectuate the automated CDG billing; and (3) the steps and timeline to achieve full automation of CDG billing. Con Edison submitted its implementation plan detailing its progress toward automated billing and crediting for CDG projects on October 17, 2022. Automation of CDG billing and compensation was achieved in October 2023 with the launch of the Customer Care and Billing ("CC&B") system.

Con Edison's Energy Affordability Policy ("EAP") program provides monthly bill discounts to low-income electric and gas customers who are automatically enrolled if they receive benefits from other social service programs.[250] The 2023 -2024 NY State Budget directed the utilities to expand the EAP to include customers who are not eligible for the existing EAP and moderate-income customers who face affordability challenges. The budget also directed the utilities to develop a pilot that will evaluate the impact of transitioning to electric cooling and heating on low-income customers' bills. Approximately 1,000 low-income customers statewide will be enrolled in NYSERDA's Empower+ program and the utilities will provide credits to monitor that participants' electric bills do not exceed 6 percent of their income. In tandem, Con Edison is rolling out both its Statewide Solar for All ("S-SFA") program and NYPA's Renewable Energy Access and Community Help ("REACH") program to deliver clean energy savings to low-income customers. Both S-SFA and REACH as well as their interactions with EAP are further discussed below.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Completed implementation of a new Con Edison customer service system ("CSS") known as the CC&B system. CC&B provides customers with faster enrollment and onboarding, greater ease of configuration, and more timely receipt of bills.
- Developed and implemented the Value Stack Customer Portal in Q2 2024 to improve coordination between customers and the Con Edison business units involved in onboarding and compensating DERs.
- Enrolled approximately 282 CDG projects and their subscribers in the Net Crediting Program, representing a combined capacity of 99 MW.
- Achieved full automation of billing and crediting processes for all CDG projects in the CC&B system.
- Established the Clean Energy Market Operations team in early 2025 to consolidate the management of compensation programs.

[249] Case 19-M-0463, *In the Matter of Consolidated Billing for Distributed Energy*, Order Establishing Process Regarding Community Distributed Generation Billing (filed September 15, 2022).
[250] This includes SNAP (Supplemental Nutrition Assistance Program) and TANF (Temporary Assistance for Needy Families).

Utility Capabilities Demonstrated (non-exhaustive)

Customer Programs: Completion of CC&B and ongoing enhancements has provided Con Edison with greater flexibility in *customer program* design and execution.

Market Participation: Con Edison continues to automate *billing* and *compensation* functionality, where possible, to increase internal efficiencies and reduce friction for market participants.

Con Edison has made great strides in implementing both methodologies and systems that enable billing and compensation for DERs. Notably, the implementation of CC&B has provided the Company with a foundational platform that will enable more flexibility in accommodating future DER programs and the integration of flexible loads in support of CLCPA goals.

Community Distributed Generation Billing

Under the net crediting model, CDG Sponsors, or developers of eligible generation projects such as solar PV, receive monthly subscription fees from members participating in a shared CDG project. These fees are set as a percentage of the customer's monthly bill credit, such that the customer receives a net savings. When a CDG Sponsor's project injects electricity into the utility's distribution system, the utility credits the customer's, or CDG Member's, bill commensurate with the CDG savings rate designated by the CDG Sponsor and adds the CDG Sponsor's monthly subscription fee. Net crediting, which allows the Company to apply the savings rate provided by the CDG Sponsor to all of the CDG Satellites, is intended to reduce customer acquisition and financing costs, particularly enabling low-income customers' participation in the state's clean energy efforts. Net crediting was also designed to reduce the confusion associated with two separate bills and payment requirements that may discourage CDG participation. The Company provided the PSC with quarterly updates to its implementation plans associated with automated CDG billing until all automation efforts were completed. With the launch of the new CC&B system in October 2023, Con Edison fully automated the billing process for CDG customers.

VDER Value Stack Customer Portal

To support the growth of DER projects and meet customer expectations of accurate and timely VDER compensation, the Company has implemented a new platform for administration of VDER projects, called the Value Stack Customer Portal. This portal was deployed in Q2 2024 and is designed to improve coordination between Con Edison teams, DER asset owners, and DER and CDG Marketers who are all involved in onboarding and compensating DER projects and customers. It was developed in response to developer and other stakeholder feedback regarding the need for greater efficiency in administering DER programs. DER developers and hosts are already benefitting from the improved efficiency of this solution with greater visibility into the project pipeline and monitoring of VDER and CDG projects from application to permission to operate, to ongoing subscriber management and data sharing. Con Edison is better positioned to enable further growth of DERs through increased integration of the DER onboarding system (PowerClerk®)[251] with the Value Stack Customer Portal.

As of December 2024, the Company has made significant progress in integration of the Value Stack Customer Portal with the CC&B system. This integration will enable accounts and contract data to be accessed from a centralized system if there is a corresponding account number. CDG host providers and third parties, such as developers, will benefit from this integration through timelier and more accurate production of billing statements. Implementation is scheduled for Q3 2025.

[251] Software that streamlines design and management of DER programs

Statewide Solar for All

The PSC issued an order approving the S-SFA program on May 16, 2024.[252] Under S-SFA, the Joint Utilities aggregate Value Stack credits generated by participating CDG projects and distribute them as bill credits among customers that are automatically enrolled in the applicable utility's low-income energy affordability program ("EAP"). Value Stack credits from a participating generator would be divided into several components: (1) a percentage of the credits that would go towards providing bill savings to the utility's EAP customers ("Customer Share"); (2) a 1 percent Utility Administrative Fee that the utility would be permitted to retain; and (3) the remaining portion of the Value Stack credits, paid by the utility to the project owner as direct compensation. The Customer Share of all participating generators in a particular utility service territory would then be aggregated and evenly divided among the utility's EAP customers. By guaranteeing payments to solar and storage developers, Con Edison is reducing both the cost of financing clean energy projects and helping to meet the Company's clean energy goals.

S-SFA is intended to align with the REACH program (see section immediately below) to allow for efficiencies in program administration and implementation across the two programs. In Q4 2024, Con Edison deployed the first phase of a platform solution to onboard new and existing projects applying to participate in the S-SFA or REACH programs. This phase involved prioritizing program application intake through the Value Stack Portal. Phase 2 began in Q1 2025 and involves making updates to provide secure contract upload functionality and reduce manual processes during the internal review and approval processes.[253] The Company will continue to support these programs to help provide affordable, clean energy for low-to-moderate income customers and disadvantaged communities ("DACs") and further support NY State's CLCPA goals.

Renewable Energy Access and Community Help

To extend the benefits of renewable energy to DACs, the PSC issued the Order Implementing Renewable Energy Access and Community Help (REACH)[254] in October 2024. Con Edison and Orange & Rockland collaborate with the New York Power Authority ("NYPA") to implement this program. The utility responsibilities include the distribution of monthly bill credits to REACH program beneficiaries and monthly standard offer payments to NYPA for small scale REACH projects (less than 5 MW), as well as engagement with customers. NYPA's responsibilities include the transfer of revenue generated by large scale projects to utilities for distribution based on the proportion of EAP customers living in DACs within each utility's service territory.[255] Under this program, a portion of the net revenue generated through the production of renewable energy are distributed through bill credits to low-income customers that participate in the utility's EAP. Additionally, by January 1, 2027, eligible customers will begin receiving bill credits that include a share of large-scale project revenues that are distributed by NYPA.

Con Edison filed its REACH Implementation Plan on December 13, 2024, which further outlines required enhancements to existing information systems including CC&B, the Value Stack Customer Portal, and PowerClerk®.

Con Edison's S-SFA and REACH programs aim to expand the footprint for renewables while helping low-income customers, particularly those enrolled in EAP, participate in the clean energy transition. Though the mechanisms vary

[252] Case 21-E-0629, *In the Matter of the Advancement of Distributed Solar*, Order Approving Statewide Solar for All With Modifications (issued May 16, 2024).
[253] Case 22-E-0064, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Strategic Customer Experience Portfolio Report Q4 2024 (dated February 28, 2025).
[254] Case 24-E-0084, *Petition of New York Power Authority to Establish the Renewable Energy Access and Community Help Program*, Order Implementing Renewable Energy Access and Community Help Program (issued October 16, 2024).
[255] Case 24-E-0084, *Petition of New York Power Authority to Establish the Renewable Energy Access and Community Help Program,* Con Edison and O&R Renewable Energy Access and Community Help Program Implementation Plan: https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B2097C193-0000-CB1F-8A04-EBF5F2F7A0EB%7D.

across these two programs, as described above, they share the goal of providing easier access to clean, renewable, and affordable energy to low-income customers.

Customer Care and Billing

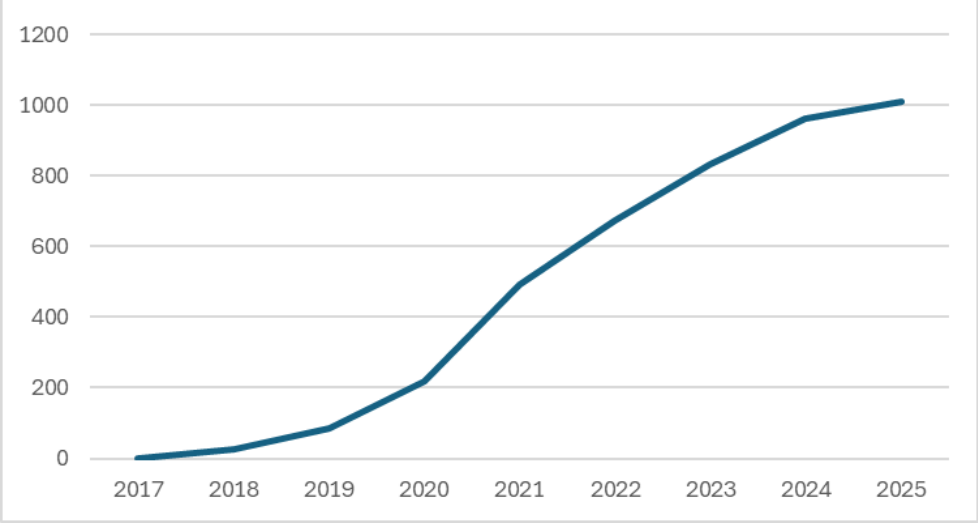
Con Edison implemented CC&B, a new Oracle-based customer service system, in October 2023. CC&B has enhanced the Company's ability to manage requests across the utility customer lifecycle, including service connections, support for advanced metering infrastructure ("AMI"), implementation of new rates, automation of complex billing, payment processing, collections, and field work while also streamlining business processes and supporting clean energy programs across the enterprise. CC&B further strengthens the Company's ability to satisfy regulatory performance standards tied to billing timeliness, accuracy, and transparency. Billing operations are now better equipped to accommodate future dynamic rates, volumetric crediting enhancements, and DER billing complexity resulting from programs such as Federal Energy Regulatory Commission ("FERC") Order 2222[256] aggregator settlement and new CDG models.

Crediting functionality for both net metering and CDG projects is now fully automated and can be performed remotely. This automation enables monthly credit allocation and subscriber management without the need for manual uploads or spreadsheet tracking, significantly accelerating the payment cycle for Project Sponsors and facilitating faster realization of Value Stack credits. Based on experience to date, DER owners are experiencing:

- Greater ease of program set up and configuration
- Improved traceability of bill calculations
- Faster enrollment and onboarding in specific rates and tariffs
- Timelier issuance of bills

As shown in **Figure 37** below, the number of CDG Project Hosts has grown significantly since 2017. By working to continually increase the number of VDER CDG Project Hosts, Con Edison is enabling greater participation for customers in the clean energy transition.

Figure 37: Cumulative Number of VDER CDG Project Hosts



[256] Order 2222 envisions aggregations of smaller resources, including rooftop solar, energy storage, electric vehicle chargers and other technologies, all working together to maintain stability of the grid. Further details on FERC Order 2222 are available in the *Future Implementation and Planning* section under Wholesale Market Developments.

Clean Energy Market Operations Team

In early 2025, Con Edison established a dedicated section within the Customer Operations group called Clean Energy Market Operations to streamline the onboarding, billing, and compensation processes for customers who have installed DERs and have received permission to operate. This initiative aims to enhance the customer experience by providing tailored support and clear guidance specifically for these customers as they navigate the complexities associated with their new energy systems. By focusing on these areas, Clean Energy Market Operations works with customers to effectively manage their DER systems while also facilitating timely and accurate billing and compensation for energy produced and fed back into the grid. This proactive approach not only empowers customers but also aligns with Con Edison's commitment to promoting sustainable energy solutions and fostering a more resilient energy infrastructure.

Future Implementation and Planning

Summary of Future Actions

- Implement new Net Crediting Program enabling savings for community solar participants.
- Continue to implement tariff revisions and CC&B modifications to accommodate FERC 2222 rules being implemented by the NYISO.
- Continue collaboration with CDG Billing & Crediting Working Group on key topics including expanding existing programs and further developing the net crediting model.

The Company continues to devote substantial time and resources to enable DER billing and compensation and DER-related programs, for areas including design, programming, implementation, and ongoing IT and administrative maintenance.

Wholesale Market Developments

The NYISO launched its initial DER aggregation market at the end of April 2023. Discussions between the Joint Utilities and the NYISO have centered on developing processes and handoffs between the NYISO and the utilities to enroll, assess, track, monitor, and compensate DER aggregations participating in the market. Through these discussions, the Company has continued to evolve internal processes, including those related to compensation and billing systems administration. To accommodate DER participation under the April 2024 NYISO rules, Con Edison has designed and implemented system modifications to its CC&B that involve changes to project sub-metering, combinations of DER, and project sizes and configurations.

To advance its compliance with FERC Order 2222, the NYISO launched a program to integrate aggregations of DER into its wholesale markets beginning in April 2024. Order 2222 envisions aggregations of smaller resources, including rooftop solar, energy storage, electric vehicle chargers and other technologies, all working together to maintain stability of the grid. The NYISO program rules require participating DERs to be at least 10 kW in size. Due to the 10 kW limitation, the NYISO's rules do not achieve full compliance with Order 2222. The NYISO is expected to update its rules to comply with Order 2222 by 2026.

Con Edison has reviewed and identified tariff changes that will be necessary to enable the NYISO's market launch and future expansion. The Company received approval for its proposed retail tariff changes in March 2023,[257] which are

[257] Case 22-E-0549, *In the Matter of the Federal Energy Regulatory Commission (FERC) Order Nos. 2222 and 841, to Modify Rules Related to Distributed Energy Resources*, Order Approving Tariff Modifications (issued and effective March 17, 2023): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={2066F086-0000-C919-82EE-FFA3F907A5BF}.

intended to preclude dual market participants from receiving duplicative compensation in both wholesale and retail markets concurrently.

Net Crediting

Multiple Discount Rate Net Crediting is a new program that expands the options for consolidated billing, thereby reducing financing costs for community solar and enabling a more competitive market. The program went into effect in June 2025 based on the Order Approving Multiple Savings Rates for Community Distributed Generation Subscribers.[258] Under this order, CDG projects are permitted to offer up to three distinct savings rates, providing developers the flexibility to tailor offerings based on customer type. This enhanced customization will improve project economics and increase the appeal of CDG projects to a broader range of prospective participants. In addition, the order authorizes CDG projects to exclude more than one anchor customer. Anchor customers are typically large, demand-billed entities, and exclusion grants developers' greater flexibility in structuring contracts, which in turn strengthens project financing opportunities and reduces overall risk. These modifications to net crediting are designed to support the state's goal to deploy 10 GW of distributed solar by 2030.

Host Community Benefit Program

The Host Community Benefit Program is intended to provide an annual bill credit to residential electric utility customers with premises located in a renewable Host Community[259] for each of the first ten years that a "Major Renewable Energy Facility" (greater than or equal to 25 MW) operates in that community. The owner of a facility will fund the credits by paying an annual fee of $500 per MW of nameplate capacity for solar facilities, and $1,000 per MW for wind facilities. The fees paid by the facility, less utility administrative fees, will be distributed equally among the residential utility customers within the Host Community.

The Company filed its implementation plan with draft tariff changes on September 30, 2021, as directed by the Order Adopting a Host Community Benefit Program,[260] issued on February 11, 2021. Con Edison is awaiting further approval by the PSC of the Implementation Plan and tariff. Staff released a report on the Implementation and Effectiveness of the Host Community Benefit Program in June 2023. The report stated that at the time of release, the PSC has not taken up the draft implementation plan for consideration.

Billing and Payment Enhancements

In collaboration with a payment vendor, the Company has initiated the integration process for additional payment options into customer-facing systems, including PayPal and Venmo. This initiative aligns with Con Edison's commitment to facilitating seamless payment interactions for customers, and the improved e-bill system is scheduled to go live in Q1 2026.

The Company has developed a personalized video messaging initiative that aims to enhance customer interaction and support through tailored video content. This initiative will visually guide customers through beneficial programs such as budget billing, auto-pay, e-bill, and government assistance programs via personalized email communications containing clickable videos. The Company is currently in the process of finalizing these videos and conducting a pilot targeting customers for enrollment in its paperless billing, budget billing, and auto-pay programs.

[258] Case 21-E-0629, *In the Matter of the Advancement of Distributed Solar*, Order Approving Multiple Savings Rates for Community Distributed Generation Subscribers (issued May 16, 2024).
[259] Defined as the town(s) or city(ies) where a renewable facility is located.
[260] Case 20-E-0249, *In the Matter of Renewable Energy Facility Host Community Benefit Program*, Order Adopting a Host Community (issued February 11, 2021).

The programs and initiatives outlined in this section underscore Con Edison's ongoing commitment to enhancing the customer experience. Recognizing the importance of delivering continued value, the Company is actively advancing its billing and compensation initiatives to evolve with changing customer needs. As Con Edison progresses toward a more mature Distributed System Platform, the customer experience remains central to its approach.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
High volume and pace of billing system changes may introduce errors or delays in DER crediting and customer invoicing	• Maintain rigorous cross-functional business requirements development process. • Apply structured regression testing to validate billing accuracy and safeguard customer experience.
DER-related billing changes may inadvertently disrupt other programs (e.g., budget billing, Retail Choice, low-income discounts)	• Conduct pre-implementation impact assessments across all billing programs. • Incorporate relevant functional areas (e.g., Customer Operations and Rate Engineering) review into governance checkpoints.
Integration of complex programs (e.g., S-SFA, REACH, Value Stack, time-of-use ("TOU") rates, wholesale aggregation) can challenge platform flexibility and IT resource allocation	• Prioritize system modularity and flexibility in platform design. • Stagger implementation timelines. • Coordinate cross-program delivery through IT portfolio governance.
Limited visibility by external stakeholders into system constraints may lead to infeasible or conflicting policy proposals	• Proactively engage in Joint Utilities billing working groups and DER policy forums. • Provide technical feedback and recommend alternatives where system limitations exist.

Stakeholder Interface

The Company recognizes that stakeholder engagement and developing inclusive regulatory policy to achieve desired outcomes is an important part of customer satisfaction. The Company has hosted or participated in many stakeholder engagement sessions to continually provide information to customers and industry participants. Past and planned presentations, webinars, and workshops centered on various utility program topics, such as net crediting, value stack, and remote crediting. Collaboration between the Joint Utilities, the NYISO, and stakeholders is ongoing for the DER Participation model and FERC 2222 implementation.

The Company continues to educate customers about the various billing and payment options available to them, to promote the adoption of electronic channels, and to implement new services to help customers better manage their bill payments. In addition, Con Edison continues to partner with regional community organizations that educate customers on available financial assistance to help with energy costs.

Another area of stakeholder engagement is with the parties involved in the DRV/LSRV methodology studies within the ongoing VDER proceeding. Stakeholders from the solar industry, including Solar Energy Industries Association, Coalition for Community Solar Access, Natural Resources Defense Council, New York Solar Energy Industries Association, Pace Energy and Climate Center, and Vote Solar, have participated in several forums and technical conferences, and continue providing comments and recommendations to the PSC and Staff regarding the development of DRV/LSRV compensation options.

The Company participates in monthly meetings for the CDG Billing and Crediting Working Group and participates in stakeholder conferences on CDG billing and crediting hosted by the PSC.

Additional Detail

This section responds to the questions in the DPS guidance specific to billing and compensation.

1) **Describe the various DER-related billing and compensation programs (including demand response) implemented or revised by the utility since the last update. For this first inclusion in the DSIP, describe developments that have occurred since the beginning of NEM, RNM, CDG, and VDER.**

See the discussion above under *Current Progress* which details the DER-related billing and compensation programs implemented and revised by the Company.

The Company has made modifications to their demand response programs in accordance with the PSC's Order Addressing Dynamic Load Management Program Modifications issued on April 25, 2025.[261] The Company's commercial demand response programs (Rider T) were modified to (1) enable automatic rollover for aggregator and direct enrollee enrollments between capability periods, (2) remove the enrollment minimum pledge of 50 kW of load relief requirement for sub-aggregations, and (3) extend the voluntary Distribution Load Relief Program call window to include 9:00 p.m. to 8:00 a.m. Additional information on each of these demand response programs is located on Con Edison's website.[262]

There are other DER-related programs or opportunities for compensation including storage, various EV programs, Clean Heat, and Non-Wires Solutions. More information on these programs can be found in **Section 2.4 Energy Storage Integration**, **Section 2.5 EV Integration, Section 2.6 Clean Heat Integration**, and **2.13 Beneficial Locations for DERs and Non-Wires Alternatives**, respectively.

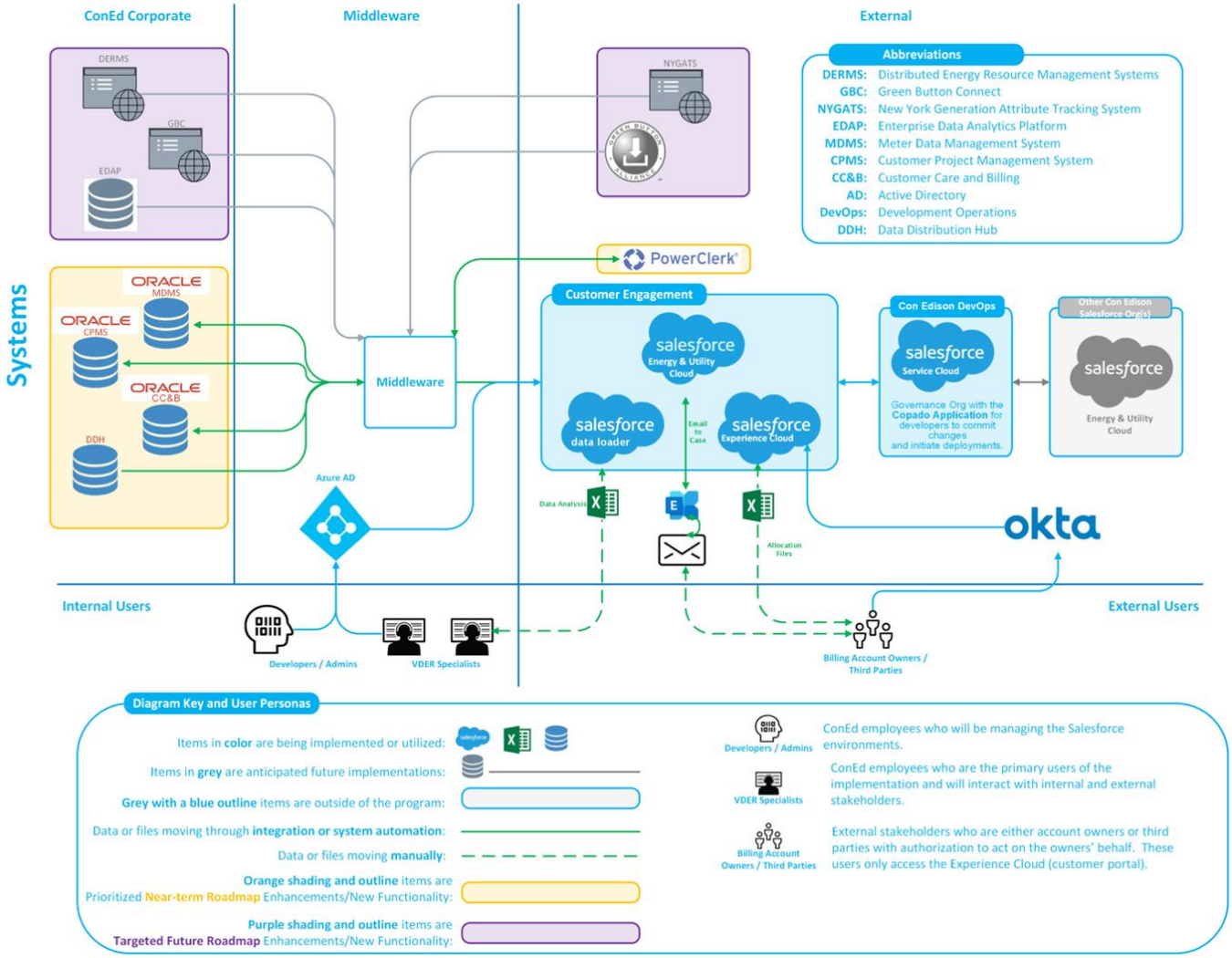
2) **Describe the customer billing/compensation functions and data generally needed to expand deployment and use of DERs in the utility's service area. Include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.**

The customer-facing functions that Con Edison leverages for its DER programs include billing and crediting, program management, call center support, accounting, rate engineering, data sharing, and reporting. Specific data needs vary depending on the program but generally include meter data from the AMI data repository, account information from the CC&B and Customer Project Manager System DER information from the PowerClerk® interconnection portal, and financial data. In addition, specific data needs from the NYISO- and NYSERDA-managed systems focus on the reporting

[261] Case 14-E-0423, *Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs*, Order Addressing Dynamic Load Management Program Modifications (issued April 25, 2025).
[262] Con Edison Smart Usage Rewards for Aggregators or Direct Enrollees: https://www.coned.com/en/save-money/rebates-incentives-tax-credits/rebates-incentives-tax-credits-for-commercial-industrial-buildings-customers/smart-usage-rewards.

and synchronization of customer registration. A high-level diagram of the Value Stack Customer Portal is shown below in Figure 38.

Figure 38: Value Stack Customer Portal High-Level Diagram – Current and Target Future State

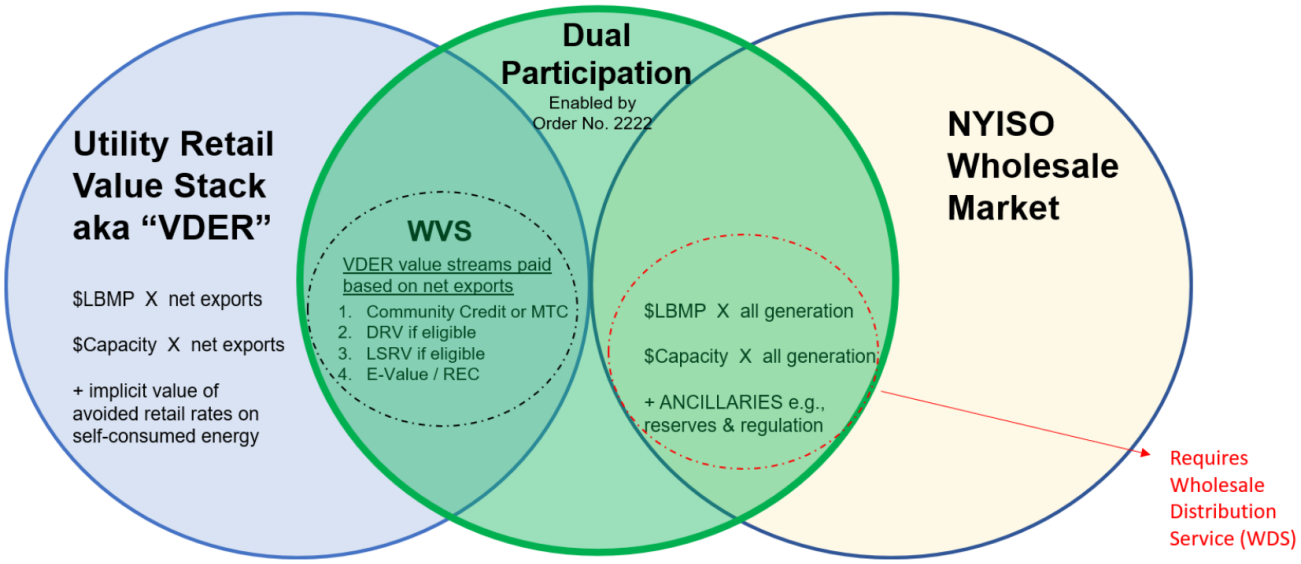


For customers who enroll in Con Edison programs that promote flexible resource adoption (e.g. demand response, EV managed charging, non-wires solutions, energy efficiency), compensation outside of bill credits provides a clearer understanding of their participation impacts their earnings. Depending on the program, they may receive payments through physical or digital check, and in the case of the SmartCharge Commercial program, through Venmo or PayPal.

3) **Describe the customer billing/compensation functions and data needed to enable DER participation in the NYISO's wholesale markets for energy, capacity, and ancillary services. This should include information regarding the utility's implementation of its Wholesale Distribution Service ("WDS"), Wholesale Value Stack ("WVS"), and related non-wholesale value stack (VDER without wholesale energy and capacity components). Also include descriptions of the existing and planned components (processes, resources, and data exchanges) that will support those needs. For planned components, provide the sequence and timing of key investments and activities required for component implementation.**

The FERC 2222 Order provides an avenue for direct participation by smaller DERs, through aggregations, in wholesale electric markets including the energy, capacity, and ancillary services markets operated by the NYISO. For the NYISO's DER and Aggregation Participation Model, DERs must be at least 10 kW at the facility level to sign up with an aggregator, who then must be able to offer a minimum of 100 kW to the NYISO. New York utilities, including Con Edison, have implemented tariffs that permit dual participation in both the utility retail Value Stack tariffs and in the NYISO wholesale markets. This dual participation is facilitated through the retail WVS tariff which is designed to preclude double compensation. This relationship is shown in Figure 39 below.

Figure 39: Compensation for DERs Participating in the NYISO Markets



The new Wholesale Value Stack (WVS) retail tariff provides a path for Dual Participation

In addition, Con Edison filed a bidirectional federal wholesale tariff with FERC for WDS charges. Wholesale market participants in this NYISO model can receive energy payments, capacity payments, and ancillaries as applicable from the NYISO. Coordination, verification, and settlement functions with the NYISO and the utility is required for customers participating in both the NYISO wholesale electric markets and the utility retail value stack tariffs. Con Edison, along with the Joint Utilities of New York, worked extensively with the NYISO to develop the requisite processes, requirements and data exchanges.

Registration and enrollment require data exchanges between the customer, the NYISO, and the utility. Once an aggregator registers with the NYISO as a NYISO customer, registration with the utility and pre-enrollment data exchange may take place. Next (or concurrently), the aggregator must submit its DER enrollment data to the NYISO which then forwards the data to the utility for an official Distribution Utility Review that can take up to 60 days. Upon passing the distribution utility review, the final step is a NYISO workflow review of the DER and aggregations. If the aggregation

successfully makes it through all these stages, it may begin market participation the first calendar day of the subsequent month.

Some of the activities that occur during the distribution utility review include verification of the following: appropriate metering equipment, existence of interconnection agreements for each DER in the aggregation, correct T-node identification, and establishment of telemetry that can receive and transmit to the applicable transmission owner over their required protocols. Discovery of any of these activities as unfulfilled will trigger an immediate attestation of rejection which halts further progression through the enrollment process until the deficiencies have been cured and resubmitted.

Con Edison has developed tools and customer resources to facilitate the coordination and operation of retail DERs participating in the wholesale market. There is a new System Impact Tool which (1) layers various datasets over a geospatial picture of the distribution system; (2) combines DERs into grid-wise resources to simplify monitoring and management; (3) supplies operational information to aggregators via a dashboard; and (4) allows for transmission and distribution control center coordination. For customers, Con Edison continues to add features to the DERMS external portal, which allows the customer to validate account status and view tariff information and transmission node, DER Asset information such as nameplate capacity, address, and type, and disruption information for each DER in the aggregation.

4) **Describe the utility's plans to implement or modify DER-related billing and compensation capabilities, including automation, to address the Community Distributed Generation (CDG) billing and crediting problems that were the focus of the Commission's September 15, 2022, Order in Cases 19-M-0463, et. al[263].**

Con Edison filed its implementation plan for full automation of CDG billing and crediting on October 17, 2022. In its April 10, 2024, progress update to the PSC,[264] the Company reported that all existing projects were fully automated into the CC&B system. At that time, more than 99 percent of subscribing customers had been billed and credited.

The Company provides detailed implementation and modification plans in case 19-M-0463, In the Matter of Consolidated Billing for Distributed Energy Resources.[265] Links to supported filings are located below in Table 32.

Table 32: Con Edison Consolidated Billing for DER Resources

Supported Filing	Link
CDG Billing & Crediting Automation Implementation Plan	https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bAFBFD1B7-B767-481D-B54A-C290AC900271%7d
Updated Automation Implementation Plan	https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={F0A2C98E-0000-C83F-ADCF-18CAD1221B5F}
Annual Net Crediting Report	https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={4076ED95-0000-C175-9818-38267EAFA3E9}

[263] Note 249, *supra.*
[264] Case 19-M-0463, *In the Matter of Consolidated Billing for Distributed Energy Resources*, Con Edison CDG Billing and Crediting Automation Update Q1 2024 (filed April 10, 2024)
[265] Case 19-M-0463, *In the Matter of Consolidated Billing for Distributed Energy Resources*, Matter Master (opened June 18, 2019): https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=19-M-0463.

5) **For each type of DER billing and compensation, including for CDG and wholesale market participation, describe the current information system constraints preventing full automation of DER billing and compensation.**

Full automation of DER billing and compensation was achieved with the rollout of CC&B 2.8. The Company continues to focus on expanding and improving automation to support billing and crediting of VDER hosts and applying dedicated resources to support automation efforts and quarterly update filings.

6) **Describe how DER billing and compensation affects other programs such as budget billing, time of use rates, and consolidated billing for Energy Service Companies ("ESCOs").**

Generally, DER billing and compensation does not prevent a customer from participating in other billing programs such as budget billing, time of use rates, and utilizing an ESCO and/or participating in utility consolidated billing for ESCO supply. When implementing new or updated compensation methodologies, the Company evaluates their impact on other programs. Additionally, some DER programs require customers to take certain rates (or vice versa). For example, a Value Stack customer with an energy storage system that has a peak capacity at least 115 percent larger than the customer's onsite load is required to take Mandatory Hourly Pricing for supply.

7) **Describe the utility's means and methods – existing and planned – for monitoring and testing new or modified customer billing and compensation functions.**

With the CC&B system now in production, all existing customer rates have been validated and are actively in use for customer billing.

If a new rate or customer compensation cannot be implemented utilizing current functionality, system enhancements will be needed to support the new initiative. The Company will work with its CC&B support vendors and internal business and system SMEs to implement the enhancement or functionality. The new enhancement process for CC&B will follow a process similar to the legacy system. Once a system enhancement has been identified, the Company follows a process of requirements gathering, solution design and development, validation of the solution in a non-production environment, and promotion of the solution to the production system.

8) **Describe the utility's means and methods – existing and planned – for supporting customer outreach and education, including where and how customers, DER developers/operators and other third-parties can readily access information on the utility's billing and compensation procedures.**

The Company provides a suite of general information that supports customer outreach, education, and billing and compensation procedures for customers, DER developers and operators, and other third parties as shown in **Table 33**. Billing and payment options are promoted through a variety of channels including messages on customer bills, bill inserts, emails, web content, brochures, flyers, and in-person and virtual presentations.

Table 33: Con Edison Billing and Compensation Resources

Resource	Link
About Your Bill & Rates	https://www.coned.com/en/accounts-billing/your-bill
TOU Rates	https://www.coned.com/en/accounts-billing/your-bill/time-of-use
Rates and Tariff Rulings	https://www.coned.com/en/rates-tariffs/rates
Rate Calculators	https://www.coned.com/en/accounts-billing/your-bill/rate-calculators
How to Read a Bill	https://www.coned.com/en/accounts-billing/your-bill/how-to-read-your-bill
FAQs	https://www.coned.com/en/accounts-billing/your-bill/how-to-read-your-bill/understanding-your-bill-faq
Using Private Generation Energy Sources	https://www.coned.com/en/save-money/using-private-generation-energy-sources
19-M-0463, *In the Matter of Consolidated Billing for DERs*	https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MattercaseNo=19-M-0463

9) Describe the utility's means and methods – existing and planned – for receiving, investigating, and monitoring customer complaints and/or inquiries regarding billing and compensation issues related to DERs.

The Company has an established process for addressing billing complaints through its Customer Operations team, with dedicated resources who support specific complaints or inquiries regarding DER billing and compensation issues. Customers and hosts can access these resources through the contact information listed on their bill.[266] When they initiate an email with a question or concern, there is a billing inquiry case created and assigned to a specialist to address and answer. Subscribers and hosts can also call the 1-800-75-CONED number with any bill-related questions, where a team member may respond, or if they are unable to answer the question, defer to a dedicated DER team member.

[266] The email address is: customerservice@valuestack.coned.com.

2.11. DER INTERCONNECTIONS

Context and Background

In support of the solar, energy storage, and emissions reductions goals outlined in New York State's ("NY State") Climate Leadership and Community Protection Act, Con Edison continues to make large strides with grid integration of distributed energy resources ("DER"). The Company will continue to work with policymakers and stakeholders to remove barriers and streamline the DER interconnection process.

The DER interconnection and reinforcement process spans from initial planning to detailed design, through construction and commissioning.[267] Reducing the duration and associated costs of the interconnection process will further facilitate increased DER deployment. Hosting capacity maps, described in detail in **Section 2.9 Hosting Capacity**, are valuable tools to help developers and customers with initial screening and evaluation of potential DER project locations. Increased automation and efficiency within the interconnection review process can also help drive incremental value by preventing or reducing the duration of project delays and assisting developers in reviewing their portfolio to determine the most viable projects.

Con Edison's role is to facilitate efficient and timely interconnection of DERs to the distribution system, both behind-the-meter ("BTM")[268] and in front-of-the meter ("FTM"),[269] while also reinforcing the system to maintain safe and reliable grid operations. As the interconnection queue continues to grow in both size and complexity, many portions of the Company's non-network system (specifically 4 kV grids and autoloops) are experiencing issues with saturation and more challenging interconnection reviews. The Company is addressing the challenges of interconnecting large numbers of potential applicants through multiple strategies, including:

1. Reducing the number of non-viable applications to lower the project cancellation rate through better external data communication around constraints on the hosting capacity maps.
2. Early flagging of applications seeking to interconnect in challenging or problematic areas, to discuss alternative options.
3. Improving queue management by implementing stricter requirements in the standardized interconnection process and verifying that only viable projects retain their position throughout design and construction to prevent non-viable projects from consuming hosting capacity, which increases costs for later applicants.

Interconnection Online Application Portal

To define the improvements necessary to streamline the interconnection process and implement queue reform, the Public Service Commission ("PSC") and New York State Energy Research and Development Authority ("NYSERDA") are guided by the New York Interconnection Online Application Portal Functional Requirements ("IOAP Report") [270] which were developed with Electric Power Research Institute ("EPRI") in 2016. The Interconnection Online Application Portal ("IOAP") Report included a three-phase roadmap for achieving increased automation.[271]

---

[267] Note 12, *supra.*
[268] Note 48, *supra.*
[269] Note 72, *supra.*
[270] EPRI, New York Interconnection Online Application Portal Functional Requirements (issued September 2016): http://www3.dps.ny.gov/W/PSCWeb.nsf/96f0fec0b45a3c6485257688006a701a/dcf68efca391ad6085257687006f396b/$FILE/EPRI%20Task%201%20Memo%20Report_Final%209-9-16.pdf.
[271] *Ibid,* pp. 13-17.

- Phase 1: Automate application management - *completed*
- Phase 2: Automate standardized interconnection requirements ("SIR") technical screening - *completed*
- Phase 3: Full automation of all processes – *in progress*

During Phase 1, the Company automated the application management portion of the interconnection process including application submittal, validation, tracking, and approval. Further updates in Phase 2 focused on automation of the SIR technical screens for projects above 50 kW, including but not limited to, a review of the point of common coupling, certification status of specified equipment, and compatibility of the line configuration with the interconnection type. The Company is now moving into Phase 3, which focuses on full data integration and advanced analytics.

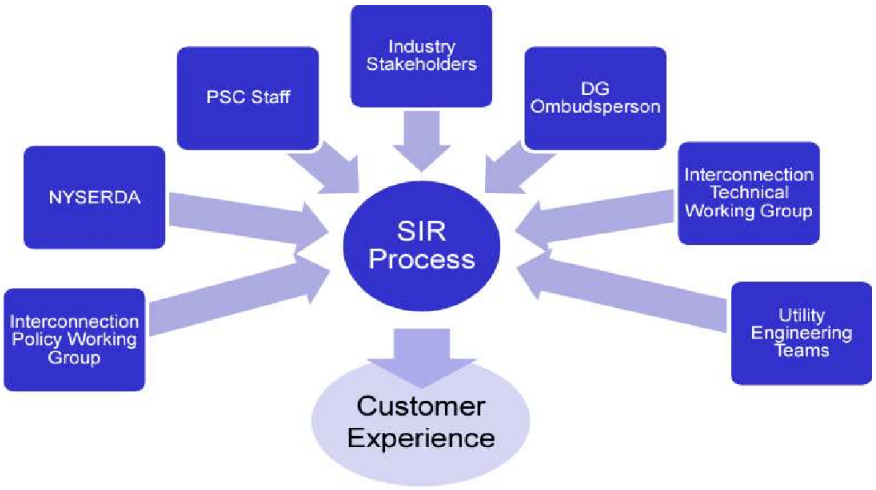
Recent IOAP work has already connected core systems, including the new Enterprise Geographic Information System ("eGIS"), load-flow models, and customer-billing platform, to create a stronger foundation for continued automation. In tandem, Artificial Intelligence ("AI")-driven data integrity pilots will support improved intake screening, minimizing the need for manual cleanup and giving technical reviewers a clearer picture of projects from the start of the process. Greater automation will help maintain statutory review timelines as application volumes rise and developers request multiple design options per submitted interconnection request, which are increasingly on feeders experiencing distributed generation ("DG") saturation.

Customer submissions flow through PowerClerk®[272], a platform that is fully integrated with Con Edison's internal Customer Project Management System ("CPMS"). All applications are initially evaluated through automated preliminary SIR screens, except for fast-track projects (i.e., 25 kW or smaller) which require only an administrative review and bypass screening entirely. This automation, applied across the full range of project sizes, enables approximately 90 percent of total applications to pass the initial review without manual intervention. As a result, processing times have improved even as application volumes continue to rise.

Standardized Interconnection Requirements

Established by the PSC in 1999, the SIR provides an evolving framework for processing applications to interconnect DG projects to the state's investor-owned utilities' electric distribution systems. As shown in **Figure 40** below, the SIR is informed on an ongoing basis by a combination of utilities, DG developers, regulators, NYSERDA, and other stakeholders through state-led working groups.

Figure 40: Interconnection Process Inputs



[272] Note 251, *supra.*

Since the 2020 DSIP filing, New York's SIR has been revised four times, with each update broadening opportunities for DG and energy storage systems ("ESS").

- July 2021: PSC adopted the Cost-Sharing 2.0 Framework,[273] allowing multiple projects to divide the cost of qualifying distribution upgrades rather than assigning the entire amount to the first applicant, thereby making more feeder capacity economically accessible to additional projects. Cost Sharing 2.0 is described in greater detail below.
- May 2022: PSC approved seventy-seven amendments that standardized forms, clarified language in the preliminary and supplemental screens, established a two-day outage notification requirement, and confirmed that the Coordinated Electric System Interconnection Review ("CESIR") study clock begins when the study payment is received.
- May 2023: Following the Order Modifying the Standard Interconnection,[274] the PSC adopted revisions incorporating Underwriters Laboratory ("UL") Supplemental B 1741[275] and Institute of Electrical and Electronics Engineers ("IEEE") 1547-2018,[276] standards governing the performance and interoperability of smart inverters and other devices, into the SIR. The order further directed the Department of Public Service ("DPS") to maintain a public certified-equipment list, required utilities to issue an updated cost estimate within ten business days when project scope changes after a CESIR study, and defined standard site-control documentation.
- February 2025: PSC Order Granting Petition with Modifications[277] introduced financing flexibility by allowing developers to provide stand-by letters of credit rather than large cash deposits, thereby reducing upfront capital requirements when distribution upgrade estimates exceed $500,000.

These changes to the SIR have modernized NY State's interconnection rules by updating technical standards and expanding both technical and financial pathways for clean energy development statewide while maintaining ratepayer protections.

Cost Sharing 2.0

As previously described, Cost Sharing 2.0 was a meaningful policy change that has had the positive impact of reducing the financial burden for interconnecting additional DER capacity. In October 2020, the Interconnection Policy Working Group ("IPWG") filed a petition requesting amendments to the system upgrade cost-sharing provisions contained in the SIR that had been in place since January 2017.[278] The proposed changes would remove significant financial burdens imposed by the "first-mover" projects that would originally bear 100 percent of costs for substation upgrades (i.e., transformer bank upgrades or replacements) to be reimbursed by subsequent projects interconnected on the same

[273] Case 20-E-0453, *Petition of the IPWG Members Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements for New Distributed Generators and Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems* (issued October 29, 2020): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={4B2B2DC0-5C29-4E32-9C28-C6946EEA72E6}.
[274] Case 22-E-0713, *Petition of the IPWG/ITWG Members Seeking Certain Minor Amendments to the New York State Standardized Interconnection Requirements*, Order Modifying Standardized Interconnection Requirements (issued April 21, 2023)
[275] Certification standard for smart inverters, focusing on grid support functions such as voltage and frequency ride-through, interoperability, and advanced communications.
[276] Additional technical standard specifying the interconnection and performance requirements for Distributed Energy Resource (DER) systems, including the capabilities and behavior of smart inverters.
[277] Case 24-E-0414, *Petition of New York Solar Energy Industries Association Seeking Modifications to the New York State Standardized Interconnection Requirements to Allow Use of Alternative Forms of Financial Security for Distribution Upgrades in Excess of $500,000 for New Distributed Generators and/or Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems*, Order Granting Petition with Modifications (issued February 14, 2025).
[278] Note 273, *supra.*

substation and benefiting from the same upgrades, without a guarantee that following interconnection projects would materialize and result in cost reimbursement.

The Cost-Sharing 2.0 Framework approved in 2021 addressed these significant financial burdens for certain types of upgrades utilizing a pro-rata concept. This mechanism helps spread the cost of system upgrades equitably to each DG and ESS project interconnecting on the same substation and provides cost certainty at the outset of each project. The framework applies to two categories of distribution upgrades as follows:

1. Utility-Initiated DG/ESS Upgrades: When a substation transformer bank installation and/or replacement is in a utility's Capital Investment Plan, the utility will consider options to upgrade the equipment for greater hosting capacity rather than just a replacement-in-kind.
2. Market-Initiated DG/ESS Upgrades: When a qualifying upgrade is required to interconnect a project, the utility will perform a detailed study to develop a cost estimate and construction schedule for the upgrade. Through the CESIR, the utility will assign the triggering project and any sharing project its share of the upgrade charges. For distribution, sub-transmission line, and underground secondary network upgrades, the utility will charge the triggering project the full cost estimate; later projects will be charged a pro rata share and the triggering project will be reimbursed based on the benefit granted to the second mover(s). Additional detail on these upgrades is shown in Table 34 below.

Table 34: Cost-Sharing 2.0 - Market Driven Upgrades

Upgrade Types	Examples
Substation upgrades – other than substation transformer installation/upgrades	• 3V0 substation upgrades • Substation load tap changer or relay modifications • Substation modifications allowing for the implementation of advanced inverter or command/control schema
Substation transformer installation/upgrade	• Size increases and associated equipment installation and/or upgrades
Distribution upgrades	• Three phase extensions • Three phase line reconductoring • Three phase new feeders
Secondary network upgrades	• Mainline installations (new feeders and/or conduit installations) • Manhole, structure, and/or service box installations for DG/ESS (new or enlargements) • Secondary transformer installations (new or upgrades)

Additional detail on Cost Sharing 2.0 can be found in the NY State SIR.[279] As described further below, since its approval, Con Edison has seen a significant increase in developer participation with shared upgrade projects.

[279] New York State Department of Public Service: https://dps.ny.gov/distributed-generation-information.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Surpassed 1 GW of cumulative DG in September 2024 and reached 1.1 GW by April 2025, including a record 43.9 MW of third-party energy storage connected in 2024.
- Implemented the Cost-Sharing 2.0 framework which has resulted in the full funding of 25 shared distribution-line upgrades involving 13 projects with alternative billing that lowers upfront cash outlays for single-entity cost-sharing cases.
- Completed Phase 2 of the IOAP, automating all SIR preliminary technical screens and integrating eGIS, leading to approximately 90 percent of applications now clearing preliminary review without manual intervention.
- Developed clustered-project rules and a study framework to address the impacts of closely co-located DER on the network system.
- Enabled multiple-service-option study requests in PowerClerk® and introduced a standardized meter-unlock form to streamline construction closeout.
- Implemented a temporary waiver to accommodate bidirectional EV equipment still awaiting certification.
- Adopted updated smart-inverter standards (UL 1741-SB and IEEE 1547-2018) and issued Con Edison grid-code set points for DERs.
- Published an updated cost matrix for typical upgrade items through the Interconnection Technical Working Group ("ITWG"), giving developers better cost visibility.
- Added an option for developers to post standby letters of credit in lieu of large cash deposits when upgrade estimates exceed $500,000, easing upfront capital requirements while maintaining rate-payer protections.
- Updated underground network design to allow higher reverse power through network protectors and introduced a contingency curtailment scheme that allows up to 5 MW interconnect with only two transformers.
- Provide quarterly updates to Clean Energy Update dashboard to update progress on solar, storage, electric vehicle ("EV") charging, and clean-heat installations.

Utility Capabilities Demonstrated (non-exhaustive)

Hosting & Registration: Con Edison is enhancing processes by automating tasks, working with stakeholders on future modifications to the SIR, and developing clearer technical guidance to expedite the *DER interconnection* and *DER registration* processes.

Monitoring & Visibility: Con Edison has proactively worked to identify improvements to the SIR (e.g., 2023 enhancements for smart inverters) to increase *visibility* into DER performance.

Market Participation: Con Edison is working with the New York Independent System Operator ("NYISO") and aggregators to establish the links and formats needed to pass real-time data signals between aggregators and the bulk system to support FERC 2222 implementation to enable greater *DER participation in the market*.

Building on the significant strides over the last few years to streamline and improve transparency, the Company continues to refine and enhance the interconnection process in response to developer feedback and user experience. Con Edison continues to evolve IOAP capabilities and actively contributes to SIR revisions through Joint Utilities working groups. As of April 2025, the Company has interconnected 1.1GW of DG, in support of the State's policy goal of 10 GW of distributed solar by 2030.

Cost Sharing 2.0 Projects

Since the last DSIP filing, there have been 25 shared distribution line upgrades associated with 13 participating DG projects that have been fully funded. No projects have unrecovered costs or have utilized the two percent cap per Cost Sharing 2.0.[280] Developers are also increasingly co-locating projects on adjacent parcels within Con Edison's service territory to take advantage of Cost-Sharing 2.0. To avoid unnecessary upfront payments and subsequent reimbursements, the Company now issues credit memos when a single entity is responsible for multiple sharing projects tied to the same upgrade infrastructure (i.e., the developer is effectively sharing costs with itself). Under this approach, customers are invoiced only for their net share of the upgrade cost, rather than paying the full amount and waiting up to 60 business days for reimbursement of the shared portion. This process improves cash flow management and further reduces capital barriers for participating developers.

It is expected that Cost Sharing 2.0 will continue to be a strong driver of continued DER deployment across Con Edison's service territory.

Phase 2 Interconnection Online Application Portal

As previously described, updates in Phase 2 focused on automation of the SIR technical screens for projects above 50 kW, including but not limited to, a review of the point of common coupling, certification status of specified equipment, and compatibility of the line configuration with the interconnection type. Phase 2 also required integrating multiple utility systems, such as billing, customer information systems, work management systems, and load-flow software programs to allow for the push and pull of data in standard formats between each system. This phase also required calculating SIR screens A to F[281] based on utility data and returning a pass or fail determination.

The Company continues to leverage the PowerClerk® interconnection software, the Company's ongoing interconnection experience, and developer feedback to identify potential process improvements and create innovative solutions. In response to an increasing volume and complexity of interconnection applications and developer feedback, the Company has made additional enhancements to the PowerClerk® platform and supporting back-office systems. These enhancements now allow for the following:

- Expansion of a fast track for solar projects 25 kW or less by only requiring a documentation review. Projects over 25 kW undergo a preliminary automated screening that routes them to either the fast track or an engineering review.
- Automation of preliminary screening analysis, tagging notes to cases, and cancelling projects out of SIR compliance.

[280] Case 20-E-0543, *Petition of Interconnection Policy Working Group Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements*, Con Edison Semi-Annual Cost Sharing 2.0 Report: October 1, 2024 – April 30, 2025 (issued Mary 28, 2025): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={70FC1797-0000-CC36-9418-0F7363D5EA13}

[281] Represent the preliminary screens that determine whether a full CESIR is required. For additional information, please see Appendix G of the SIR: https://dps.ny.gov/system/files/documents/2024/02/sir-effective-february-1-2024.pdf.

The IOAP provides granularity and transparency to the customer during the SIR process and automates many of the preliminary project-related screens, data exchanges, and processing steps for greater customer efficiency. The enhancements mentioned above have contributed to enabling administrative compliance, shortening timelines associated with document review, and have further facilitated engineering studies. This provides customers with a more streamlined experience for connecting DERs in Con Edison's service territory.

Additional recent enhancements to Con Edison's interconnection tools and customer experience include the following:

- Implemented enhancements in PowerClerk® to support multiple service option studies within a single application so customers can view comparative interconnection costs and select the most viable option aligned with specific project budgets and technical constraints.
- Developed cluster study guidance to streamline processing for clusters of small DG projects located on nearby buildings to address coordination and processing of bottlenecks in urban or campus-like installations.
- Established testing responsibilities for projects smaller than 500 kW that do not require supervisory control and data acquisition ("SCADA")[282] (i.e., developers can complete testing along with a Con Edison Customer Project Manager without needing engineering presence as well). This shift enables more efficient utilization of Company engineering resources for more impactful projects.
- Introduced a standardized form for DER-related meter unlocks to support smoother coordination between customers and utility field crews.
- Developed the Small Project Completion Guidance Document to explain billing transitions, solar crediting, and customer responsibilities for owners after receiving permission to operate.

Lastly, for projects greater than 5 MW looking to either participate in the New York Independent System Operator ("NYISO") market or operate outside the scope of the SIR, Con Edison formalized a new guide – EOP-5506: Utility Process for Distributed Energy Resource Interconnections. To support implementation, the Company created dedicated workflow automations within PowerClerk® and the CPMS to support application intake and processing for these projects in a manner similar to the SIR pathway to facilitate improved internal tracking and reporting capabilities.

Temporary Waivers to 2023 SIR Order

With UL 1741-SB certified and IEEE 1547-2018 compliant inverters becoming available as of 2023, the Joint Utilities worked with stakeholders to fully realize the benefits of these technologies, specifically improved grid resiliency, reliability, and situational awareness. Con Edison, along with other members of the Joint Utilities, worked with the ITWG to establish the smart inverter setpoints customized to its service territory, so that these utility-defined grid support functions best support local grid stability. In response to stakeholder feedback that these regulations made some equipment non-compliant, the Company worked with the Joint Utilities and third parties to establish a temporary waiver, expiring July 1, 2025, to safely interconnect non-compliant equipment.

Technical Guidance and Standardization

Con Edison is leveraging its experience of interconnecting DERs to support ongoing learning and standardization. For example, the Company continues participating in the ITWG and IPWG and coordinating with the Joint Utilities on interconnection issues. As listed below, since filing the 2023 DSIP the Joint Utilities, as part of the ITWG, developed several technical documents addressing ITWG priorities for the interconnection process:

- Joint Utilities Updated Cost Matrix
- Joint Utilities EV Charger UL 1741-SB Waiver

[282] Note 56, *supra.*

- Joint Utilities Supporting Documentation for Updated SIR Screens and Accompanying Technical Guidance Matrix
- Joint Utilities Technical Guidance Matrix
- Joint Utilities Memo on Mixed UL1741-SA/SB Inverters
- Smart Inverters Default Settings

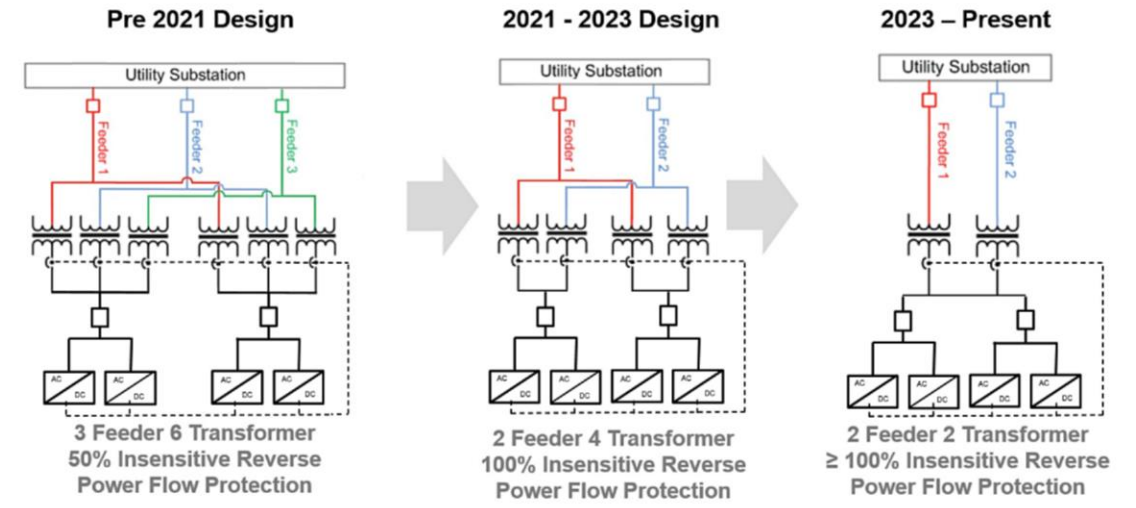
The guidelines above are available on the DPS DG website.[283] In addition, Company-specific guidelines including costs to perform CESIRs, requirements for the high-tension non-network distribution system, and smart inverter and synchronous machine settings are available on Con Edison's website.[284]

Since the last DSIP filing, Con Edison has expanded and standardized its technical offerings for more cost-effective interconnection solutions. These revised specifications facilitated a record-breaking 43.9 MW of third-party owned energy storage connecting to the grid in 2024. In 2025, the Company will pilot a new four-way primary switch to reduce switchgear and transformer requirements for DER interconnections to the Con Edison network system. The Company will also continue to engage with industry stakeholders to review specification modifications that could further aid DER adoption on the network system.

Underground Design Requirements Improvements to Reduce Infrastructure Costs

Beginning in 2021 Con Edison raised reverse-power settings on network protectors, allowing distributed resources to use more of each transformer's capacity and eliminating the need for additional transformers and associated civil engineering work. Building on that experience, in 2023 the Company introduced a contingency-based curtailment scheme that relies on local SCADA signals, hard-wired trips, and two-stage relay logic. When a station breaker opens, the system automatically issues a "reduce-export" command and opens the network protector, permitting up to 5 MW of DER to interconnect on just two transformers instead of the four previously required. This sequence cuts costs, reduces physical footprint, and maintains system protection while increasing infrastructure utilization. The evolution of this design is shown below in **Figure 41**.

Figure 41: Evolution of DER Interconnection Designs to Provide System Protection with Reduced Infrastructure Costs



[283] Department of Public Service Distributed Generation website: http://www3.dps.ny.gov/W/PSCWeb.nsf/All/DCF68EFCA391AD6085257687006F396B?OpenDocument.

[284] Con Edison Guides and Specifications for Private Generation: https://www.coned.com/en/save-money/using-private-generation-energy-sources/specifications-for-private-generation.

DER Interconnection Data Sharing

The DER landscape remains vital to achieving the state's clean energy objectives. To provide greater visibility into progress, the Company launched the publicly accessible Clean Energy Update[285] in 2022. This site is updated quarterly and provides progress updates and data on the deployment of solar, battery storage, EV charging infrastructure, and clean heat projects. This site makes it easy for interested stakeholders to view and track the Company's progress towards its clean energy goals.

Future Implementation and Planning

Summary of Future Actions

- Continue to enhance the interconnection process to accommodate new design standards, technologies, and configurations to further decrease interconnection costs and facilitate additional dynamic modes of operation.
- Continue Phase 3 enhancements to the PowerClerk® IOAP including full integration with eGIS and the Company's customer billing system.
- Work with the NYISO, aggregators, and other relevant stakeholders to enable new markets under FERC 2222.
- Continue to engage with Company-specific focus groups and Joint Utilities working groups including ITWG, IPWG, and other working groups to receive feedback and provide technical guidance on upcoming topics.
- Participate in EPRI P174 working group (DER Integration Working Group) on interconnection issues with projects that assess interface devices, analytics, system studies, monitoring, special applications, and maintenance for effective interconnection and integrated operation of distributed generation resources.

Continue Technical Innovation

Over the next several years, Con Edison will prioritize equipment and control solutions that expand hosting capacity and lower customer interconnection costs, with special attention to New York City's network areas where space is limited, and interconnections tend to be expensive. Engineering teams will launch pilots that use four-way primary switches and other compact high-tension equipment designed to reduce customer transformer and switchgear requirements and minimize the civil engineering work typically needed for large DER projects. Each pilot will track construction lead times, installed costs, maintenance access, protection coordination, and load impacts so the Company can fully evaluate performance before designating the new equipment as a standard offering. Lessons learned will be incorporated into an updated design guide, giving developers clear options that balance cost, footprint, and operational needs when planning future interconnections.

At the same time, Con Edison is working with manufacturers, developers, and industry groups to qualify alternative breakers, switches, grounding devices, and related interconnection equipment that meet Company specifications while offering better availability or lower pricing. Broadening the approved equipment list will limit schedule risk in a tight supply market, give project sponsors clearer procurement pathways, and ease space constraints on customer property. Together, these efforts will provide developers with a wider range of technical options, more reliable cost visibility early in the planning process, and faster paths to construction while maintaining safe and reliable grid operations.

[285] The Clean Energy Update is available at: https://www.coned.com/en/about-us/media-center/clean-energy-update.

Flexible Interconnections

Building on the updated underground design requirements described above, the Company is exploring how to expand SCADA-based capabilities to support both seasonal and real-time import and export limits using substation and feeder telemetry (e.g., transformer and feeder loading profiles). The objective is to enable dynamic curtailment, or "flexible interconnections," for larger DERs seeking to interconnect in constrained areas, provided their output (or charging) can be actively managed by the utility's Distributed Energy Resource Management System ("DERMS"). Similar concepts have been adopted in other locations.[286]

Con Edison, in coordination with the Joint Utilities, industry stakeholders, and DPS, continues to work to clarify how flexible interconnections can be implemented within the existing SIR framework. The Company's goal is to establish a clear pathway for projects that would otherwise require costly upgrades, such as those interconnecting on heavily saturated feeders or where substation work is prohibitively expensive, to interconnect at lower cost while preserving system reliability.

Verifying Cost Estimating Accuracy

Volatile material prices and longer lead times have increased the importance of dependable cost estimates for developers. The interconnection team is reviewing several years of completed projects and construction invoices, grouping the data by DER type, project size, voltage class, and point of interconnection. Findings from this review will update the cost factors used in the estimating tools that support layout development, and the revised factors will be shared annually with the ITWG. Information from PowerClerk® and the work-management system will highlight cost drivers such as labor hours, specialty equipment, and site civil engineering work and reveal trends that may call for adjustments to equipment specifications, design guidelines, or the estimating framework itself.

Enhanced Queue Management

Con Edison and the Joint Utilities are working with industry partners on revisions to the SIR that will clarify when projects must withdraw from the queue if they miss key milestones. Under the updated rules, a project that fails to progress on schedule will forfeit its reserved capacity. Coupled with improved data visibility from IOAP enhancements, this approach will help engineering and project management teams better assign resources, coordinate field work, and keep the queue moving. Better transparency will also prevent stalled applications from blocking viable projects or increasing costs for customers who are ready to proceed.

Enabling New Aggregator Markets Under FERC 2222

FERC Order 2222 allows aggregated DERs to participate in the NYISO's wholesale markets through the Distributed Energy Resource Aggregation ("DERA") program. Con Edison is working with the NYISO and aggregator companies to establish the telemetry links and data formats needed to pass real-time output, status, and control signals between aggregators and the bulk system. The Company reviews each proposed aggregation profile to confirm that combined operations stay within local feeder and substation limits and approves aggregator enrollment with the NYISO. Once an aggregation is active, Con Edison serves as a conduit for performance data and cost-settlement information to the NYISO

[286] As examples, Hawaiian Electric has smart export and customer self-supply tariffs that rely on remote curtailment to manage solar on saturated circuits. UK Distribution Network Operators active network management zones routinely grant non-firm connections that curtail generation when line or transformer limits are approached. Pacific Gas & Electric is piloting flexible interconnect agreements that allow DERs to exceed circuit hosting capacity in exchange for responding to SCADA dispatch signals.

so resources can be credited in the wholesale market. These efforts help customers access the DERA market for aggregated resources, enabling dual participation models under FERC 2222 without affecting distribution reliability.

Interconnection Online Application Portal

As previously described, the Company is beginning Phase 3 enhancements to the PowerClerk® IOAP, which focuses on full data integration and advanced analytics. As the Company continues to accommodate new technologies and configurations, there will be an increased focus on enhancing the interconnection process to support integration while reducing costs and enabling additional dynamic modes of operation. There has been an ongoing effort to integrate the new customer care and billing system with PowerClerk® IOAP, allowing data exchange and driving operational efficiencies. Further integrating PowerClerk® IOAP with the Company's DERMS (see **Section 2.3 Grid Operations** for further information) will create a direct link between interconnection data and real-time DER operations. Con Edison has made significant enhancements to the IOAP, automating preliminary screens, expanding the fast-track pathway for projects under 25 kW, and introducing credit-memo billing under Cost Sharing 2.0, which has improved the efficiency and timeliness of DER interconnection processes and created a more streamlined, user-friendly experience for developers and customers.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Increasing complexity of projects, leading to longer interconnection review timelines and complex design approvals	• Engage developers earlier to discuss interconnection options, trade-offs, and system constraints. • Standardize CESIR review frameworks, system design templates, approved equipment criteria, and interconnection requirements checklists. • Further enhance the IOAP with automated screening, load flow tool integration, and improved project tracking in PowerClerk®.
Increasing cost of interconnections	• Develop cost-reducing technologies (e.g., interrupter switchgear for streamlined high-tension network interconnections). • Continue refining and implementing the Cost Sharing 2.0 framework to equitably allocate upgrade costs across benefiting projects. • Utilize standby letters of credit as an alternative to large cash deposits, as approved in February 2025[287] by the PSC.
Saturation of local grid capacity	• Improve communication of emerging system constraints by updating hosting capacity maps, which helps to reduce non-viable applications. • Collaborate with the Joint Utilities to evaluate and pilot flexible interconnection approaches, including SCADA-based dynamic curtailment, 8,760 production profile analysis, and non-firm export agreements to enable larger (i.e., MW scale) DERs to interconnect without immediate infrastructure upgrades.

[287] Note 277, *supra.*

Stakeholder Interface

The SIR is expected to continue to evolve as interconnection application volumes grow, further experience is gained, and both utility and developer needs advance. Potential modifications are vetted through the ITWG and IPWG, and Con Edison, working with the Joint Utilities, industry stakeholders, and DPS Staff, will remain engaged as those groups review flexible interconnection options, queue reform, and other matters. Consistent with the way anti-islanding and monitoring-and-control requirements were developed, the ITWG will post any new requirements online for transparent stakeholder review.

Con Edison remains actively engaged in the IPWG and the ITWG where it collaborates with the Joint Utilities, developers, and regulators to improve interconnection practices and inform future revisions to the SIR. Current areas of focus include refining screening methodologies, managing interconnection costs, and exploring technical and policy options to improve cost-effectiveness and transparency.

Within the ITWG, Con Edison plays a central role in promoting consistent technical standards across the New York utilities. In recent years, the Company has contributed to updated CESIR study methodologies, led refinements to voltage flicker screen guidance, published a technical report on effective grounding practices, and participated in a Joint Utilities-led voltage regulator subgroup formed to study tap movements in the presence of DERs. In parallel, the Company continues to support the IPWG's efforts to address non-technical issues, including customer communications, queue management, and interconnection financing.

In addition to its role in the Joint Utilities working groups, each April, Con Edison convenes a developer focus group with large-scale solar and battery developers (> 50kW-5MW) to solicit and better understand the context for developer feedback on the DG interconnection process. This gathering has occurred annually since 2018 and has been identified by developers as a factor in increasing developer satisfaction on Con Edison's DER interconnection process. Beyond this annual event, the Company regularly hosts and participates in outreach meetings, workshops, and brainstorming sessions with DER stakeholders to discuss emerging issues and review interconnection standards and design specifications. These meetings serve as a forum to evaluate new technology packages, assess compatibility with utility protection schemes, and coordinate potential engineering policy updates. Several examples of modifications to Con Edison's processes and programs based on this feedback is outlined below:

- Standardization of engineering design requirements.
- Development of a pilot program to implement new technology for large DER projects, with a focus on energy storage on the Con Edison network system.
- Detailed feedback on how to enhance the Company's hosting capacity maps for better upfront planning. Enhancements were made in 2025 to provide additional data on networked feeder hosting capacity.

The Company also engages in broader industry forums, including co-hosting the New York Battery and Energy Storage Technology Energy Storage Day and participating in the City University New York Solar + Storage Installer Workshop. These forums offer additional opportunities for dialogue with developers, technology providers, and policymakers around demand response programs, bulk storage procurements, EV initiatives, and best practices for energy storage interconnection. The learnings from these events help inform the Company's approach to evolving DER use cases and interconnection pathways.

To incorporate that feedback into ongoing system improvements, developer feedback is continuously integrated into enhancements to PowerClerk® and the CPMS, which together support a more streamlined, transparent, and responsive interconnection process.

Additional Detail

This section responds to the questions in the DPS guidance specific to DER interconnections.

1) **Describe in detail (including the web URL) the web portal that provides efficient and timely support for DER developers' interconnection applications.**

Con Edison maintains a dedicated website for customers applying for interconnection of private generation resources, which provides the necessary resources for DER interconnection applications.[288] This web portal offers links to appropriate forms and documentation according to the DG size thresholds in the SIR. In addition to the necessary interconnection application documentation and guidelines, the website provides example materials, such as a copy of the customer authorization letter, standardized contract, and the DG documentation checklist. The DG application portal,[289] PowerClerk®, provides links to reference materials and a tutorial on how to use the PowerClerk® portal, as well as contact information for the appropriate parties at Con Edison to address any questions or concerns.

2) **Describe where, how, and when the utility will implement and maintain a resource where DER developers and other stakeholders with appropriate access controls can readily access, navigate, view, sort, filter, and download up-to-date information about all DER interconnections in the utility's system. The resource should provide the following information for each DER interconnection:**

   a. **DER type, size, and location;**
   b. **DER developer;**
   c. **DER owner;**
   d. **DER operator;**
   e. **the connected substation, circuit, phase, and tap;**
   f. **the DER's remote monitoring, measurement, and control capabilities; and**
   g. **the DER's primary and secondary (where applicable) purposes; and,**
   h. **the DER's current interconnection status (operational, construction in-progress, construction scheduled, or interconnection requested) and its actual/planned in-service date.**

The PSC website includes a range of information on DER interconnections and is updated monthly.[290] The information currently available on the PSC website consists of the following data:

- DER type and size
- DER developer
- Connected substation and circuit
- DER current interconnection status (operational, construction in-progress, construction scheduled, or interconnection requested)
- Actual in-service date

Each of the Joint Utilities provides the following information to DPS monthly via an SIR inventory report: DER location, owner, and operator. Due to customer privacy and competitive development concerns, the utilities file redacted and unredacted versions of the report, with only the redacted version posted online. Generally, each utility does not collect information regarding phase and tap, DER remote monitoring, measurement, and control capabilities and DER primary

[288] Con Edison Applying for Private Generation landing page: https://www.coned.com/en/save-money/using-private-generation-energy-sources/applying-for-interconnection.
[289] PowerClerk® landing page, Accessible at https://conedlargedg.powerclerk.com/MvcAccount/Login.
[290] New York State Public Service Commission Distributed Generation landing page: https://dps.ny.gov/distributed-generation-information.

and secondary purpose(s) during the interconnection process. The Company is open to exploring collection and disclosure of additional information, with appropriate customer consent, if requested by developers and other stakeholders.

All sites that have an operational impact are actively managed and monitored by a SCADA remote telemetry unit which enables future integration with DERMS.

3) **Describe the utility's means and methods for tracking and managing its DER interconnection application process and explain how those means and methods ensure achievement of the performance timelines established in New York State's Standardized Interconnection Requirements.**

The Company's PowerClerk® system tracks the timeliness of each application by using built-in timers associated with each task in the SIR to track the progress of an application and generate automatic reminder emails if an application appears pending, which alerts Company personnel to outstanding items. To effectively manage the application status of each interconnection relative to the SIR timelines, Con Edison also maintains an internal dashboard to track project status through each step of the SIR.

4) **Describe where, how, and when the utility will provide a resource to applicants and other appropriate stakeholders for accessing up-to-date information concerning application status and process workflows.**

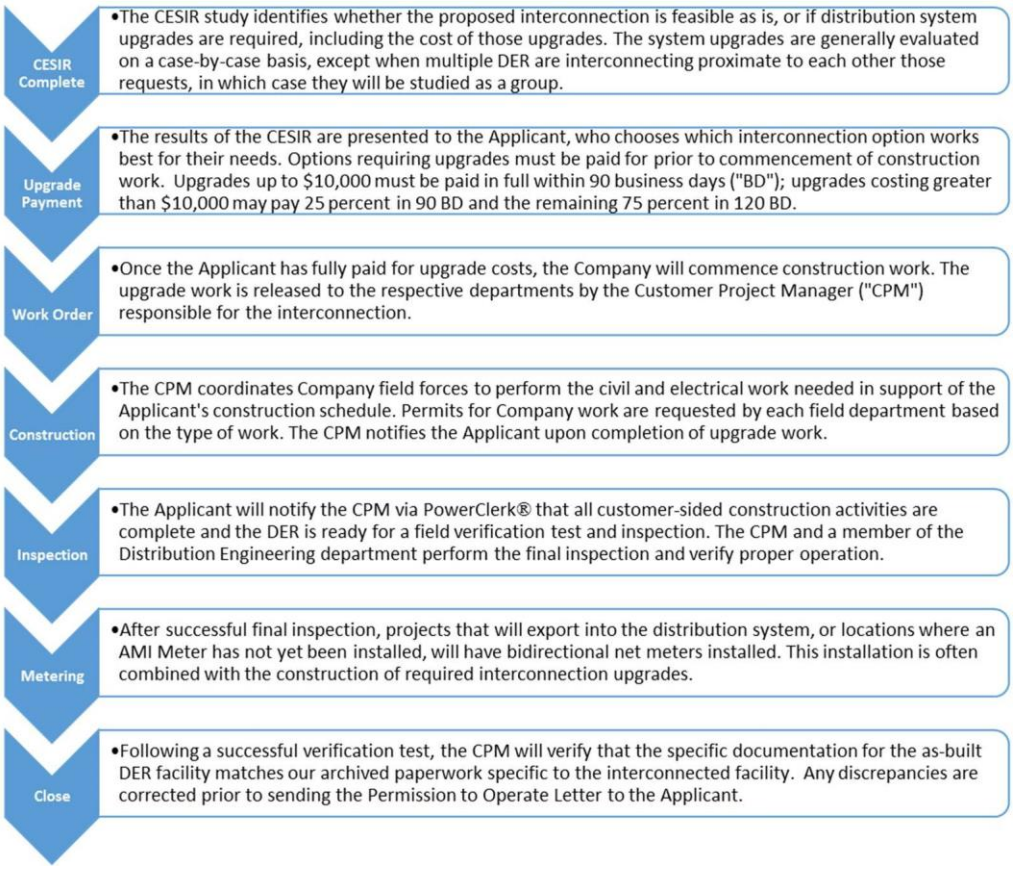
Con Edison provides up-to-date information to applicants via the IOAP and PowerClerk®. The IOAP offers greater accessibility and transparency and is more user-friendly for applicants seeking information on their current application status. General process workflows are on the Company's interconnection web portal.[291] To protect an applicant's privacy, Con Edison limits the sharing of details of specific applications and their application status to the applicant.

5) **Describe the utility's processes, resources, and standards for constructing approved DER interconnections.**

The Company manages construction for interconnections requiring upgrades to the utility system. This could include creating a new service for FTM-type interconnections, upgrading service for increased hosting capacity, installing SCADA controllers to monitor and control export onto the distribution system, or upgrading network protector relays to allow for increased export onto Con Edison's secondary network distribution system. **Figure 42** outlines the general process for managing these upgrades.

[291] Con Edison May 2022 NYS SIR – Simplified Process Flow Chart 50kW – 5MW: https://www.coned.com/-/media/files/coned/documents/save-energy-money/using-private-generation/simplified-process-flow-chart.pdf?la=en.

Figure 42: Process for Managing Construction for Interconnection Upgrades



6) Describe the utility's means and methods used for tracking and managing construction of approved DER interconnections to ensure achievement of required performance levels.

To better coordinate DER installations with system upgrades, the Company created the Distributed Energy Services group. This group recently expanded to two teams to provide better coordination for both existing and incoming EV and DER projects. Dedicated employees for both EV and DER projects actively monitor and engage with developers to understand project-specific timelines and milestones. Additional details about these groups are outlined below:

EV Interconnection Group

- The first team handles all intake and close-out tasks.
- The second team manages small construction projects.
- The third team oversees large construction projects.

DER Interconnection Group

- The first team processes intake and accounting for large DG projects.
- The second team coordinates small projects (i.e., less than 50kW).
- The third team manages larger projects (i.e., greater than or equal to 50kW).

7) Describe how and when the utility will deliver and maintain its DER interconnection information to the IEDR.

Con Edison has been sharing all of its DER data from PowerClerk® with the IEDR monthly since the completion of Phase 1 of the IEDR. This data is accessible to users as a layer on IEDR's Electric Infrastructure Assessment Tool map.

2.12. ADVANCED METERING INFRASTRUCTURE

Context and Background

Con Edison has been on a nearly seven-year journey to deploy advanced metering infrastructure ("AMI") and supporting technologies across its service territory. AMI provides customers with valuable consumption information and enables more innovative pricing and demand response ("DR") capabilities. This information is foundational to providing customers with easy access to their energy consumption data so they can make more informed decisions. At the same time, AMI provides the Company data that enables more efficient identification and resolution of potential system issues. Deployment is also central to maintaining compliance with several regulatory proceedings, notably Integrated Energy Data Resource ("IEDR")[292], and tracking and benchmarking building energy efficiency ("EE") measures related to New York City ("NYC") Local Law ("LL") 84 and LL97. AMI further serves as an enabler to Green Button Connect ("GBC") customer-consented data sharing and new time-variant rate structures.[293]

To maximize the value from AMI-generated data, Con Edison has also deployed a robust communications network that provides a critical communication link with the meters. This link allows operators to dispatch specific resources as distributed energy resource ("DER") markets continue developing, and the supporting IT infrastructure is built.

This journey has also included extensive interaction with customers and other relevant stakeholders to build awareness of the full functionality of the AMI system. The Company developed an AMI Customer Engagement Plan detailing how it would engage customers and third parties and help them understand and take advantage of the benefits of the Company's investments in AMI and the digital customer experience.[294] The engagement plan activities facilitate greater customer participation in the Company's DR programs, provide for other energy management opportunities offered through innovative value-added products and services by third parties, and increase access to EE tools. Following years of system planning and project execution, Con Edison successfully completed deployment of the AMI Project in June 2024, resulting in more than 4.86 million meters being installed across the service territory. Customers have access to data that will enable them to more proactively track their energy usage and identify opportunities to reduce consumption and save money.

As extreme weather events become increasingly frequent, the Company will continue to maintain and improve grid resiliency and reliability. Con Edison views its AMI system as a critical tool to mitigate the impacts of these weather events by enabling faster detection and resolution of outage incidents, allowing for enhanced customer experience.

Though major deployment activities have been completed, ongoing development of AMI capabilities will enhance the benefits of this system for both the Company and customers. Further integration of AMI data into Company processes will provide Con Edison with more holistic customer information and enable better informed and customized outreach and program offerings based on customer demographics and use patterns. As time progresses, AMI will also provide the data needed by the Company to better measure DER performance in programs and adjust as needed. Ongoing improvements to the AMI network will bring greater transparency in energy usage and result in more efficient internal operations and interactions with customers and other stakeholders.

---

[292] Note 187, *supra.*

[293] These topics are discussed at greater length elsewhere in the document. The IEDR and GBC are discussed in **Section 2.9 Data Sharing**, EE benchmarking and emission savings tracking are discussed in **Section 2.7 Energy Efficiency Integration and Innovation**, and the Company's Innovative Pricing Pilot ("IPP") is discussed in **Section 2.10 Billing and Compensation**.

[294] Case 15-E-0050, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, AMI Customer Engagement Plan (filed July 29, 2016).

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Completed implementation of the AMI Project, including installation of 4.86 million electric and gas smart meters as of December 2024.
- Since the release of the revised My Account design in 2022, continued to prioritize feedback from customers in enhancing the platform. Key enhancements to improve customer experience includes:
  - Refinements to the user interface to make it easier to navigate and find key information.
  - Improvements to backend systems for enhanced reliability and security.
- Introduction of additional features and functionalities based on customer requests and business needs, including features such as the rate eligibility screener, financial assistant tool, and consolidation of authenticated and guest pay flows.
- Implemented conservation voltage optimization ("CVO") across entire service territory. Continued optimization efforts with this energy reduction initiative.
- Leveraged AMI system to perform pings and on-demand reads on affected AMI meters to verify outage status and deploy crews more efficiently. Avoided 85,000 truck rolls for false outages, resulting in fuel savings and reduced greenhouse gas ("GHG") emissions.

Utility Capabilities Demonstrated (non-exhaustive)

Monitoring & Visibility: *AMI* has increased *visibility* into system conditions which has resulted in operational efficiencies and improvements in outage management processes.

Dispatch: *AMI* meters and other grid edge sensors connected to the communications network provide information that enables operators to optimally *dispatch* specific resources.

Customer Programs: *AMI* data supports Con Edison's efforts to improve its *customer programs* and enhance the overall customer experience.

Market Participation: *AMI* data provides customers with valuable information that will enable them to more meaningfully participate in Con Edison programs, proactively track their energy usage, and engage with other *market participants* (e.g., contractors, aggregators, and other third parties) to identify opportunities to reduce consumption and save money.

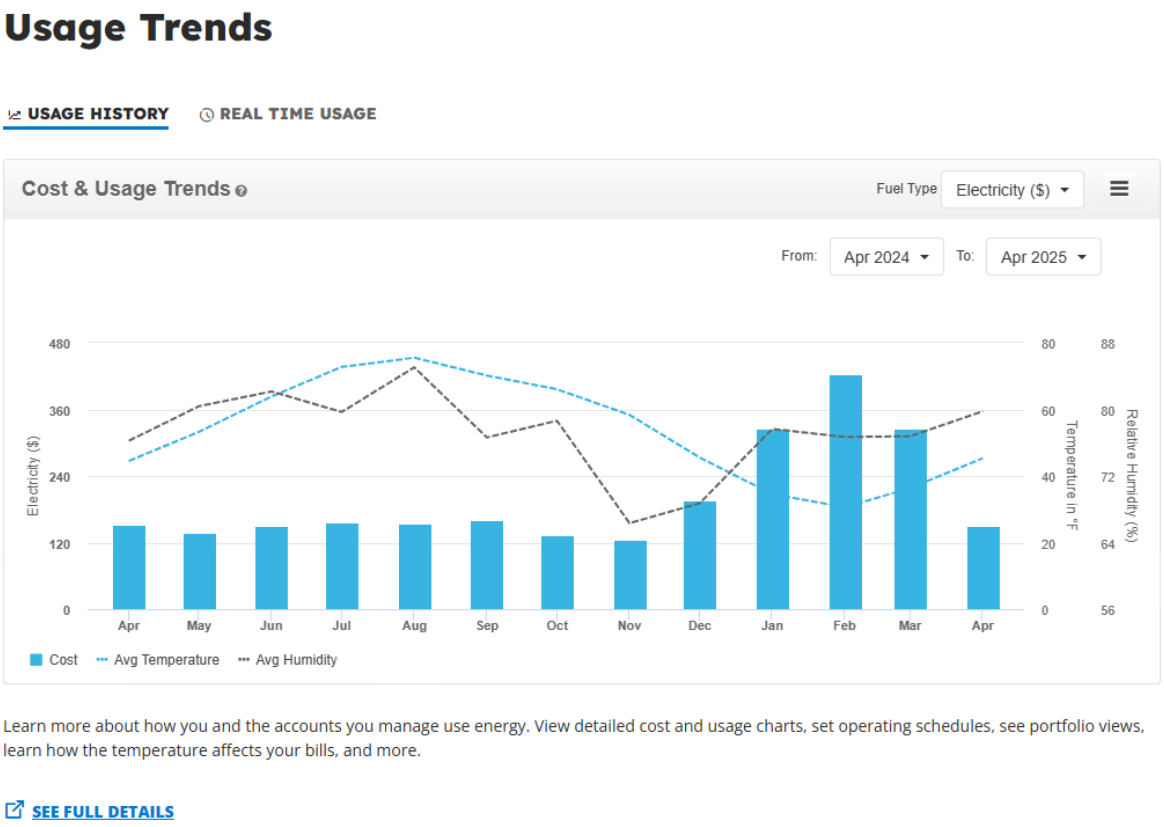
As of December 2024, Con Edison had installed approximately 4.86 million meters across the Company's service territory and 22,500 communication devices.[295] Going forward Con Edison plans to purchase approximately 78,000 AMI electric meters and additional units of associated metering equipment per year to support new business installations, meter replacements, and Public Service Commission ("PSC") required testing.

[295] Case 22-E-0064, *Proceeding Motion of the Commission as the Rate, Chares, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, AMI Stabilization and Optimization Report Q4 2024 (filed January 30, 2025).

My Account

My Account is the online interface tool that Con Edison customers can use to track their energy usage and identify opportunities to reduce usage which can result in financial savings. For residential customers, this includes billing and usage information contained in 15-minute interval data, comparisons and analysis, and instructions on how to share their energy usage data with contractors and other third parties. This data access is complemented by several resources on the Con Edison website that provide customers with energy savings program options and tools, such as Time-Of-Use rates,[296] a Market Supply Charge Calculator,[297] and a third-party Rate Comparison Calculator,[298] that they can leverage to reduce their bills. Commercial and complex billing customers are also eligible for My Account to access in-depth 5-minute interval data, personalized energy insights, and more. Examples of the insights available to commercial customers are shown in Figure 43 below.

Figure 43: My Account Cost and Usage Insights



In 2022, the Company released a revised design of its My Account page, informed by customer feedback with improvements to the site's scalability and navigability. Con Edison's continued enhancements to AMI capabilities provide increased visibility into system conditions at the customer level and help further operationalize flexibility by enabling customers, particularly residential customers, to participate in programs such as DR.

[296] Con Edison Time-Of-Use Rates: https://www.coned.com/en/accounts-billing/your-bill/time-of-use.
[297] Con Edison Market Supply Charge Calculator: https://www.coned.com/en/accounts-billing/your-bill/rate-calculators/market-supply-charge.
[298] Apogee Rate Comparison Calculator: https://c03.apogee.net/mvc/home/hes/land/el?utilityname=coned&spc=trc.

Conservation Voltage Optimization

Voltage data obtained from AMI can enhance the efficiency of the electric system. By analyzing this data, the Company can better optimize voltage across the electric system, thereby reducing energy losses. CVO is the adjustment of area substation supply voltages to a lower value while providing adequate voltage levels for all customers. CVO allows the Company to better understand load patterns and demands. This information allows for more effective load balancing and management, resulting in energy savings for end-use customers.

The primary purpose of CVO is to reduce energy costs and the environmental impacts of burning fossil fuels while continuing to maintain acceptable voltage at all points along the distribution feeder under all loading conditions. Specific benefits include energy costs savings due to a reduction in fuel purchased, as well as avoidance of GHG emissions from fossil generation. Con Edison is continuing CVO efforts as part of its smart grid optimization efforts. CVO is now enabled in all 83 of the Company's networks and Con Edison will continue to optimize this technology to reduce energy costs and emissions while maintaining safe and reliable power flows.

AMI Communications Network

Along with being used for measuring electric consumption, the AMI communications network provides a valuable platform for monitoring sensors, particularly for natural gas leak detectors ("NGDs"). In October 2018, the Company began a pilot to deploy 9,000 NGDs to identify concentrations of methane above a threshold of 10 percent lower explosive limit or 0.5 percent gas-in-air. The successful testing of the pilot and the positive stakeholder feedback led to a mass deployment of NGDs, starting in September 2020.

As of December 31, 2024, the Company has installed more than 274,000 NGDs and detected more than 5,300 leaks.[299] By proactively identifying and addressing leaks, the Company is reducing the risk of potential ignition, the cost associated with lost and unaccounted gas, and the environmental impact of methane emissions.

Outage Management

AMI has enabled operational efficiencies and enhancements to the Company's outage management process. The Company has been using the AMI system to perform pings and on-demand reads on affected AMI meters to verify outage status and deploy crews more efficiently. In total, the Company has avoided 85,000 truck rolls for false outages since April 2018.

At the end of 2020, the Company implemented an outage validation system that leverages AMI restoration events and automatically pings meters to confirm power has been restored when customer outage tickets are closed, or their status is updated to "restored." The AMI Restoration Validation Engine enhances the restoration process by validating the AMI meter is powered on before communicating restoration message data back to the customer. The meters that are not validated will not receive a restoration message, and instead, a new ticket will be created that will be worked on by operators and restoration crews. This provides increased support for those customers experiencing "nested outages," or outages that persist after an area is restored.[300] This system increases the efficiency of the Company's outage restoration flow and provides a better end-user experience for customers by reducing the number of inaccurate restoration messages.

[299] Case 22-E-0064, *Proceeding Motion of the Commission as the Rate, Chares, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Annual AMI-Enabled Natural Gas Detector Report (filed March 27, 2025).
[300]Case 22-E-0064, *Proceeding Motion of the Commission as the Rate, Chares, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Strategic Customer Experience Portfolio Report Q1 2024 (filed May 30, 2024).

At the end of 2021, the Company implemented an integration of AMI outage messages with the Outage Management System ("OMS") to detect outages based on meter data, specifically outage messages from AMI meters. This integration automatically creates outage tickets for multiple-service electric outages, resulting in reduced reliance on customer reporting and allows the Company to better understand the full scope of any outages impacting customers with smart meters.

As time progresses, the Company continually works with both external and internal stakeholders to improve outage management efforts through leveraging available AMI data. For example, the Company has developed a cross-organization data integration with New York City Transit to send electric outage and voltage events for subway system meters in near real-time. Con Edison has also implemented a custom dashboard system that allows operators to monitor real-time power status of various critical customer types. Additionally, the Company has created a surgical emergency shutoff system that leverages the AMI remote disconnect functionality to reduce load during a system emergency that prevents cascading network failure and potentially a variety of other overload conditions.

Future Implementation and Planning

Summary of Future Actions

- Continue to refine the value-added features enabled by AMI, including outage notifications, high bill alerts, enhanced customer data sharing, and pricing pilots.
- Continue to optimize energy reduction benefits of CVO.
- Continue to deploy NGDs and investigate opportunities to deploy additional value-added sensors on the AMI network as the need arises.
- Continue to collaborate with the IEDR use case stakeholders to provide energy consumption (AMI interval data) and customer billing data to support IEDR Phase 2 use case development, such as GBC.

Con Edison will continue to implement innovations and initiatives to leverage AMI data in improving its core business operations. Among the areas of focus for these improvements are enhancements to the OMS, taking further advantage of the AMI system capabilities, full implementation of AMI data gathering and reporting features, and application of AMI data for a defined set of business analytics use cases.

Transforming Outage Management with Advanced AMI Integrations

The Transforming Outage Management with Advanced AMI Integrations initiative enhances resiliency and operational excellence by investing in AMI foundational technologies and leveraging smart meter data to enhance outage management capabilities. While smart meters were being deployed during the AMI project, operators used the early versions of outage management applications to check the status of the meter and control the switch of the meter as needed. To continuously improve resiliency and operational excellence, enhancements to the Company's outage management applications and tools are necessary.

As part of ongoing efforts to increase the functionality of its AMI network, the Company has identified several targeted investments around outage management. For example, the Company is seeking to enhance its customer-facing outage reporting application to provide a more seamless and streamlined customer experience. The Company is also seeking to upgrade its customer communication capabilities to enable automated text messaging to critical customers experiencing an outage even when the customer hasn't reported the outage and other enhancements to improve the user experience.

AMI Business Analytics

The goal of the AMI Business Analytics project, launched in May 2022, is to design and deploy a suite of data analytics use cases to assess customer load profiles and patterns, leveraging the Company's AMI data and other internal and external data sources. Through this integrated application, Con Edison is building predictive insights into specific customer trends, reconciliation of weather-adjusted peaks of the electric and gas systems, and uptake of load-modifying technologies. Additionally, this project supports the system planning process, which is designed to identify current and future operating requirements, risks, and potential solutions to provide safe, reliable, and resilient systems.

The AMI Business Analytics project is leveraging the Enterprise Data Analytics Platform("EDAP"), to provide information needed for use cases. The program identifies additional analytics to be performed on the already existing data in EDAP and integrates new data sources to unlock further insights and deliver new analytics use cases. These use cases focus on data integration for customers employing emerging technologies such as electric vehicles ("EV"), heat pumps, DERs, and other systems incentivized by policies like the Climate Leadership Community Protection Act and NYC's LL97.

This project has led to the development of several impactful use cases, including analyzing new business ramp rates, assessing the impact of heat pumps on gas and electric peak loads and volumes, and understanding the adoption of EV chargers and charging behavior. Leveraging AMI data has enabled the Company to improve both the reconciliation process and the accuracy of forecasting inputs. It also helps enhance a variety of functions, including the integration of AMI data into the existing forecasting process flow, consolidation of data sources into a single platform, planning for future needs that support clean energy targets, and the continued pursuit of automation tools and advanced analytics.

Future use cases will enhance the calibration of clean energy technology adoption, improving locational load forecasting and insights into the breakdown for disadvantaged communities. The Company will continue to develop sophisticated models with future use cases to capture emerging load impacts and incorporate weather information to normalize the load. This will provide a clearer understanding of the impact of clean energy adoption on electric and gas demands.

The Company will also continue its efforts with the IEDR, described in greater detail in **Section 2.8 Data Sharing**. AMI data will be shared under the appropriate consent and privacy standards.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Degradation of AMI communication network that negatively impacts functionality	• Continue to invest and make enhancements to the AMI communication network to maintain desired performance. • Actively engage AMI vendors and other utility peers to share best practices on how to adequately maintain AMI communication network.
Issues and errors with software and/or hardware and other equipment	• Troubleshoot communication challenges, inspect equipment, and perform other regular operation and maintenance activities. • Consistent with current practices, continue to perform full software and acceptance testing prior to full release of enhancement and customer interface redesigns.
Financial penalties associated with non-compliance with applicable requirements for customer bill accuracy	• Maintain the Company's AMI communication network and remain compliant with applicable requirements around the accuracy of customer bill information through continued investment. Delays in communication can expose the Company to financial penalties.

Stakeholder Interface

As noted above, the Company filed an AMI Customer Engagement Plan describing a range of activities to raise awareness of the benefits of AMI and address customer questions and concerns.[301] To date, Con Edison has informed all customers in its service territory on AMI implementation. Approximately 50,000 customers in the Company's service territory do not have smart meters, primarily due to their opting out or refusal to provide access to the meter.

For DER developers, GBC facilitates sharing more granular data from AMI through an automated process in a machine-readable format, supporting developers' business planning, marketing, and project scoping. These third-party companies can provide customers with insights and recommendations for programs and services that can help them use energy more efficiently and save money. Additionally, the Company has continued to see increases in residential customers participating in DR programs due to the deployment of AMI.

AMI provides Con Edison with increased granularity and greater visibility into customer consumption and behavior. Leveraging AMI has enabled Con Edison to see real-time disaggregated views of customer loads to verify participation by program and/or resource. AMI readings have been central to developing customer profiles based on historical track records of participation across services. This capability opened Con Edison's behavioral DR programs to residential customers in 2021, leading to a 538 percent increase in customer enrollment from 2021 to 2024.

Additional Detail

This section responds to the questions in the DPS guidance specific to AMI.

1) **Provide a summary of the most up-to-date AMI implementation plans, including where AMI has been deployed to date.**

The AMI Order approved the Company's proposal to deploy 4,715,000 smart meters across its service territory between 2017 and 2023.[302] AMI meter installation began in June 2017 for new business customers and business-as-usual replacements. As of December 2024, Con Edison has deployed 4.86 million electric and gas smart meters and 22,500 supporting communications devices. Though AMI mass deployment has been completed, the Company will continue to work with its customers and vendors where access issues or obstructions have prevented the installation of AMI. The Company has also proactively opted out customers from AMI installation if all attempts to contact the customer are exhausted (typically five attempts are made).

Table 35 shows the current AMI communications network and meter deployment schedule - with *"Meters Deployed"* reflecting data as of mid-April 2025. Ninety percent of the meters listed in the table are I-210 for residential applications, and the remaining meters are KV2C for commercial applications.

[301] Note 294, *supra.*

[302] Case 19-E-0065, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Con Edison AMI Metrics Report April 2023 (filed May 1, 2023).

Table 35: AMI Meter Deployments by Region (Initial Target versus Actual Number)

Phase	Region	Initial Deployment Target	Meters Deployed
1	Staten Island	182,000	188,897
2	Westchester	605,000	625,704
3	Brooklyn	988,000	1,070,321
	Bronx	787,000	824,316
4	Manhattan	1,144,000	1,114,691
	Queens	1,009,000	1,052,979

2) Provide a summary of all new capabilities that AMI has enabled to date, and how these capabilities benefit customers, including, as applicable, customer engagement, energy efficiency, and innovative rates.

As discussed in further detail above, AMI enables the delivery of personalized energy consumption insights through the customer My Account portal, as well as operational efficiencies such as CVO, outage management enhancements, and the deployment of NGDs to improve public safety. The Company has developed load shed capabilities and tools, which can isolate portions of the network if or when issues occur within the local distribution system. Additionally, AMI has enabled increased access to program participation, such as DR, where aggregators can enroll residential customers and view their data consumption through platforms like GBC. Increased program participation additionally encourages customers to engage with their energy consumption data.

3) Describe the AMI-acquired data and information that is planned to be available through the IEDR.

On October 13, 2023, the Commission issued an order that instructed the Joint Utilities to transfer defined customer data sets to IEDR without the need of prior customer consent as the transfer of data between data custodians is permissible under previous IEDR and Data Access Framework orders. As IEDR is not allowed to share customer data sets with third parties without customer consent, the order also authorized utilities to propose tariff amendments to protect them from liability if the IEDR Administrator improperly accesses or shares customer data.[303]

The Company now provides AMI data to the IEDR, which enhances visibility into customer consumption patterns and demographic trends that can be leveraged by third-party developers to support more informed planning and investment decisions.

4) Describe where and how DER developers, customers, and other stakeholders can access up-to-date information about the locations and capabilities of existing and planned smart meters.

The Company continues to proactively communicate the benefits of AMI to customers and relevant stakeholder groups via multiple channels including direct mail, the Company website, and other digital platforms. Additionally, the AMI rollout plan is publicly available through the Company's website and was promoted through extensive outreach activities, including sustained customer information campaigns and educational programing.

5) Provide a summary of plans and timelines for future expansion and/or enhancement of AMI functions.

The Company plans to upgrade AMI applications, do a complete hardware refresh, and implement the AMI Business Analytics program as part of the rate case. Software enhancements include upgrades to the Meter Data Management System ("MDMS"), Meter Asset Management System, Head End System ("HES"), AMI custom application enhancements, and ProField Encore application in 2025 and beyond.

[303] Note 191, *supra.*

The Company began work on the AMI Business Analytics application in March 2022 and anticipates an estimated in-service date of December 2025 for its initial phase. This project is planned to continue under the umbrella of the enterprise data and analytics portfolio. Under the AMI Business Analytics program, Con Edison will continue to assess customer load profiles and patterns, leveraging the Company's AMI data and other internal and external data sources to ultimately enhance a variety of reporting analytics.

6) **Describe where and how each type of AMI-acquired data is stored, managed, and shared with, and used by other utility information systems such as those used for billing/compensation, customer service, work management, asset management, grid planning, and grid operations.**

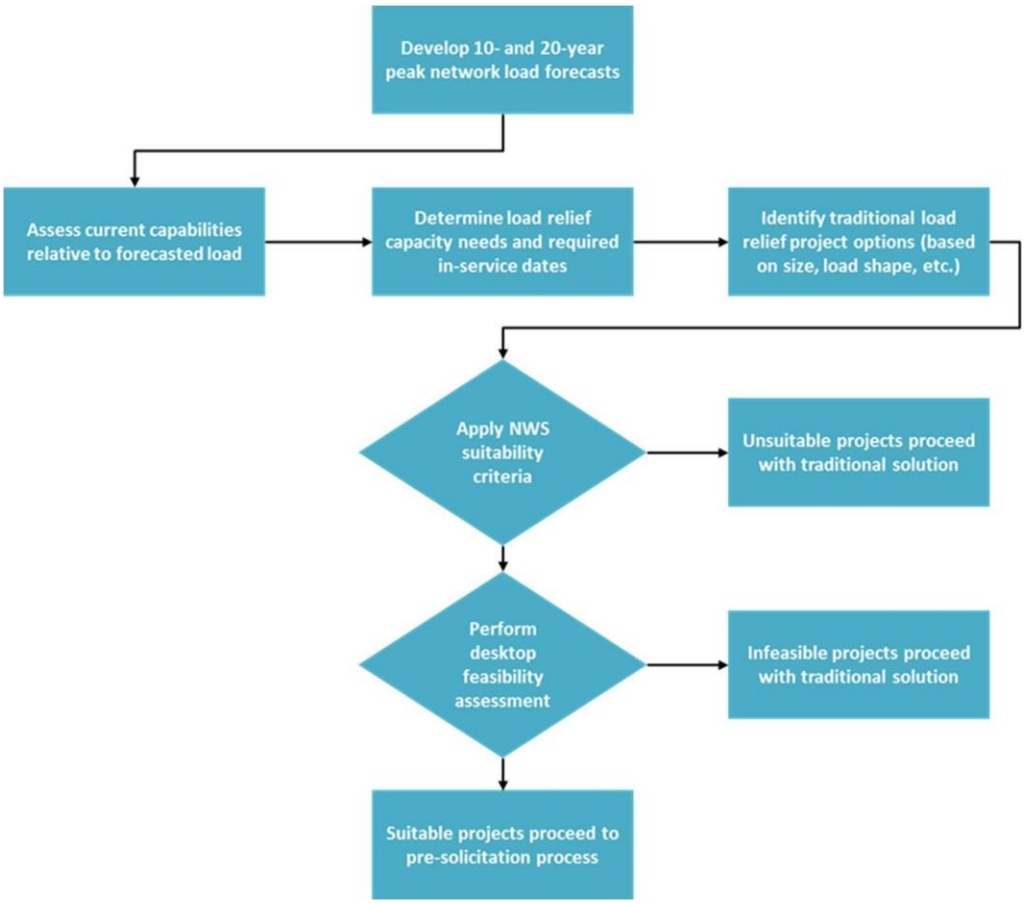
AMI interval data is measured and collected every 5 or 15 minutes (depending on meter and customer type). Interval data is collected and stored in the AMI HES for a period of 45 days. Every 15 minutes, interval data is sent to the MDMS where it is stored in the production database for 24 months. Long-term AMI data is stored in the Company's EDAP. Data is shared with other systems through various integrations with HES, MDMS and/or EDAP, depending upon the data requirements.

2.13. BENEFICIAL LOCATIONS FOR DERS AND NON-WIRES ALTERNATIVES

Context and Background

Beneficial locations have the potential for localized distributed energy resource ("DER") deployment to address projected system needs, specifically for load relief, to achieve deferral or avoidance of traditional utility infrastructure investments.[304] Beneficial locations are generally identified through the Company's capital budgeting process. The Company's distribution planning team uses load flow modeling, network reliability modeling, and modeling of system performance to assess the current capability of existing distribution and substation assets to meet the forecasted load based on the design criteria, type of asset, thermal ratings, and local power factors. For assets that are determined to be at risk of becoming overloaded during system peak conditions or under various contingencies, traditional and possible non-wires solution ("NWS") load relief project options are identified to mitigate the deficiency.[305] Figure 44 provides a simplified diagram of the NWS identification steps within the capital planning process.

Figure 44: NWS Identification in Capital Planning Process



An NWS is an innovative, cost-effective alternative to traditional utility infrastructure investments, such as building new substations or upgrading existing transmission and distribution lines. Among the benefits of NWS is the ability to

[304] Note 18, *supra*, p. 40.

[305] Other areas of system need identified through distribution modeling include risk reduction programs, new business projects to interconnect new customers, storm hardening or resiliency projects, emergency response and replacement, IT solutions to meet strategic business needs, and public works projects to re-route Company equipment due to municipal right-of-way.

integrate DERs, such as energy storage. By avoiding or deferring traditional investments, NWS portfolios provide a net benefit to society, as well as help reduce greenhouse gas ("GHG") emissions in support of the Company's efforts to achieve the goals established in the Climate Leadership and Community Protection Act ("CLCPA"). However, there must be a thorough analysis of potential NWS projects through the feasibility assessment to determine if the project will successfully address the load relief deficiencies and if all relevant costs and benefits to stakeholders have been appropriately considered.

The feasibility assessment step of NWS identification in the capital planning process is a desktop analysis that evaluates demographics across customer segments, customer energy consumption patterns, and the potential for load management from energy efficiency ("EE"), DERs, and other solutions. The feasibility assessment also estimates costs based on previous NWS request for proposal ("RFPs") and program activity. As shown in **Figure 44** above, suitable and feasible projects are advanced to the solicitation process, where the need is defined in terms of the total MW of load relief required to replace or defer the traditional capacity, the applicable time of day the load relief must be available, and the in-service date(s). This information, along with additional demographic information and project-specific detail, is included in the NWS solicitation. Based on responses, the Company evaluates the viability of implementing an NWS portfolio to meet the MW needs within the required timeframe and conducts a benefit-cost analysis ("BCA") informed by the BCA Handbook ("BCA Handbook").[306]

If the Company can design a feasible portfolio to meet the load relief need and the NWS portfolio of solutions passes the Societal Cost Test ("SCT")[307] in the BCA, the Company procures the necessary solutions, files the BCA results, and begins implementation. If the Company is unable to design a feasible portfolio of cost-effective solutions, the Company pursues a traditional solution. Feasible portfolios for NWS can consist of targeted deployments of EE solutions, which provide continuous load relief, dispatchable resources that are called upon to provide targeted load relief, or a combination of the two. Dispatchable elements of an NWS portfolio provide locational and temporal value by providing grid services when and where they are needed. These dispatchable resources provide grid services more flexibly than tariff-based solutions and are compensated with a premium for the value they provide.

Con Edison's approach to NWS has been informed through its experience and a series of regulatory orders. In 2014, the Public Service Commission ("PSC") issued its Order approving Con Edison's Brooklyn Queens Demand Management ("BQDM") Program.[308] The BQDM Program set the necessary conditions to establish a framework for the Company's evolution of the Targeted Demand Management ("TDM") Program, which would target networks reaching capacity due to increasing demand. In December 2015, the PSC approved the TDM Program, allowing the Company to implement load relief in targeted areas through customer-side solutions when it would cost-effectively enable deferral of new infrastructure investments.[309]

[306] The Company's BCA Handbook was filed concurrently with the DSIP under Case 16-M-0411, *In the Matter of Distributed System Implementation Plans*, Con Edison Electric BCA Handbook v5.0 (filed on June 30, 2025): https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-M-0411.

[307] Societal Cost Test compares the costs incurred to design and deliver projects, customer costs with avoided electricity and other supply-side resource costs (e.g., generation, transmission, and natural gas) and the cost of externalities (e.g., carbon emissions and other net non-energy benefits). The BCA Order established it as the primary measure of cost-effectiveness.

[308] Case 14-E-0302, *Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn Queens Demand Management Program*, Order Establishing Brooklyn/Queens Demand Management Program (issued December 12, 2014).

[309] Case 15-E-0229, *Petition of Consolidated Edison Company of New York, Inc. for Implementation of Projects and Programs that Support Reforming the Energy Vision*, Order Implementing with Modification the Targeted Demand Management Program, Cost Recovery, and Incentives (December 17, 2015).

The Company's approach to NWS has continued to evolve based on experience with the BQDM Program and other needs. Based upon the program's success, the PSC approved the Company's petitions to extend the program beyond 2018[310] and obtain additional demand reductions beyond 2018 without additional funding.[311]

NWS has become a core business function within the capital planning process and remains a key mechanism for bringing DERs onto the system. NWS continues to offer opportunities for developers to propose innovative solutions to meet a clearly defined system need while delivering customer and environmental benefits. These solutions also provide an avenue for Con Edison to further develop the flexibility of grid services. NWS projects can interconnect flexible storage resources that can be used to manage load on peak days thereby contributing to the overall reliability and resiliency of grid operations. To date, market response has been strong, with many proposals testing novel concepts and incorporating advanced technologies. Con Edison continues to learn from its experiences and the collective experience of the Joint Utilities and is pursuing creative options to expand opportunities for NWS.

While this section is primarily focused on the NWS portfolio, the Company's demand response ("DR") program also provides varying incentives based on different locations within the distribution networks. For instance, in the Commercial System Relief Program, participants located in Brooklyn, Bronx, Manhattan and Queens earn a higher incentive than participants located in Staten Island and Westchester. In the Distribution Load Relief Program, networks are classified as Tier 1 and Tier 2 based on their Network Resiliency Index ("NRI"). Networks with a lower NRI have higher incentive rates. These differing price signals provided to DER developers indicate beneficial locations on Con Edison's grid. Further detail on DR programs can be found on the Company's website[312] and in **Section 2.3 Grid Operations**.

Additionally, the Value Stack, through the locational system relief value ("LSRV") and demand reduction value ("DRV") components, provides a market price signal to developers as an indicator of locations that could benefit from additional load relief efforts. However, they are less dispatchable than NWS as the eligible hours for compensation are predetermined. For additional details, see **Section 2.10 Billing and Compensation**.

Implementation Plan, Schedule, and Investments

Current Progress

Summary of Achievements

- Continued to implement portfolios to defer traditional solutions in Newtown and BQDM.
- Managed ongoing procurement for ongoing NWS projects.
- Launched new Jamaica NWS portfolio in Queens, New York.
- Provided incentive offerings for new technologies including but not limited to, dynamic power factor correction, thermal energy storage, and window insulation.
- Addressed projected overload in Jamaica substation area.
- Shared information on beneficial locations by: (1) supplying information on past, present, and expected future NWS solicitations on the Company's website and the Joint Utilities website, and (2) displaying NWS areas and LSRV system relief value zones as part of the Company's hosting capacity maps.

[310] Case 14-E-0302, *Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn Queens Demand Management Program*, Petition for Extension of Time to Implement Brooklyn Queens Demand Management Program (filed January 19, 2017).
[311] Case 14-E-0302, *Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn Queens Demand Management Program*, Order Extending Brooklyn/Queens Demand Management Program (issued July 13, 2017).
[312] Note 262, *supra.*

Utility Capabilities Demonstrated (non-exhaustive)

Planning & Forecasting: Con Edison continues to leverage *planning* processes to identify and evaluate potential NWS portfolios that enable greater deployment of DERs.

Dispatch: *Dispatchable* elements of NWS portfolios provide locational and temporal value through grid services when and where they are needed. These *dispatchable* resources provide more flexibly than tariff-based solutions and are *compensated* for the value they provide.

Non-Wires-Solutions Market Opportunities

Con Edison has continued to identify opportunities for NWS, bring those opportunities to the market, and work to implement portfolios assembled around these opportunities. Since the 2023 Distributed System Implementation Plan ("DSIP"), the Company has continued to implement programs in the Newtown and BQDM areas, and launched a new portfolio in Jamaica, Queens. Finally, the Company continues to manage procurement for its BQDM program, through the Prescriptive Energy Storage System ("ESS") Incentive previously launched in this area in 2022.

Newtown Load Transfer Project

The Company deferred the need for a traditional solution identified for the Newtown area substation through an NWS portfolio. The traditional solution included a load transfer implemented in 2021 to relieve projected forecast constraints on the Newtown area substation and the sub-transmission feeders supplying the substation. The first NWS RFP was released July 6, 2018, with an ESS-specific solicitation announced June 14, 2019. From these RFP responses, the Company developed a portfolio of customer-side solutions including EE and ESS projects.

The Company continued to implement EE adders (i.e., additional financial incentives for customers for qualified projects) to its small business and nonprofits, multifamily, and commercial and industrial EE programs through 2024 in addition to working with developers to install contracted ESS solutions. Through the end of 2024, the portfolio has achieved over 17.3 MW of customer side load relief during the targeted peak hour on the Newtown networks. The Company successfully met the expected load relief needs for Summer 2024 (May – September).

Jamaica Substation Project

In March 2023, Con Edison issued an RFP seeking up to 16 MW of load relief solutions by Summer 2027 for the area served by the Jamaica substation in Queens. The NWS portfolio seeks to eliminate a traditional solution of upgrading limiting sections of 27 kV bus and disconnecting switches at the Jamaica area substation. The Company began implementing EE adders through its small business and nonprofits, multifamily, and commercial and industrial EE programs in 2023 following a consultation with the Department of Public Service Staff in concurrence with other procurement activities.[313] The Company is currently finalizing procurement with vendors selected through the RFP. When there is reasonable certainty as to the costs of the NWS portfolio, the Company will file a BCA in accordance with the 2023 Rate Case Order.

[313] Case 22-E-0064, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, NWS Project Consultation Letter (filed June 16, 2023): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={702BD988-0000-C711-B032-7B47993C3428}.

Brooklyn Queens Demand Management Program

The Company continued implementing a portfolio of customer-sided EE, distributed generation ("DG"), and ESS technologies to reduce peak demand in the BQDM targeted area. The Company also continued procurement through its BQDM Prescriptive ESS Incentive, offering incentives for grid-connected systems and load-following systems. In 2023, the Company evaluated the potential for a new utility-owned ESS adjacent to its Brownsville Substation. The Company continued procurement and construction on the 5.8 MW system in 2024 and expects the system to be operational in 2025 to support forecasted load relief needs.[314]

NWS remains a key program for Con Edison to continue to improve the reliability of service while also supporting the deployment of greater flexible capacity resources. Furthermore, as previously noted, all potential NWS portfolios undergo evaluation through the SCT and BCA frameworks. This rigorous, data driven assessment confirms that all relevant costs and benefits have been thoroughly analyzed and that selected NWS projects align with Con Edison's commitment to prudent cost management and value-driven investment.

Process Improvements

The Company is implementing the following process improvements:

- Leveraging valuable experience from developing and managing solicitations to refine the Company's internal operating procedures and improve the solicitation process for developers and third parties.
- Streamlining the solicitation process for NWS and technology specific offerings.
- Increasing lead time for project development.
- Coordinating stakeholder engagement sections with City University of New York ("CUNY") and other authorities having jurisdiction to unlock non-traditional marketplaces in energy storage through permitting.
- Continuing assessment of technologies to expand incentive offerings in NWS programs.

While it is possible to standardize many of the NWS procedures, Con Edison has observed that each NWS is unique in terms of size, nature of the need, and the types of technology solutions to be evaluated, which is driving continued learning. For example, the Company has further improved internal processes to develop and analyze portfolios efficiently, which has subsequently improved portfolio and BCA analysis tools to analyze suitable NWS more quickly and identify cost-effective portfolios.

As noted above, the annual capital budgeting process results in the identification of system needs, including projects needed to provide load relief. Con Edison reviews projects in the 10-year Load Relief Program[315] to determine if an NWS has the potential to defer or avoid a capital project using the Company's NWS suitability criteria and feasibility assessment. The suitability criteria are annually reviewed and updated based on experience gained through procurement and subsequent DER performance, as appropriate. Ongoing experience in the initial phases of NWS solicitations suggests the suitability criteria generally works well to highlight areas of need and effectively direct developers to high-potential opportunities. Many past solicitations have facilitated the construction of viable portfolios of DER solutions for projects satisfying the suitability criteria.

Con Edison issues competitive market solicitations for projects meeting the criteria that pass the initial feasibility analysis to further evaluate viable NWS portfolios. Solicitations not resulting in viable portfolios have also been instrumental in better understanding the real-world challenges of procuring and implementing NWS portfolios. For

[314] Case 14-E-0302, *Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn/Queens Demand Management Programs*, BDQM Project Consultation Letter (filed May 30, 2023): https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={D0006D88-0000-C911-A18A-425B23121F89}.
[315] Note 37, *supra.*

example, the Company's experience with solicitations and implementation of NWS with long lead technologies provides evidence that a sufficient implementation runway enables successful execution of NWS portfolios.

Future Implementation and Planning

Summary of Future Actions

- Continue to assess NWS opportunities as part of the capital planning process.
- Select one or more NWS solutions for market solicitation exploration.
- Streamline go-to-market strategies to procure diverse portfolios of solutions with offerings for all customer segments.
- Identify new project opportunities for projected system needs of load relief through NWS solutions.
- Pursue refinements to the feasibility assessment that help provide cost-effective solutions in an appropriate timeframe as part of the NWS identification in the capital planning process.
- Continue ongoing enhancements to the solicitation process incorporating lessons learned.
- Continue to implement existing NWS portfolios.

The Company will continue to identify beneficial locations through the capital planning process and direct developers to these locations through RFPs, as well as the NWS layer of the Company's hosting capacity maps. Additionally, the Company will continue to explore opportunities to refine and enhance existing utility programs such as DR and adjust DER price signals to further enhance opportunities to meet localized system needs.

The continued advancement of NWS will help enhance grid reliability in the face of increasingly frequent and severe weather events. Solutions such as EE and DER alternatives offer pathways to strengthen system reliability and operational flexibility, particularly during times when the grid is stressed. NWS is already enabling greater deployment of DERs, as developers pursue innovative approaches to meet system needs. Further integration of EE and load management strategies will expand Con Edison's ability to respond dynamically to grid conditions. These efforts not only bolster resiliency and reliability but also contribute to GHG emissions reductions and support the broader adoption of clean energy technologies.

With continued stakeholder dialogue, sharing experiences within the Joint Utilities, and ongoing experience through present and future rounds of NWS solicitations, the Company expects to further refine and improve the efficiency of its solicitation process. The Joint Utilities continue to share experiences and lessons learned to achieve a consistent set of best practices and improve the solicitation processes to be more efficient and user-friendly. This includes reviewing the NWS suitability criteria as part of the annual planning process and evolving how NWS can address those needs.

Risks and Mitigations

The table below summarizes the risks that could affect the timely implementation of the future actions described above as well as measures the Company has or will take to mitigate these risks.

Risk	Mitigation
Changes in annual load forecasting and load relief needs	• Continue to manage the process of balancing the necessary lead time required to identify, solicit, and implement an NWS portfolio against potential changes in load relief needs.
Changes in policies for valuing and implementing DER in beneficial locations	• Continue collaborating with the Joint Utilities, Authorities Having Jurisdiction, and other stakeholders to identify any such situation and plan to address any issues or concerns as they arise.
Changes to BCA requirements	• Continue to monitor the progress of the Marginal Cost of Energy Services study and any subsequent changes to the BCA as this may impact portfolio makeup. • Continue to work with the Joint Utilities to share best practices on NWS procurement and implementation processes.

Stakeholder Interface

Con Edison will continue engaging stakeholders through the relevant Joint Utilities working groups, including a focus on DER sourcing and NWS, hosting capacity, forecasting, and the Value of Distributed Energy Resources Value Stack. On a more direct level, the Company will continue one-on-one and group communications with NWS bidders to identify opportunities for enhancements in future NWS solicitations.

The Company participates in the annual New York Battery and Energy Storage Technology Energy Storage Day to discuss a range of NWS topics. Other key stakeholders that Con Edison interacts with include CUNY, Fire Department of New York, Department of Buildings and the New York State Energy Research and Development Authority.

The Company's ongoing presence and strong relationships with stakeholders in NWS areas facilitate the ability to convene both formal and informal meetings. Depending on the type of program, this may include elected officials, local chambers of commerce, business improvement districts, local development corporations, not-for-profit community-based organizations, government entities such as community boards and the New York City Housing Authority, community housing associations, block associations, and tenant associations.

Regular engagement and the resulting communication and feedback with developers, vendors and other stakeholders is a major aspect of Con Edison's NWS programs. Developers and vendors provide guidance on continually changing criteria and needs for implementing successful DER projects. The agency and policy organizations listed above are important in directing Con Edison efforts to areas of opportunity that optimize overall project benefits.

The Company also continues to provide quarterly updates on NWS and BQDM implementation,[316] as well as annual implementation plans. Through these filings, the Company presents project-specific updates on the system need, load relief procured to date, and expenditures, as well as future planned implementation.

[316] The NWS quarterly reports and implementation plans are available by searching for Case 22-E-0064 on the DPS website. The BQDM quarterly report and implementation plans are available by searching for Case 14-E-0302 on the DPS website.

Additional Detail

This section responds to the questions in the DPS guidance specific to beneficial locations for DERs and NWS.

1) **Describe where and how developers and other stakeholders can access resources for:**

   a. **accessing up-to-date information about beneficial locations for DERs and/or energy efficiency measures; and**

The Company posts information about past and present NWS solicitations and programs on its website,[317] on the Joint Utilities website,[318] and on the PSC Document and Matter Management website.[319] Information on beneficial locations can also be accessed through the hosting capacity map, where developers can view if an address is within the boundaries of an existing NWS.

   b. **efficiently sorting and filtering locations by the type(s) of capability needed, the timing and amount of each needed capability, the type(s) and value of desired benefit, the serving substation, the circuit, and the geographic area.**

As noted in response to "1a)" above, the Company shares information on beneficial locations targeted for NWS through its NWS website and hosting capacity map. The NWS solicitations posted on the Company's website provide extensive detail on the system capability needed, the timing and amount of each needed capability, the serving substation and/or circuit, and the geographic area. The NWS solicitations also provide customer demographic information, including annualized consumption and peak and average billing demand. Additionally, the NWS projects value assets in accordance with the BCA Handbook.[320]

2) **Describe the means and methods for identifying and evaluating locations in the distribution system where:**

   a. **an NWA comprising one or more DERs and/or energy efficiency measures could timely reduce, delay, or eliminate the need for upgrading distribution infrastructure and/or materially benefit distribution system reliability, efficiency, and/or operations; and/or,**

The Company's capital budgeting approach seeks to identify the investments needed to meet customer expectations for safe and reliable service while moderating impacts to the customer bill. Con Edison initiates its annual planning cycle immediately following the summer operating period with the development of forecasts and identification of load relief needs. Planning continues over the next several months with the identification of risk reduction, new business, and other system investments. A proposed capital budget undergoes an optimization process during which time projects are ranked against investment criteria and funding goals. The five-year capital plan is reviewed by leadership for approval as the five-year capital plan which is presented to the Board in November. The Board formally approves the first year of the capital plan for the upcoming fiscal year in November, and the plan is then filed with the PSC the following February.[321] The capital plan is funded through the rate case with plans for the upcoming three-year rate period submitted to the PSC for approval. The projects funded in the rate agreement form the capital plan with years outside of the rate period showing the longer-range plans for the Company. During the rate period, the Company has the authority to reallocate capital to meet emergent needs and funding priorities. During the capital planning process, Company planners use load

[317] Con Edison Non-Wires Solutions website: https://www.coned.com/en/business-partners/business-opportunities/non-wires-solutions.
[318] Joint Utilities website: http://jointutilitiesofny.org/utility-specific-pages/.
[319] Matter Management Search: https://documents.dps.ny.gov/public/common/search.html.
[320] Note 306, *supra.*
[321] Con Edison 2016 Electric Rate Case & Con Edison 2019 Electric Rate Case, Report on 2019 Capital Expenditures and 2020-2024 Electric Capital Forecast (filed February 28, 2020).

flow modeling, network reliability modeling, and modeling of system performance to assess the current capability of existing distribution and substation assets to meet the forecasted load, based on the design criteria, type of asset, thermal ratings, and local power factors. For assets that are determined to be at risk of becoming overloaded during system peak conditions and under various contingencies, multiple load relief project options are identified to mitigate the overload.

The Company analyzes load relief needs at an area substation and sub-transmission level over a 10-year window and at a distribution-level feeder level for up to three years. The load relief projects (also referred to as system expansion projects) identified in the capital planning process are measured against the NWS suitability criteria to determine suitable NWS candidates. Specifically, the Company reviews the list of projects in the 10-year Load Relief Program and determines if the project: (1) is for load relief, (2) has enough lead time to pursue a NWS without foreclosing the opportunity to install a traditional solution if needed, and (3) meets the financial threshold, thus meeting the NWS suitability criteria. Table 36 presents Con Edison's current NWS suitability criteria.[322] Projects that do not meet some or all of the suitability criteria can also be evaluated as a potential NWS project if sufficient need is identified.

Table 36: Con Edison NWS Suitability Criteria

Criteria	Potential Elements Addressed	
Project Type Suitability	Project types include load relief or load relief in combination with reliability	
Timeline Suitability	Large Project: Projects that are on a major circuit or substation and above	36 to 60 months
	Small Project: Projects that are feeder level and below	18 to 24 months
Cost Suitability	Large Project: Projects that are on a major circuit or substation and above	No cost floor
	Small Project: Projects that are feeder level and below	Greater than or equal to $450,000

For projects satisfying the criteria, the Company defines the MW need and the time of day over which the relief is required, determines the total capacity of NWS needed to defer or avoid the traditional project(s), and defines the date(s) by which the relief is needed.

[322] The Joint Utilities submitted a compliance filing with individual utility-specific suitability criteria. Case 16-M-0411, *In the Matter of Distributed System Implementation Plans*, Joint Utilities Filing of Utility-Specific Implementation Matrices for Non-Wires Alternatives Suitability Criteria (dated March 1, 2017).

Following the identification of NWS suitable candidates, an assessment is conducted on each project to determine the feasibility of an NWS portfolio given the magnitude of anticipated deficiency, timing of the deficiency, and size of the service area impacted. The assessment leverages customer demographic and energy usage information, as well as historic program data to develop potential portfolio outcomes. This analysis facilitates identification of projects where NWS portfolios are infeasible and brings only viable solutions to the market.

Information about the capital project the Company seeks to avoid or defer is provided to the market via competitive solicitation. Based on responses, the Company evaluates the viability of implementing an NWS to meet the MW needs within the required timeframe and conducts a BCA informed by the BCA Handbook.

If the Company can assemble a feasible portfolio to meet the MW need and the NWS passes the SCT in the BCA, the Company procures the necessary solutions, files the BCA results, and begins implementation. If the Company is unable to assemble a feasible portfolio of cost-effective solutions, the Company pursues a traditional solution.

b. one or more DERs and/or energy efficiency measures including increased value-based customer incentives could reduce, delay, or eliminate the need for upgrading bulk electric system resources and/or materially benefit bulk electric system reliability, efficiency, and/or operations.

The identification of system needs at the bulk electric level follows the same process as described in the response to "2a)" above. In certain instances, traditional solutions identified during the capital planning process include both bulk electric and distribution system resources. For example, the Water Street and Plymouth Street NWS solved for a traditional solution that included upgrades required at the distribution area substation, as well as at the sub-transmission feeder supplying that substation. To date, there have been no projects that are solely dedicated to the bulk electric system and meet the NWS suitability criteria.

3) Describe how the NWA procurement process works within utility time constraints while enabling DER developers to properly prepare and propose NWA solutions which can be implemented in time to serve the system need. Details should include:

a. how utility and DER developer time and expense are minimized for each procurement transaction;

The Company has standardized procurement documentation to enable more efficient practices for the Company and developers, implementing cost-effective solutions and reduced processing times as part of the procurement process, where applicable. During past stakeholder engagement sessions, stakeholders discussed the time-frame for developers to respond to RFPs and generally agreed that additional time would result in higher quality proposals, recognizing that the appropriate response time depends on the type, size, and location of the project. In response, Con Edison extended its RFP response times from the 6 weeks initially allotted to 8-12 weeks in future procurements to balance the urgency of the need with providing RFP respondents the necessary time to develop a solution. In one-on-one discussions with various RFP respondents, the respondents generally agreed they are given sufficient time to prepare responses.

The Company's use of the feasibility assessment described in question "2a)" assists developers by avoiding projects with little to no likelihood of delivering a cost-effective, feasible portfolio. This saves time and expense for both developers and Con Edison.

Additionally, the Company's Prescriptive ESS Incentive offering was redesigned to initiate contracting with projects at certain standardized interconnection requirements milestones. This design component provided a higher level of certainty of project details at the time of contracting, with the goal of minimizing the investment of time and capital into projects that are at high risk of not meeting the load relief dates identified for the territory.

b. how standardized contracts and procurement methods are used across the utilities.

Best practices in both contracting and procurement are shared among the Joint Utilities. The Company is also a frequent participant in industry conferences, often hosted by Electric Utility Consultants Incorporated or the Electric Power Research Institute, to learn how other utilities are approaching this issue. The Company has also recently increased collaboration with Orange and Rockland.

4) Describe where and how DER developers and other stakeholders can access up-to-date information about current NWA project opportunities.

Current NWS project opportunities are widely publicized to promote broad awareness and advanced notice of upcoming market opportunities. NWS solicitations are available at the following online resources:

- Con Edison website: https://www.coned.com/nonwires
- Con Edison hosting capacity maps: https://www.coned.com/en/business-partners/hosting-capacity
- Joint Utilities of New York central data portal: http://jointutilitiesofny.org/utility-specific-pages/nwa-opportunities/
- Filed with the PSC under the generic REV proceeding (Case No. 14-M-0101) and Con Edison's rate case proceedings (Case No. 16-E-0060, Case No. 19-E-0065, and Case No. 22-E-0064)

5) Describe how the utility considers all aspects of operational criteria and public policy goals when deciding what to procure as part of a NWA solution.

One of the key priorities in building an NWS portfolio is maintaining system reliability. All NWS portfolios are expected to meet the system need; those that do are then evaluated using the BCA Handbook. The technology solutions considered are informed by market responses to solicitations (e.g., requests for information and RFPs). However, the Company has encouraged innovative solutions in recent solicitations and optimizes portfolios based on a set of criteria as listed below to provide a diverse, reliable, and cost-effective portfolio to balance delivery risk and optimize offerings for customers.

The Company defines innovative solutions as solutions that: (1) target customers and use technologies that are currently not part of Con Edison's existing programs, (2) target generally underserved customer segments, and/or (3) are based on the use of advanced and innovative technology that help foster new DER markets and provide potential future lessons learned. In practice, the Company is receiving proposals and building balanced portfolios that incorporate EE, ESS, and other demand management solutions, thus helping to meet public policy goals. Proposals are generally evaluated using the following criteria:

- Proposal content and presentation
- Project costs
- BCA
- Execution risk
- Respondent qualifications
- Customer acquisition
- Timeliness
- Coincidence with peak and deficiency period
- Technology viability
- Community impact
- Innovative solutions (e.g., underserved customer segment and criteria mentioned above)

Considerations for assembling a NWS portfolio include, but are not limited to, the ability of the solutions to meet the identified load relief at the network peak and for the duration of the overload, cost-effectiveness, execution risk of the various solutions, and the ability to achieve a SCT score of 1.0 or greater as required by the PSC. Where the proposals received have been insufficient to meet the need and there is adequate lead time, the Company may pursue other buying strategies. Examples of how the Company has been creative in assembling viable NWS portfolios include providing scoring criteria that reward innovative solutions and releasing technology-specific RFPs.

6) Describe where, how, and when the utility will provide DER developers and other stakeholders with a resource for accessing up-to-date information about all completed and in-progress NWA projects. The information provided for each project should:

a. describe the location, type, size, and timing of the system need addressed by the project;

The Company's NWS website contains the solicitation documents for completed and in-progress NWS projects. Additionally, the Company files NWS quarterly reports in Case No. 22-E-0064 (the previous rate case). The Company files BQDM reports in Case No. 14-E-0302.

b. provide the amount of traditional solution cost that was/will be avoided;

Con Edison does not provide the cost of the traditional solution. Revealing the traditional solution cost could result in suboptimal procurement results to the detriment of utility customers.

c. explain how the selected NWA solution enables the savings; and

Con Edison provides information on the expected load reduction for each solution in the annual NWS implementation plans and achievements on load reductions in the quarterly reports, referenced in the response question to "6a)" above.

d. describe the structure and functional characteristics of the procurement transaction between the utility and the solution provider(s).

The Company interprets this question to refer to information about the procurement mechanism, such as an RFP or auction. This information is available in the solicitation documents available on the Company's NWS website and quarterly and annual reports.

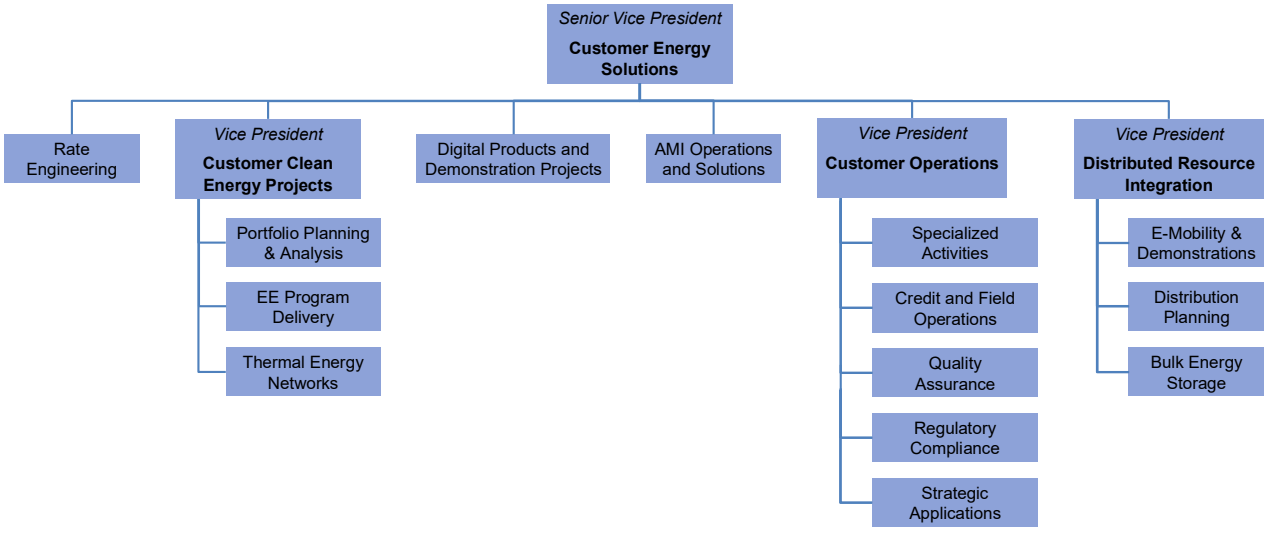
3. OTHER DSIP-RELATED INFORMATION

3.1. DSIP GOVERNANCE

Con Edison's organizational structure brings together policy, business, and technical experts to support more holistic approaches to Reforming the Energy Vision ("REV") implementation and improve the customer experience. Effective November 1, 2017, realignments in Con Edison's organizational structure resulted in the formation of the Customer Energy Solutions ("CES") organization. The CES organization guides the Company's overall clean and distributed energy strategy and is leading the Company to evolve its energy business to become cleaner, adapt its business model to be more innovative, and transform the customer experience to provide best-in-class service. The group is focused on expanding customer choice, enhancing the customer experience, and fostering customer engagement, including integrating distributed energy resources ("DER") and other customer-facing technologies, and supporting markets for new customer products and services. To improve this focus, the Company has established a Vice President of Customer Clean Energy Programs, who focuses on portfolio analysis of customer-facing programs, delivery of energy efficiency ("EE") and clean heat programs, and the development of utility thermal energy networks. The CES organization also consolidates distributed resource integration functions under a vice president, who is responsible for e-mobility, distribution planning, and bulk energy storage.

In 2024, the Company integrated Customer Operations into CES, reinforcing the link between the traditional customer operations functions (e.g., billing, call center, website) and clean energy programs. These organizational changes reflect Con Edison's commitment to a clean energy transition and emphasize critical policy priorities like EE, clean heat, energy storage, and electric vehicles ("EV"), and more closely couple customer programs to the billing and compensation functions. CES further unites a broader set of functions that influence the customer experience, including AMI operations and solutions, digital products and demonstration projects, and rate engineering. Figure 45 shows the business functions that fall within CES and report to the Senior Vice President of CES, who directly reports to the President of CECONY.

Figure 45: CES Organizational Structure



Organizational adjustments are enacted within CES to further align functions and support greater efficiencies, occasionally resulting in the formation of new groups. For example, to execute the EV-enabling programs discussed in the 2.5 Electric Vehicle Integration, CES formed an e-mobility team to design and develop EV programs and rate

options. Additionally, the digital products and demonstration projects team was formed to deliver clean energy-enabling technologies, such as the distributed energy resource management system discussed in **2.3 Grid Operations**.

These organizational changes demonstrate the Company's commitment to accountability, intra-company coordination, and standardization where possible and where it results in greater efficiency. Through greater institutional coordination and communication, the Company can better disseminate best practices and lessons learned, driving a culture of continuous improvement.

At the executive level, formal committees provide strategic direction on Company initiatives, including Distributed System Platform ("DSP") development and grid modernization, and the necessary approvals to proceed. Executives from the relevant business areas participate to exchange information and represent a variety of perspectives to further inform decision-making.

This organization and committee structure align the people, processes, and technologies to facilitate DSP development and provides the appropriate oversight and management of DSP-related work streams and functions. Core DSP work streams like hosting capacity, modernizing protective relays, and supervisory control and data acquisition and metering upgrades, are managed by dedicated project managers within Distribution Planning. Currently, Distribution Planning has primary responsibility for developing the Distribution System Implementation Plan ("DSIP"), with input from other groups, internal and external to CES.

The DSIP serves as a core planning document for the Company, outlining its plans across DER integration, information sharing, and market services over the course of the next five years based on current Company and New York State priorities and objectives. Through the Grid of the Future ("GOTF") proceeding, the Company will continue its development of the DSP through the definition of utility capabilities and architectures needed to deploy and utilize flexible resources to meet grid needs. Future DSIPs will detail the Company's progress in building these capabilities and the grid, digital, and commercial architectures, as directed by the Public Service Commission ("PSC"). Finally, while the Company's DSIP is separate and distinct from its rate case, the DSIP will ultimately serve to inform subsequent rate case filings. The Company's current rate case filing builds from the five-year plan within the DSIP and incorporates additional inputs from other regulatory, policy, and litigation processes to prioritize investments for which the Company will seek cost recovery.

Joint Utilities Collaboration

The Joint Utilities are working together to foster common and consistent approaches, tools, and methodologies that will support statewide markets for DER products and services and help reduce transaction costs for third-party providers. The Joint Utilities strive for standardization where possible, recognizing that the utilities are diverse in their service territories, grid configurations, data availability, and the degree of development of existing capabilities. The Joint Utilities also regularly share lessons learned from demonstration projects and ongoing efforts implementing REV.

In 2014, each utility appointed leaders to serve on the REV Leadership Team ("RLT"), which meets twice per month to raise awareness of emerging issues, collaborate on shared initiatives, and work toward alignment on the way the Joint Utilities plan for and transition to their new roles as DSP operators. The RLT established two committees—the Regulatory Policy Committee ("RPC") and DSP Steering Committee. The RPC coordinates the Joint Utilities' efforts in policy and rate-related proceedings that fall under the larger REV framework. The DSP Steering Committee discusses strategic issues affecting the Joint Utilities and makes collective decisions on behalf of the Joint Utilities. The Steering Committee meets monthly.

The Steering Committee oversees topic-specific implementation for several Joint Utilities working groups, including:

- Grid of the Future
- Integrated Planning
- Interconnection
- DER Sourcing
- Independent System Operator-DSP Coordination
- Electric Vehicles
- Community Distributed Generation Billing and Crediting
- Information Sharing (IEDR)

These working groups, staffed by utility subject matter experts, were formed to discuss specific technical details, share best practices, and reach common recommendations on how to implement DSP functions. To support these collaborative processes across the six companies, the Joint Utilities retained a consultant to provide project management office functions and technical expertise, as well as coordination of the implementation working groups and related stakeholder engagement efforts.

To improve transparency and facilitate information sharing, the Joint Utilities collectively maintains and regularly updates their website (www.jointutilitiesofny.org) with valuable resources for interested parties. For example, the utilities post a quarterly summary of current Joint Utilities DSP enablement activities to the website homepage each month to keep third parties informed of efforts to advance DSP implementation. The Joint Utilities enhanced their website by compiling utility-specific links for hosting capacity, system data, EVs, and NWS opportunities. The website also serves as a valuable repository for stakeholder information, providing key policy and regulatory documents, detailing past stakeholder meetings, summarizing inputs that stakeholders have previously provided and next steps for addressing them, and providing links to other resources such as NY Grid Connect. The Joint Utilities welcome suggestions to enrich the website through their email address at: info@jointutilitiesofny.org.

3.2. MCOS STUDY

The 2023 DSIP Guidance requires utilities to include a publicly accessible web link to the latest version of the utility's MCOS Study. Con Edison's latest approved MCOS study was filed in the MCOS proceeding and VDER proceeding and is available by searching for Case 16-M-0411, 19-E-0283 or 15-E-0751 on the DPS website found here: https://documents.dps.ny.gov/public/common/search.html.

3.3. BENEFIT COST ANALYSIS

The 2023 DSIP Guidance requires utilities to include a publicly accessible web link to the latest version of the utility's BCA Handbook. The Company's current version, Con Edison's Electric BCA Handbook v5.0, is available by searching for Case 16-M-0411 or Case 14-M-0101 on the DPS website found here: https://documents.dps.ny.gov/public/common/search.html.

3.4. UTILITY CODE OF CONDUCT (AFFILIATE TRANSACTIONS POLICY)

As directed by the Commission in its Order Setting Standards for Codes of Conduct, Con Edison currently provides training covering the rules about information sharing between regulated utilities and competitive energy affiliates. Designated Con Edison employees that interact with DERs and other competitive energy companies are required to take this training course annually. The training requirement is included in the Company's Affiliate Transactions Policy.

In the Code of Conduct Order, the Commission also required Con Edison to include any code of conduct modifications with its biannual DSIP filings. On March 1, 2023, Consolidated Edison Inc. ("CEI") successfully completed the sale of its wholly owned subsidiary, Con Edison Clean Energy Businesses, Inc., including the transfer of substantially all of its assets to RWE Renewables America, LLC. Currently, the Company does not have any competitive energy affiliates and accordingly has will suspended the code of conduct training.

Con Edison will provide notice to the Commission of any new competitive energy affiliates for the Company and in such event will update and reinstitute the code of conduct training accordingly.

APPENDIX A: PEAK LOAD AND DER FORECAST DETAILS

The forecast data is organized in the sections below as follows:

- System level forecasts
  - 5-year peak demand forecast
  - 10-year peak demand forecast
  - 5-year energy forecast
- Network area forecasts
  - 10-year independent peak demand forecast
- Distributed Energy Resources ("DER") forecasts
  - Demand Side Management ("DSM") (including energy efficiency ("EE") and demand response ("DR"))
  - Distributed Generation ("DG") (including photovoltaic ("PV"), combined heat & power ("CHP"), other generation, and battery energy storage systems ("BESS"))

System Forecasts

Forecast of System Peak Demand Growth

Every year, following the summer peak season, the Company produces a series of forecasts to guide the next planning cycle, including 20-year electric system peak demand forecasts and a 5-year system energy forecast. The single electric system peak hour (system-wide and by network load area) developed as part of the peak demand forecast sets the design point for maintaining system reliability.

These forecasts are developed using a hybrid of top-down and bottom-up methodologies, which improves forecasting accuracy by allowing for cross-referencing of meter data and queued projects with overall macro-economic trends. Additionally, by comparing the top-down system-wide peak load analysis to the bottom-up network peak load analyses, the Company can verify the allocations of load in its annual peak load forecast.

The electric peak demand forecast is produced by adding incremental MW demand growth of key customer sectors: residential, commercial, and governmental. Along with sector demand growth, non-sector-specific technology-driven load growth is also added, such as electric vehicles ("EV"), building electrification ("BE"), or conversions from steam to electric air conditioning ("A/C").

To determine residential sector growth, the Company analyzes both job queue data for residential applications of new services and service modifications as well as top-down econometric models which considers various economic indicators which may include number of households, real disposable income, and gross metro product. To determine commercial sector demand growth, the Company also assesses applications for new and modified service requests as well as commercial top-down econometric models which may consider economic data such as number of customers, employment, and gross metro product. The forecast of residential and commercial sector growth often displays a mix of top-down and bottom-up approaches. Similarly, governmental sector demand growth is calculated by aggregating announced projects for the initial years of the system forecast (bottom-up methodology), before switching to a top-down approach in later years.

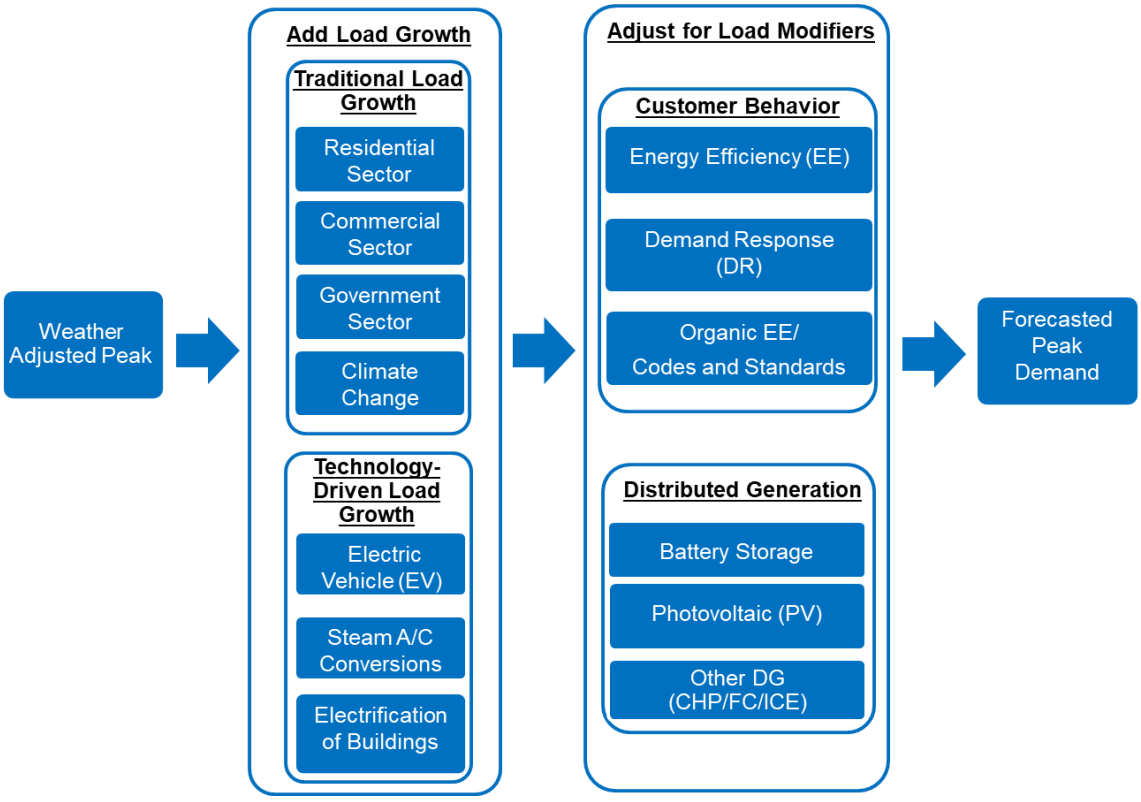
There are various DER measures that offset demand, such as EE, DR, DG/CHP, PV, BESS, and targeted load relief programs, collectively referred to as negative load modifiers. Organic EE was added as a load modifier in the fall 2017 forecast. DER are forecasted using primarily bottom-up methodologies by counting projects or program totals for both system and network forecasts. EE and DR forecasts are based on program-level projections based on historical and expected future performance. PV, DG/CHP, and BESS are forecasted using cumulative historical penetration, known

queued projects, and extrapolated future growth rates. The details and underlying assumptions regarding the forecasting of DER will be described in greater detail below in the DER Forecasts section.

The positive load modifiers, EVs, steam to electric A/C and BE, are also forecasted using a bottom-up methodology. EV forecasting is based on current registration data from the Department of Motor Vehicles, expected growth rates based on State goals and outside studies,[323] and the assumed average kW per vehicle. Steam to A/C conversions are driven by steam chillers replacement with electric chillers. Incremental load growth from steam to electric A/C is based on the aggregation of all customer conversions. BE forecast converts fossil fuel equipment in buildings to electric usage within the CECONY service territory over a 20-year horizon. This forecast includes the Electrification of Heating in winter and Electrification of Non-space Heating, which covers equipment such as water heaters, dryers, and stoves throughout the year.

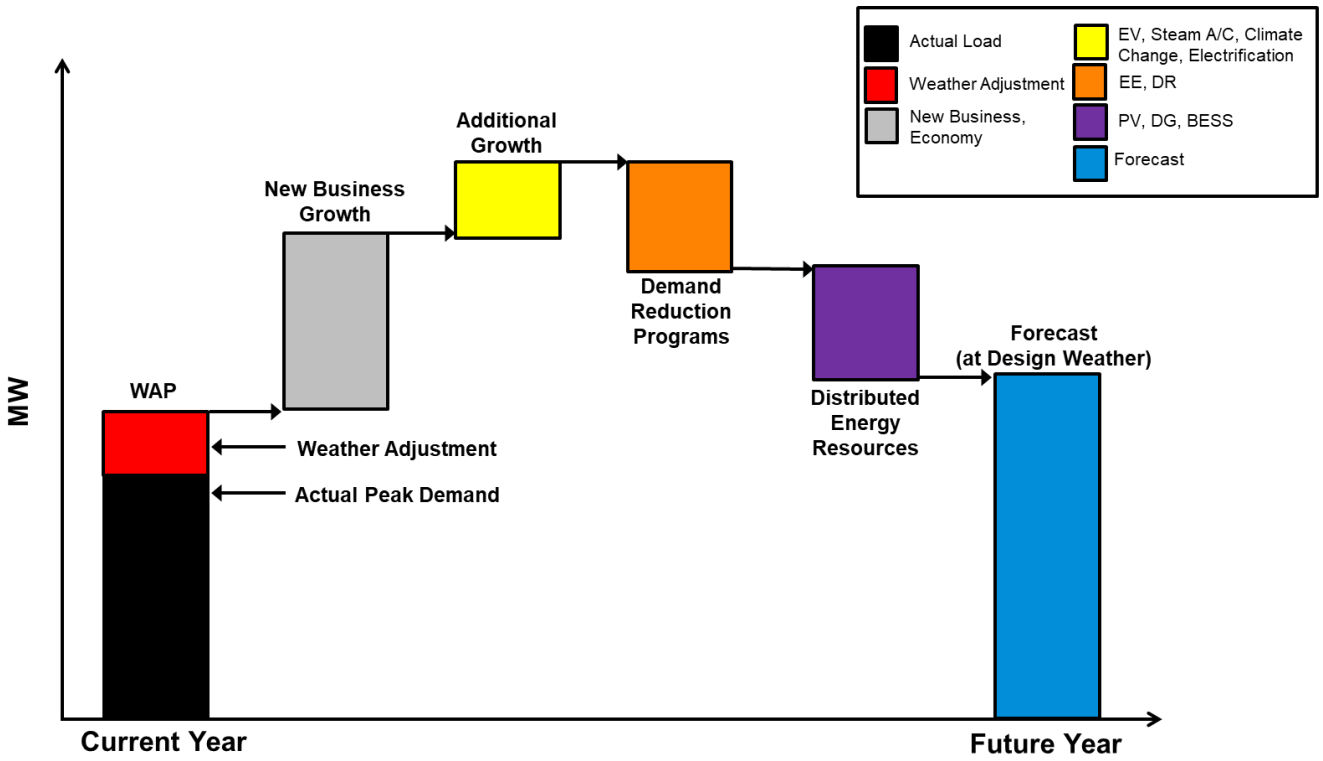
As noted above, the forecasts generally consider both top-down methodology, which takes a holistic view of macro-economic conditions that influence electric demand, as well as bottom-up methodologies which are used when there is sufficient data available to build a forecast. The combination of top-down and bottom-up works well for forecasting demand growth, as it allows cross-referencing of the meter data and queued projects with the overall macro-economic trends. Figure 46 and Figure 47 show the basic process of producing a system peak forecast.

Figure 46: System Peak Forecasting Process – Sumer Peak



[323] M.J. Bradley & Associates, *Plug-in Electric Vehicle Cost-Benefit Analysis: New York* (July 2018): https://www.erm.com/globalassets/documents/mjba-archive/reports/2018/mn-pev-cb-analysis-final-15aug18.pdf.

Figure 47: Illustrative Process of Adjusting Forecasting (not to scale)



Five-Year System Peak Demand Forecast

The following five-year system peak demand forecast was issued in November 2024 and covers the years 2025 to 2029. **Table 37** shows the overall forecasted electric system load growth, with a CAGR of 1 percent over the 5-year period.

Table 37: 2024 Electric Five-Year System Peak Demand Forecast – Summer Peak (MW)

		2024	2025	2026	2027	2028	2029
1	**WAP/ Load Growth Forecast**	**12,540**	**12,746**	**12,968**	**13,204**	**13,376**	**13,612**
2	MW Growth		206	221	236	172	236
3	% Growth		1.6%	1.7%	1.8%	1.3%	1.8%
4	**Additional MW Growth (Rolling Incremental)**						
5	BE		25	57	86	118	143
6	EV		83	156	230	311	404
7	Steam A/C Conversion		6	13	19	25	32
8	**Load Modifiers (Rolling Incremental)**						
9	PV		-63	-121	-162	-196	-224
10	DG/CHP		-16	-25	-31	-33	-38
11	BESS		-17	-46	-85	-120	-145
12	Organic EE/ Codes and Standards		-71	-131	-185	-247	-307
13	**Coincident DSM (Incremental)**						
14	Con Edison EE		-76	-37	-43	-43	-43
15	NYSERDA EE		-6	-3	-2	-2	-2
16	NYPA		-6	-6	-6	-6	-6
17	DR		0	0	0	0	0
18	Total Incremental DSM		-87	-46	-51	-52	-51
19	Rolling Incremental DSM		-87	-134	-185	-237	-288
20	**System Forecast net of both positive and negative modifiers**		**12,607**	**12,738**	**12,891**	**12,999**	**13,190**
21	MW Growth		67	131	153	108	191
22	**Rounded System Forecast net of both positive and negative modifiers**		**12,610**	**12,740**	**12,890**	**13,000**	**13,190**
23	MW Growth (Rounded)		70	130	150	110	190
24	% Growth		*0.6%*	*1.0%*	*1.2%*	*0.9%*	*1.5%*

Note: 2025 demand is weather adjusted

System Forecast Line-Item Descriptions

Line 1: Weather-adjusted peak ("WAP")/Load Growth Forecast: WAP in 2024, new business load growth forecasts in 2025 and beyond.

Line 2: MW Growth: Incremental growth of residential, commercial, and governmental sectors

Line 3: Percentage Growth: Growth as a percentage of the base

Line 5: BE – The rolling incremental load growth associated with electrifying fossil fuel equipment

Line 6: EV – The rolling incremental load growth associated with EV charging

Line 7: Steam A/C Conversion – The rolling incremental load growth associated with customers converting steam chillers to electric air-conditioning

Line 9: PV – The rolling incremental effect of the solar units (PV) coincident with peak hour demand

Line 10: DG/CHP – The peak load reduction associated with non-solar generators (*e.g.*, CHP, gas turbines, *etc*.)

Line 11: BESS – The peak load reduction associated with appropriately rated batteries

Line 12: Organic EE/ Codes and Standards – The peak load reduction associated with appropriately estimated Organic EE/ Codes and Standards

Line 14: Con Edison EE: Incremental forecasted system coincident demand reductions from Con Edison's EE programs

Line 15: New York State Research and Development Authority ("NYSERDA") EE: Annual incremental forecasted system coincident demand reductions from NYSERDA's EE programs

Line 16: New York Power Authority ("NYPA"): Annual incremental forecasted system coincident demand reductions from NYPA EE/ demand management ("DM") projects

Line 17: DR: Annual incremental forecasted system coincident demand reductions from Con Edison's commercial and residential DR programs, not including the New York Independent System Operator ("NYISO") DR

Line 18: Total DSM - Annual sum of peak reduction programs

Line 19: Rolling Incremental DSM – Total sum of new (*i.e.,* not baked into the previous year's WAP) peak reduction programs, including the previous year

Line 20: System Forecast less DSM, less DG/CHP, PV, and Battery Storage + BE + EVs + Steam A/C – System forecast including all rolling incremental growth and load modifiers

Line 21: MW Growth – Net growth; sector growth plus technology driven growth less DER load modifiers

Line 22: Rounded System Forecast net of positive and negative load modifiers to the nearest 10 MW

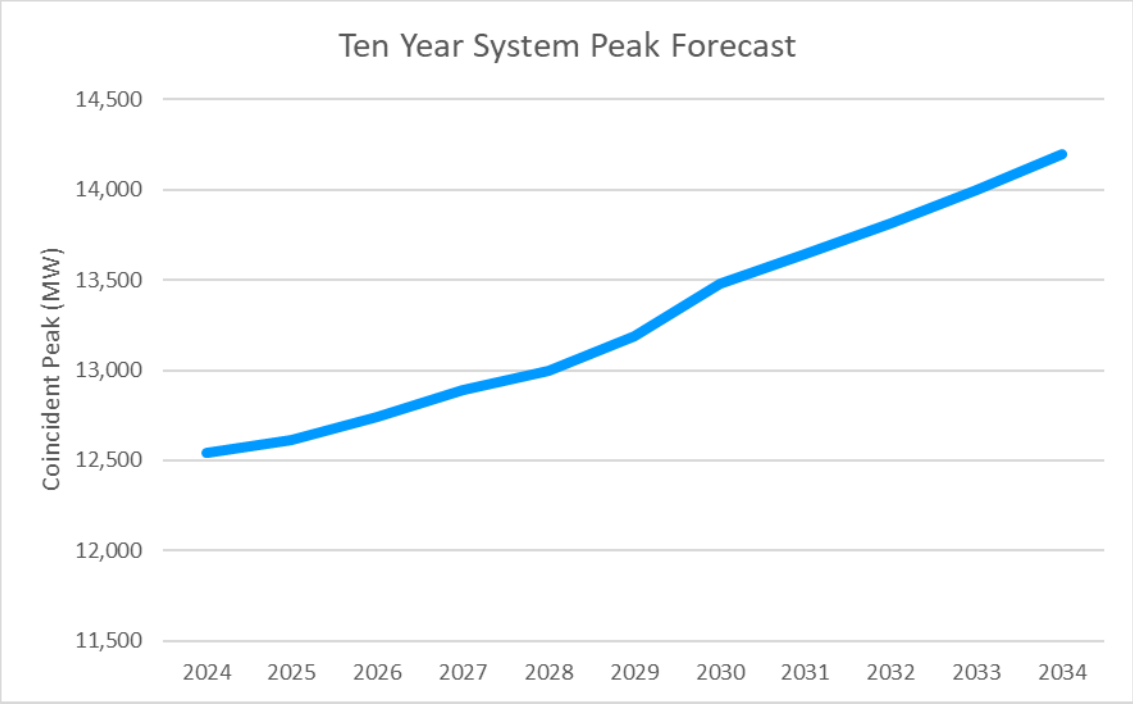
Line 23: MW Growth (Rounded): Net growth rounded to the nearest 10 MW; sector growth plus technology driven growth less DER load modifiers

Line 24: Percentage Growth – Rounded MW Growth as a percentage of the rounded system forecast

10-Year System Peak Demand Forecast

The following 10-year system peak demand forecast was issued in November 2024 and covers the years 2025 to 2034. **Figure 48** shows the 10-year CAGR is 1.3 percent, resulting in a 2034 system coincident peak of 14,200 MW. This is a 250 MW increase compared to the 2023 forecast. While EVs, BE, and new business growth are contributing to an increase in load, this increase is offset by forecasted load reductions from DSM, PV, DG, and BESS and the addition of organic EE/Codes and Standards as negative load modifiers.

Figure 48: 10-Year System Coincident Peak Demand Forecast



5-Year CAGR (2025-2029)	**1.0%**
10-Year CAGR (2025-2034)	**1.3%**

Five-Year System Energy Forecast

The current delivery volume forecast for Con Edison's service classes reflects an approximate 0.4 percent decline in sales over the five-year period. Increased BE and EVs are offset by EE as well as projected growth in PV which are contributing downward pressures in the forecast.

The forecasts of delivery volumes for major service classifications[324] are based on econometric models, whereas the forecasts of delivery volumes for the other service classifications are performed on a deterministic or individual service class basis. The delivery volume forecast for Con Edison customers includes the following adjustments, described in greater detail in the DER Forecasts section:

- PV Generation: To account for the projected delivery volumes associated with the installation of solar panels by customers who will then generate a portion or all of their energy requirements
- Standby Service: To reflect the projected delivery volumes from customers who plan to convert a portion, or all, of their existing load to onsite generation and will become standby service customers
- DSM Programs: To account for expected energy reductions resulting from EE
- EV: To account for the delivery volumes associated with the impact of charging of both light-duty and medium/heavy-duty electric vehicles

[324] SC 1 (Residential), SC 2 (Small Commercial), SC 5 (Railroad Platform and Stations Lightings), SC 6 (New York City Private Street Lighting), SC 8 (Master Metered Apartments), SC 9 (Large Commercial), and SC 12 (Multiple Dwelling Space Heating). NYPA Service Classes are also included in the energy forecast by service class: SC 62 (General Small), SC 66 (Westchester Street Lighting), SC 80 (New York City Street Lighting), SC 91 (NYC Public Buildings), and KIAC (Kennedy International Airport Cogeneration).

- BE: To account for increased delivery volumes due to electrification of building systems that previously relied on fossil fuels
- BESS: To account for the net delivery volumes added associated with charge and discharge cycles of BESS
- Steam Air Conditioning Conversions: To account for customers converting their steam chillers with electric chillers

The five-year system energy forecast is shown below in Table 38.

Table 38: Five-Year System Energy Forecast (GWh)

	2025	2026	2027	2028	2029
Con Edison	42,783	43,024	43,248	43,836	44,266
NYPA	8,997	8,987	8,954	8,961	8,917
Recharge New York	682	682	682	682	682
Total	**52,462**	**52,693**	**52,884**	**53,479**	**53,865**

Network Load Area Independent Peak Demand Forecasts

Con Edison also prepares distribution load area (network and radial) level peak demand forecasts, which roll up to the substation level. Networks are forecasted both for their independent peaks (termed “Independent Network Peak Forecast”), which may differ from the system peak hour and can vary among networks, and for their coincidence with the system peak (termed “Coincident Network Peak Forecast”). Similar to the system demand forecast, the loads are modified to account for any applicable reductions for DER-related programs and other load growth (EE, PV, BESS, DG/CHP, BE, EVs and steam A/C to electric A/C). The Network Forecasts are developed in parallel with the System Forecast during the early fall to incorporate the most recent summer experience. However, the Coincident Network Peak Forecast requires some parameters determined in the System Forecast, so it cannot be finalized until after the System Forecast is complete.

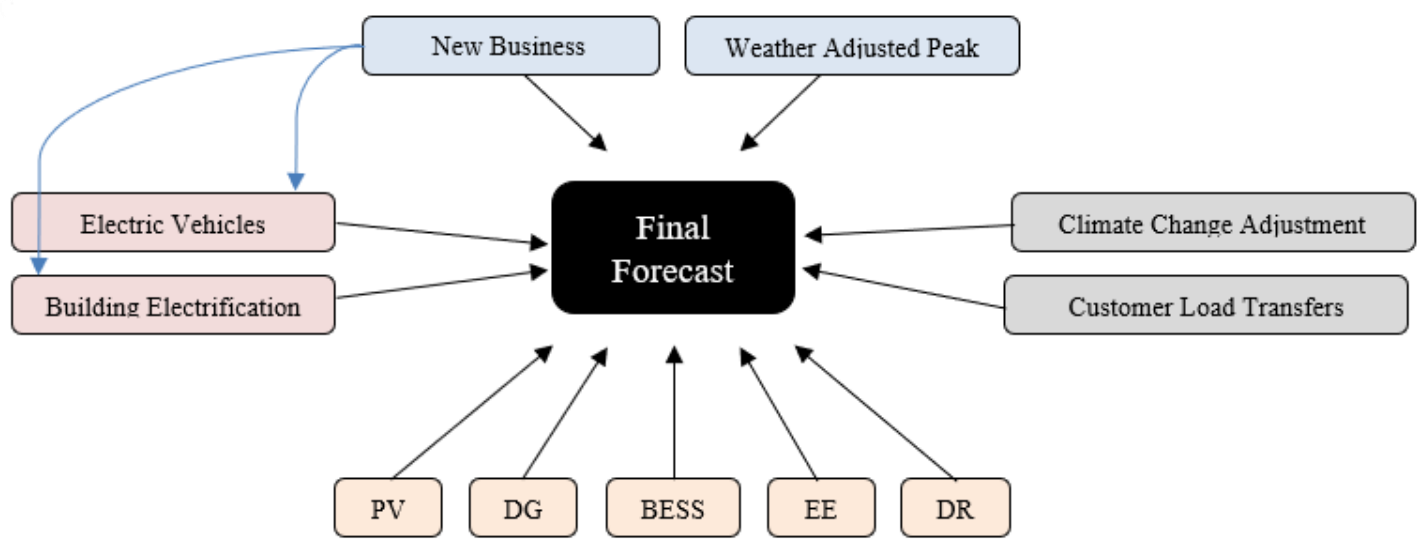
For the Independent Network Peak Forecast, the new business growth for the first five years is developed using a bottom-up approach where the Company has insight on upcoming new business jobs for each sector. This results in a more accurate forecast because the macroeconomic factors used to determine top-down growth cannot be finely parsed across the network and radial areas. "New service” new business jobs greater than 100 kVA and “additional service” new business jobs greater than 300 kVA within the electric service territory are evaluated by the Company’s SMEs in the Energy Services and Customer Engineering Departments to determine the total load, the network location, and timeline for when it will come online. In addition, the Company maintains a separate list for non-Customer Project Manager System jobs that are initiated outside the typical process. Beyond the fifth year, the top-down approach is applied, with the system level growth allocated to each network based on the network’s contribution to the first five years of growth. There are some exceptions in which the bottom-up methodology is still used beyond the fifth year if it results in a higher estimated network growth than the top-down methodology.

The backbone load for the network forecast is developed by adding the New Business growth to the WAP. The final Independent Network Peak Forecast is developed by adding the net of the load modifiers to the backbone forecast. Each network’s peak hour will inform localized infrastructure investment decisions.

The Coincident Network Peak Forecast, which uses the Independent Network Peak Forecast as a starting point, evaluates the networks’ expected load during the system peak hour. The annual coincident growth (or base load) is developed using the annual growth of each network (derived from the Independent Network Peak Forecast), the total system growth minus transmission losses, and the ratio of the independent growth of each network to the sum of all independent growth. Once the network coincident forecast is developed, it must be verified that the independent

forecast is higher than or equal to the coincident forecast. Once verified, the Independent Network Peak Forecast and Coincident Network Peak Forecast can be finalized. Figure 49 provides an overview of the network forecasting process.

Figure 49: Electric Network Peak Demand Forecast Process



The Company also prepares forecasted network-level 24-hour peak load duration curves and network level 24-hour minimum load duration curves, which are available through the Company's hosting capacity maps. Additionally, the Company provides historical 8,760 hour load data for each network as part of the system data pop-ups in its online hosting capacity maps.

Distributed Energy Resources Forecasts

Increased adoption of DER will introduce new challenges for maintaining forecasting accuracy due to uncertainties associated with the variability of DER output, its evolving correlation with net load, and the impact of geographic diversity on aggregate DER output. These new DER will have locational-specific impacts determined in part by the ways in which penetration rates evolve in each part of the distribution system. As a result, increasing levels of DER will drive the need for forecasting of future net load levels at more granular levels. For example, pairing top-down econometric forecasting approaches with more granular forecasts will enable planners to evaluate distribution system needs more accurately as DER penetration increases. These more granular load forecasts consider economic indicators and analyze load shapes based on the characteristics of individual loads or local areas. The development of these approaches for forecasting both load and DER output will enable more accurate representation of the system at varying load levels to help planners understand when and where constraints may emerge.

Within internal planning processes, DER are organized into one of two subgroups: DSM or DG. DSM includes both EE programs, DM, and DR. The DG group includes subset types of DG, namely PV, CHP or other spinning generators (DG/CHP), and BESS. The performance and behavior of DER drives the load shape, peak value, and hour of the peak. Pinpointing these values increases forecast accuracy, while uncertainty in DER quantities, locations, and timing drives forecast error.

Demand Side Management Programs

Expected energy savings from EE and DM programs are distributed across the electric networks in the forecast using planned program growth, historical consumption data, and customer demographic information. These energy savings are then converted to peak demand savings using annual hourly load curves, which vary with the measures and specific

customer segment related to each program. A geographic uncertainty factor is applied to the expected demand reductions to reflect the uncertainty of where the future savings from system-wide programs will be realized.

Incremental EE program savings are projected annually into the future as far out as the programs are funded or highly likely to be funded. Excluded from the forecast are impacts of codes and standards or naturally occurring EE implemented outside of programs, although these effects are captured in a separate load modifier (Organic EE/Codes and Standards).

For DM and DR programs, forecast data come from internal program managers who gather information from their implementation contractors and market participants. Future volume and demand reductions are tied to filed and approved program goals and budgets adjusted by historic performance and future performance expectations. For DR programs, discount factors are applied to enrolled MW for network forecasts based on the size and diversity of enrollments in each individual network. DR programs are not included in the volume forecast because the energy savings are both uncertain (programs may or may not be called) and *de minimis* (even if events are called).

The 2024 electric system peak demand forecast for DSM programs is shown in Table 39 and the delivery volume adjustments by service class for DSM programs is shown in Table 40.

Table 39: 2024 Electric System Peak Demand Forecast – DSM Programs (MW)

Line	Program	2023	2024	2025	2026	2027
14	Con Edison EE	-57	-44	-58	-84	-86
15	NYSERDA EE	-11	-6	-5	-3	-1
16	NYPA	-7	-2	-3	-3	-3
20	DR	0	0	0	0	0
21	Total Incremental DSM	-80	-56	-66	-90	-91
22	Rolling Incremental DSM	-80	-135	-201	-291	-382

Table 40: Delivery Volume Adjustments by Service Class – DSM Programs (GWh)

Delivery Volume Adjustments (GWh) – DSM Programs		2023	2024	2025	2026	2027
Con Edison	Total	-841	-1,203	-1,639	-1,928	-2,047
NYPA	Total	-200	-280	-388	-454	-478
System	Total	-1,041	-1,483	-2,027	-2,382	-2,525

Table 41 lists the specific DSM programs included in the forecasts.

Table 41: DSM Programs Included in the Forecast

EE	DM	DR[325]
Con Edison Electric Programs • Small Business Direct Install • Multifamily • Commercial & Industrial Equipment Rebate • Commercial & Industrial Custom Efficiency • Residential Electric **NYSERDA Clean Energy Fund[326]** • Residential Sector • Multifamily Sector • Commercial Sector **NYPA Programs** • BuildSmart NY	**Con Edison Electric Programs** • Brooklyn Queens Demand Management ("BQDM") • Targeted Demand Management Projects	**Con Edison Electric Programs** • Commercial System Relief Program – Reservation Payment Option • Direct Load Control Program

Distributed Generation

DG is included in demand and energy forecasts. For purposes of forecasting, DG is defined as DER capable of operating in parallel with the grid and exporting power back, including solar PV, CHP, and other rotating generation and fuel cells (DG/CHP), and BESS, which represent the overwhelming majority of DG in the Con Edison service territory.

Solar PV

The forecasting of solar PV, as with other DER, involves determining both the impact of the DER and the future growth rate. To assess the impact of currently deployed solar PV, the Company collects AC nameplate kW capacity and application of PV jobs in the interconnection queue from the interconnection processing system. The Company also analyzes available solar output per hour data and the location of the PV projects. The solar output for each hour is determined by reviewing interval data and is representative of three summer months of data (June 1 – August 31st) for past three years across a sample set of PV sites with dedicated panel telemetry available through AMI data. Figure 50 shows the output curve and Table 42 shows the average summer solar output for large PV above 25 kW.

[325] Excluded DR programs include DLRP and CSRP Voluntary Participation Options, DLRP Reservation Payment Option, and NYISO DR Programs ("SCR").

[326] Case 14-M-0094, *Proceeding on Motion of the Commission to Consider a Clean Energy Fund*, Order Commencing Proceeding (issued May 8, 2014).

Figure 50: Measured Solar Output Curve Using Sampled Interval Meter Data

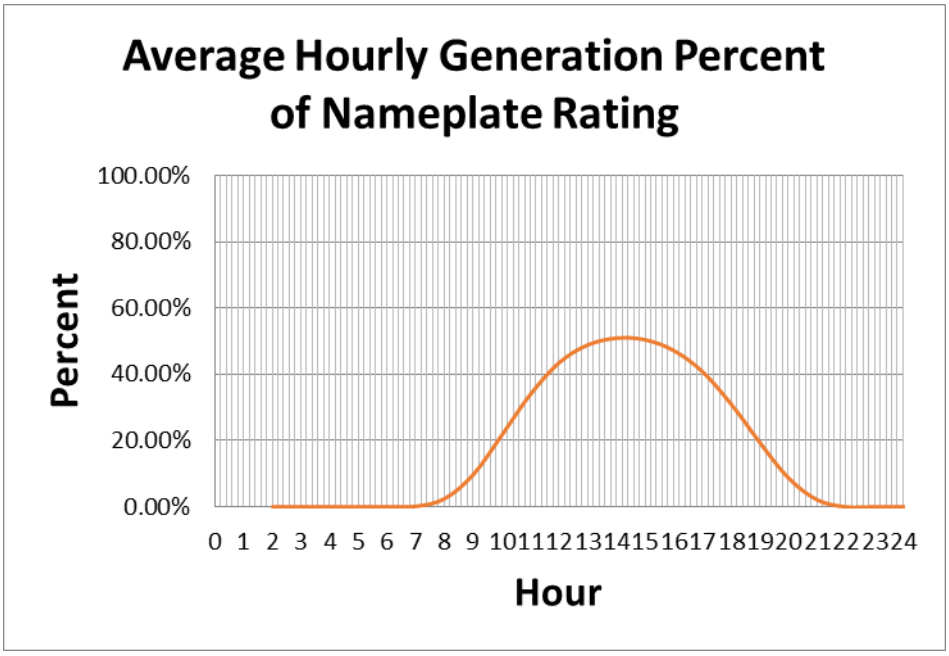


Table 42: Average Summer Solar Output for Large PV (>25 kW) as a Percentage of Nameplate Capacity (AC)

Hourly Solar Generation as a Percent of Nameplate (AC)			
Hour Ending	Average	Hour Ending	Average
1:00:00	0.0%	13:00:00	51.0%
2:00:00	0.0%	14:00:00	50.6%
3:00:00	0.0%	15:00:00	47.3%
4:00:00	0.0%	16:00:00	40.9%
5:00:00	.04%	17:00:00	31.1%
6:00:00	.15%	18:00:00	19.6%
7:00:00	2.5%	19:00:00	8.8%
8:00:00	9.7%	20:00:00	2.2%
9:00:00	21.7%	21:00:00	0.0%
10:00:00	34.1%	22:00:00	0.0%
11:00:00	43.6%	23:00:00	0.0%
12:00:00	49.0%	24:00:00	0.0%

The Company identifies where each PV job in the queue is located. Without network information for each PV, it is impossible to determine where PV is most prevalent, and where it has the greatest impact on the grid.

To assess the growth rate of solar PV installations, the initial two years of growth is based on the interconnection queue. For the years beyond the queue, the Company uses a probabilistic approach, including historical growth, cancellation, and decaying rates. For the PV forecast, the Company defined the following assumptions to build the 2024 PV forecast model for Con Edison's service territory:

- Residential customers include any account under 25 kW, and commercial customers include any account over 25 kW
- Residential jobs go-live an average of 104 days after application date
- Commercials jobs go-live an average of 465 days after application date
- The peak occurs after June 1 of each summer[327]

Twenty-five kW was selected as an approximate divider between residential and commercial projects in order to apply the lead times of large and small PV projects to the forecast. The lead-time assumptions for residential and commercial PV jobs are based on an analysis of average completion cycles of past projects. The analysis indicates residential PV goes live approximately 104 days after the application date and commercial PV goes live approximately 465 days after the application date. These lead times are expected to decrease as the interconnection process is further streamlined. As additional data is tracked and made available, the assumptions regarding go-live time will be updated and enhanced accordingly.

June 1 was assumed as a representative peak day for the purpose of creating the model, which allows PV jobs that are in the queue to be parsed into groups that will go-live that summer or the following summer.

Based on the lead times and interconnection queue, there is sufficient detail to estimate which PV jobs will go-live the next summer. The queue does not contain enough information when the current year forecast is created to estimate how many PV jobs will go-live two summers into the future. Therefore, the number of PV installations for two summers into the future must be extrapolated based on a combination of the interconnection queue used to forecast the current year and long-term growth assumptions.

As shown in line 9 of the System Peak Demand Forecast (and included below for reference in Table 43), PV is expected to contribute a rolling incremental 63 MW of load reduction in 2025, ramping to a rolling incremental 224 MW by 2029. This is based on the nameplate capacity of the PV, converting to AC, coincident with Con Edison's system peak. The PV forecast is represented as rolling incremental where 2025 is the incremental decrease to system load, and each year thereafter is the reduction of that year and all years dating back to 2025. Over the 10-year period (2025- 2035), the forecasted cumulative coincident solar PV MW is 509 MW (1,709 MW_{AC} nameplate)

Table 43: Electric Five-Year System Peak Demand Forecast – Solar PV (MW)

		2025	2026	2027	2028	2029
9	Photovoltaic (PV) (rolling incremental)	-63	-121	-162	-196	-224
	Coincident PV MW in AC (Cumulative)	-253	-311	-352	-386	-414
	% MW Growth	33%	23%	13%	9%	7%

Table 44 shows that solar generation at the system level is expected to contribute 198 GWh of energy reduction in 2025, ramping up to 648 GWh of reduction in 2029.

[327] The PV output curve analysis includes the summer months between June and August. By selecting all summer months, it captures uncertainties of weather conditions and pending projects in the queue after June 1 of each summer.

Table 44: Delivery Volume Adjustments by Service Class – Solar PV (GWh)

Delivery Volume Adjustments (GWh) – Solar Generation		2025	2026	2027	2028	2029
Con Edison	Total	-187	-293	-401	-506	-611
NYPA	Total	-11	-18	-24	-30	-37
System	Total	-198	-311	-425	-536	-648

Distributed Generation/Combined Heat and Power

CHP and other forms of rotating generation (DG/CHP) preceded the wide scale adoption of solar and BESS. As such they are referred to within Company processes and forecasts as DG/CHP, even though they are a subset of DG. All references to DG/CHP in this section refer only to CHP and other rotating generations. This includes traditional DG like gas turbines and reciprocating engines, as well as newer technologies such as fuel cells and microturbines.

DG/CHP inputs are collected from developers prior to and throughout the interconnection process. The nameplate capacity and details of the go-live timing (looking three years out) are provided through the interconnection process and verified by the Company. Furthermore, for large DG/CHP units (and some units below 1 MW), operational performance data may be collected through interval meters or other mechanisms. Long-term growth of DG/CHP is extrapolated based on the historical penetration and currently queued projects.

Because non-solar DG/CHP units are generally larger than PV projects and are normally dispatched at times of peak load, their impacts on the local grid are greater and depend on several factors. These factors include the size of the DG/CHP unit, the redundancy of the local area station, the expected time of go-live, and engineering knowledge of the substation reliability and other local conditions. For the DG/CHP forecast, the Company defined the following assumptions to build the forecast model:

- Large DG/CHP is defined as having a capacity greater than or equal to 1 MW and small DG/CHP as having a capacity less than 1 MW.
- All small DG/CHP units are assumed to be on at all times. Therefore, full credit will be taken to reduce load at their stations (and associated networks).
- Large DG/CHP units with N-2 redundancy or N-1 redundancy with a spare bank will take full load credit to reduce load at stations (and their associated networks).
- Large DG/CHP units with N-1 redundancy without a spare bank will take half of the load to reduce load at their stations (and associated networks).
- All DG/CHP jobs in the queue will be included in the base, if they are projected to be completed prior to the current summer experience. If a projected completion date is during or after the current summer experience, the job will be forecasted for the following summer. Each DG/CHP project had a performance factor applied (77 percent for large DG/CHP and 80 percent for small DG/CHP). The DG/CHP system forecast in outer years will be divided into networks based on the network's contribution to the DG/CHP queue.

Table 45 characterizes the non-solar DG assumptions that determine load reduction credit. DG for each network is rolled up for the system DG forecast.

Table 45: Determination of Non-Solar DG Demand Reduction Credit

			Station Redundancy	
			N-2 & N-1 with a spare bank	N-1
Size and Quantity of DG	Small (<1 MW)	Small DG/CHP	Nameplate capacity with performance factor and one year lag from job completion date	Nameplate capacity with performance factor and one year lag from the job completion date
	Large (>=1 MW)	Large DG/CHP	Nameplate capacity with performance factor and one year lag from the job completion date	50% of nameplate capacity with performance factor and one year lag from the job completion date

Once the DG/CHP forecast is determined, the inputs are analyzed so that the system forecast displays the rolling incremental growth (in MW). Distributed generation growth from BESS projects is tracked separately.

In determining the energy forecast load modifier for DG/CHP, the Company evaluates only the large (greater than 1 MW) DG/CHP units owned by customers taking standby service. The scope prioritizes the standby service rates because of the laborious manual methods to determine the revenues associated with these customers and, as the largest DG/CHP units, they have the greatest impact on the energy forecast. The energy forecasting process requires an investigation of the past performance of each unit. For each of the Company's existing standby service accounts, the prior year's usage is reviewed to identify monthly consumption anomalies. For new customers, if available, their past consumption is analyzed to determine the difference between usage and planned on-site generation. In each case, the potential kW generation of the new DG is provided and applied to historical energy/kW ratio to determine the account-specific monthly energy reduction to be applied to the forecast. These account-specific energy reductions are summed by existing service class to determine the energy forecast modifier.

As shown in line 10 of the system forecast (and included below for reference in Table 46), non-solar DG/CHP is expected to contribute an additional 16 MW of load reduction in 2025, ramping to an additional 38 MW of reduction in 2029. The non-solar DG forecast is represented as rolling incremental, where 2025 is an incremental decrease to the system load and each year thereafter is the reduction of that year and all years prior through 2025. Over the 10-year period, the forecasted cumulative coincident DG MW is 188 MW (241 MW nameplate).

Table 46: Electric System Peak Demand Forecast – Non-Solar DG (MW)

		2025	2026	2027	2028	2029
10	DG/CHP (incremental rolling)	-16	-25	-31	-33	-38
	Coincident DG MW (Cumulative)	-144	-153	-158	-161	-166
	% MW Growth	12%	6%	4%	2%	3%

Table 47 shows that DG is expected to contribute 624 GWh of energy reduction in 2025, ramping up to 627 GWh of reduction in 2029.

Table 47: Delivery Volume Adjustments by Service Class – Non-Solar DG (GWh)

Delivery Volume Adjustments (GWh) - Standby Service (DG)		2025	2026	2027	2028	2029
Con Edison	Impact	-477	-480	-480	-480	-480
NYPA	Impact	-147	-147	-147	-147	-147
System	Impact	-624	-627	-627	-627	-627

Battery Energy Storage Systems

BESS is a separate line item in the DG forecast. While storage is still a small component of the forecast, advances in technology will result in many more installed storage devices, particularly batteries, throughout Con Edison territory over time. BESS penetration and growth information are derived from the Company's interconnection queue, which provides a near-term view of proposed and under-construction projects.

The Company has identified factors for adoption that it believes will indicate the future pace of BESS. These factors include historical BESS market growth, policy treatment (e.g., NEM, value stack, tax credits), permitting, and interconnection processing. The Company developed a forecasting tool that blends its existing BESS forecasting methodology with proprietary techniques developed by external industry experts to dynamically model the impact of BESS on the system and network peaks. It can also model the interaction of BESS with other modifiers such as BE, EV, PV, and DG/CHP.

BESS are a flexible resource in terms of the value they can provide. For example, a 10 MW, four-hour (or 40 MWh) battery can discharge in several ways: 10 MW discharged for 4 hours, 5 MW discharged for 8 hours, or different levels of discharge for varying durations. BESS could also target a use case that provides more consistent output of intermittent renewable sources or flattening the peaks of load curves of customers with highly variable loads. These systems are most predictable when they discharge in a manner set by program rules. For planning purposes, the Company will view the load reduction from the BESS as the amount of discharge it can provide over four hours, in line with the network peak load. Thus, a 500 kW reduction from peak would be a 2 MWh battery discharged over 4 hours. The Company understands that a battery system could discharge in a variety of ways and if an incentive mechanism (e.g., DR or program rules) caused the battery discharge pattern to vary from this standard, then the Company could adjust the amount of reduction the forecast includes.

The Company recognizes that several factors require further study, including storage use and charging method. In general, a BESS resource serves as a load to the utility when it charges from the grid and serves as a resource to the utility when it discharges. Charging at off-peak times and discharging at peak times generally leads to less carbon-intensive supply sources being utilized and serves to flatten the peak and fill in the troughs for the utility, leading to a better overall load factor and better system efficiency. BESS does not serve as a load to the utility if it charges using behind-the-meter ("BTM")[328] generation (i.e., solar and battery both behind a one-way inverter). The charging of the battery would not increase the load seen by the utility.

BESS use, and its impact on peak load, varies by intended purpose (*e.g.,* customer-peak shaving, DR, direct control of utility-integrated storage) and size of resource. Customer-peak shaving is dependent on the time of the customer's peak and may not be coincident with utility or the NYISO peak. Resources used for customer-specific energy needs may be unavailable at other times.

[328] Note 48, *supra.*

Other storage uses are measurable and able to be influenced or controlled by the utility (through contracts and/or in real-time). Programs that support a higher level of utility visibility include the Reforming the Energy Vision demonstration projects (Virtual Power Plant and recently issued RFP for BESS), discussed elsewhere. These programs are administered by the Company and provide greater visibility and impact to peak demand. BQDM and other area-specific NWS have also provided an opportunity for the Company to control a BESS unit as part of a larger suite of DM projects. Similar RFPs would guarantee coincidence with the Company's greatest need. Depending on storage capacity, technology, and project economics, utility-owned storage projects may also be capable of bidding into the NYISO DR and/or ancillary services markets. The Company expects data from these programs to contribute to peak load and energy use impact studies in the coming years.

As shown in line 11 of the system forecast (and included below for reference in Table 48), batteries are expected to contribute an additional 17 MW of load reduction in 2025, ramping to 145 MW of reduction in 2029, representing a significant increase from prior forecasts.

Table 48: Electric System Peak Demand Forecast – Battery Storage (MW)

		2025	2026	2027	2028	2029
11	Battery Storage (incremental rolling)	-17	-46	-85	-120	-145

The contribution of BESS to the energy forecast is a function of several factors including roundtrip efficiencies of charge and discharge cycles, battery cycling frequency, installation growth, and intended operational behavior. The impacts of BESS on energy use vary based on how the units are charged. For example, charging from the grid would have a positive (additive) impact to delivered energy, while a resource charging from BTM generation would have no impact on delivered energy. Other factors which could affect energy usage are the load curve of customers who adopt distributed BESS and capacity utilization of the storage resource.

APPENDIX B: ENERGY STORAGE RESOURCES AS OF MARCH 31, 2025

Table 49: Energy Storage Resources as of March 31, 2025

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2025	Buchanan	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Ossining West	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Pleasantville	10	27	Lithium-ion	Hybrid w/ PV
2025	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Elmsford No. 2	23	27	Lithium-ion	Hybrid w/ PV
2025	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2025	Rockview	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Buchanan	11.5	27	Lithium-ion	Hybrid w/ PV
2025	Millwood West	13.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Elmsford No. 2	11.5	27	Lithium-ion	Hybrid w/ PV
2025	Washington Street	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Granite Hill	10	27	Lithium-ion	Hybrid w/ PV
2025	White Plains	11.5	27	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Buchanan	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Millwood West	93	186	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Washington Street	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Grasslands	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Ossining West	23	27	Lithium-ion	Hybrid w/ PV
2025	Jamaica	484.8	2174.4	Lithium-ion	Stand-alone
2025	White Plains	13.47	13.5	Lead-acid	Hybrid w/ PV
2025	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2025	Grasslands	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Granite Hill	5	13.5	Other	Hybrid w/ PV
2025	Washington Street	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Elmsford No. 2	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Elmsford No. 2	5	27	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Millwood West	0.384	50	Lithium-ion	Hybrid w/ PV
2025	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2025	Ossining West	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Elmsford No. 2	11.22	10.88	Lithium-ion	Hybrid w/ PV
2025	MASPETH	4620.6	18482.4	Lithium-ion	Stand-alone
2025	Washington Street	23	27	Lithium-ion	Stand-alone

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	White Plains	11.5	27	Lithium-ion	Hybrid w/ PV
2025	Pleasantville	15	40.5	Lead-acid	Hybrid w/ PV
2025	White Plains	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Ossining West	10	23	Lithium-ion	Hybrid w/ PV
2025	Buchanan	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Grasslands	23	23	Lithium-ion	Hybrid w/ PV
2025	Rockview	11.5	11.5	Lithium-ion	Hybrid w/ PV
2025	Ossining West	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Millwood West	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Grasslands	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Grasslands	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Elmsford No. 2	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	White Plains	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Cedar Street	11.5	27	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	54	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Harrison	13.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Woodrow	4950	15000	Lithium-ion	Hybrid w/ PV
2025	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2025	Rockview	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Buchanan	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Washington Street	12	10.24	Other	Hybrid w/ PV
2025	Buchanan	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Elmsford No. 2	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Grasslands	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Buchanan	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Millwood West	11.5	27	Lithium-ion	Hybrid w/ PV
2025	Mohansic	11.5	13.5	Lithium-ion	Hybrid w/ PV
2025	Washington Street	11.5	13.5	Other	Hybrid w/ PV
2025	Elmsford No. 2	11.5	27	Lithium-ion	Hybrid w/ PV
2025	Granite Hill	13.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2024	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2024	Pleasantville	7.6	27	Lithium-ion	Hybrid w/ PV
2024	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2024	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2024	Pleasantville	7.68	21	Other	Hybrid w/ PV
2024	Buchanan	3.9	9.3	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	27	Lithium-ion	Hybrid w/ PV
2024	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2024	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	13.865	20.1	Lithium-ion	Hybrid w/ PV
2024	White Plains	3.84	3.84	Lithium-ion	Hybrid w/ PV
2024	Washington Street	10	27	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	27	28	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	13.5	Lithium-ion	Hybrid w/ PV
2024	Millwood West	90	180	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Grasslands	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2024	Harrison	5	27	Lithium-ion	Hybrid w/ PV
2024	Rockview	10.27	10.08	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2024	Pleasantville	12.64	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	11.52	11.52	Lithium-ion	Hybrid w/ PV
2024	Ossining West	7.6	27	Lithium-ion	Hybrid w/ PV
2024	Washington Street	10	27	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2024	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2024	Grasslands	10	27	Lithium-ion	Hybrid w/ PV
2024	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2024	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2024	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Rockview	10	27	Lithium-ion	Hybrid w/ PV
2024	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Buchanan	15.36	20	Lithium-ion	Stand-alone
2024	Buchanan	3.84	10.5	Other	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2024	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2024	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2024	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	12	54	Lithium-ion	Hybrid w/ PV
2024	Ossining West	7.68	10	Other	Hybrid w/ PV
2024	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	10	10	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2024	Maspeth	770	3800	Lithium-ion	Stand-alone
2024	MASPETH	770	3980	Lithium-ion	Stand-alone
2024	Columbus Circle	500	1000	Lithium-ion	Hybrid w/ PV
2024	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Northeast Bronx	4288	20113	Lithium-ion	Stand-alone
2024	Pleasantville	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Grasslands	23	40.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	7.6	14.5	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2024	Harrison	5	13.6	Lithium-ion	Hybrid w/ PV
2024	Borden	4800	20400	Lithium-ion	Stand-alone
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	23	27	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	6	9.6	Lithium-ion	Hybrid w/ PV
2024	Harrison	15	40.5	Lithium-ion	Hybrid w/ PV
2024	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2024	Millwood West	11.5	40.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Millwood West	5	27	Lithium-ion	Hybrid w/ PV
2024	Harrison	5	10	Lithium-ion	Hybrid w/ PV
2024	Harrison	23	27	Lithium-ion	Stand-alone
2024	Ossining West	3.84	10	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	20	54	Lithium-ion	Stand-alone
2024	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Pleasantville	15	40.5	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2024	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2024	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Pleasantville	15.36	20	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	5	5	Lithium-ion	Hybrid w/ PV
2024	Cedar Street	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Washington Street	10	23	Lithium-ion	Hybrid w/ PV
2024	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2024	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2024	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2024	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Rockview	5	5	Lithium-ion	Hybrid w/ PV
2024	Pleasantville	23	40.5	Lithium-ion	Hybrid w/ PV
2024	Buchanan	10	9.6	Lithium-ion	Hybrid w/ PV
2024	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Pleasantville	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Grasslands	4989.6	15000	Lithium-ion	Stand-alone
2024	Elmsford No. 2	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Buchanan	13.5	5	Lithium-ion	Hybrid w/ PV
2024	White Plains	5	22	Lithium-ion	Hybrid w/ PV
2024	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2024	White Plains	11.52	15	Lithium-ion	Hybrid w/ PV
2024	Washington Street	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Elmsford No. 2	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Ossining West	11.5	13.5	Other	Hybrid w/ PV
2024	Mohan sic	4324.8	20000	Lithium-ion	Stand-alone
2024	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Ossining West	4000	15000	Lithium-ion	Stand-alone
2024	Wainwright	4950	19200	Lithium-ion	Stand-alone
2024	Wainwright	3000	19200	Lithium-ion	Stand-alone
2024	Harrison	11.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Harrison	23	27	Lithium-ion	Hybrid w/ PV
2024	Woodrow	4950	15000	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2024	Pleasantville	13.5	13.5	Lithium-ion	Hybrid w/ PV
2024	Grasslands	5	13.5	Other	Hybrid w/ PV
2024	Woodrow	4950	15000	Lithium-ion	Hybrid w/ PV
2024	Jamaica	484.8	2174.4	Lithium-ion	Stand-alone
2024	Ossining West	11.5	13.5	Lithium-ion	Hybrid w/ PV
2023	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	15	40.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	5	5.1	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2023	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	7.6	13.5	Lithium-ion	Hybrid w/ PV
2023	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	10	27	Lithium-ion	Hybrid w/ PV
2023	Pleasantville	5	13.5	Lithium-ion	Stand-alone
2023	White Plains	5.1	5.1	Lithium-ion	Hybrid w/ PV
2023	Millwood West	6	9.8	Lithium-ion	Hybrid w/ PV
2023	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2023	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2023	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2023	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2023	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Northeast Bronx	3.8	10.08	Lithium-ion	Hybrid w/ PV
2023	Washington Street	5.1	15.2	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	15	40.5	Lithium-ion	Stand-alone
2023	Cedar Street	5	13.5	Lithium-ion	Stand-alone
2023	Pleasantville	10	27	Lithium-ion	Hybrid w/ PV
2023	Harrison	5	9.8	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	3.84	10.08	Lithium-ion	Hybrid w/ PV
2023	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2023	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2023	Washington Street	3.84	10.08	Lithium-ion	Hybrid w/ PV
2023	Buchanan	5	9.6	Lithium-ion	Hybrid w/ PV
2023	Buchanan	10	10	Lithium-ion	Hybrid w/ PV
2023	Rockview	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2023	Elmsford No. 2	5	9.8	Lithium-ion	Hybrid w/ PV
2023	Pleasantville	10.08	10.08	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	3.84	10.08	Lithium-ion	Stand-alone
2023	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2023	White Plains	5	10	Lithium-ion	Hybrid w/ PV
2023	Harrison	5	9.8	Lithium-ion	Hybrid w/ PV
2023	White Plains	5	5.1	Lithium-ion	Hybrid w/ PV
2023	Millwood West	5	9.8	Lithium-ion	Hybrid w/ PV
2023	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	20	54	Lithium-ion	Hybrid w/ PV
2023	Millwood West	5	9.8	Lithium-ion	Hybrid w/ PV
2023	Harrison	6	13	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	5	9.8	Lithium-ion	Hybrid w/ PV
2023	Buchanan	6	13	Lithium-ion	Hybrid w/ PV
2023	Washington Street	7.68	6.6	Lithium-ion	Hybrid w/ PV
2023	Washington Street	6	13	Lithium-ion	Hybrid w/ PV
2023	Buchanan	7.68	21	Lithium-ion	Hybrid w/ PV
2023	Harrison	12.6	40.5	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	5	9.8	Lithium-ion	Hybrid w/ PV
2023	White Plains	5.76	9.8	Lithium-ion	Hybrid w/ PV
2023	Pleasantville	1.94	10.08	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	15	30	Lithium-ion	Hybrid w/ PV
2023	Harrison	15	40.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	5	9.8	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	3.8	9.8	Lithium-ion	Hybrid w/ PV
2023	White Plains	7.6	12	Lithium-ion	Hybrid w/ PV
2023	Washington Street	10	27	Lithium-ion	Hybrid w/ PV
2023	Rockview	3.84	10.5	Lithium-ion	Hybrid w/ PV
2023	Ossining West	14	16	Lithium-ion	Hybrid w/ PV
2023	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2023	Ocean Parkway	27	121.6	Lithium-ion	Hybrid w/ PV
2023	Northeast Bronx	27	91.2	Lithium-ion	Hybrid w/ PV
2023	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2023	Rockview	5	5	Lithium-ion	Hybrid w/ PV
2023	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	7.14	26	Lithium-ion	Stand-alone
2023	Elmsford No. 2	30	30	Lead-acid	Hybrid w/ PV
2023	White Plains	6	13	Lithium-ion	Hybrid w/ PV
2023	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2023	Washington Street	6	9.8	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2023	Buchanan	3.84	3.3	Lithium-ion	Hybrid w/ PV
2023	Harrison	6	9.8	Lithium-ion	Hybrid w/ PV
2023	Harrison	12.6	27	Lithium-ion	Hybrid w/ PV
2023	Grasslands	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	5.7	10.5	Lithium-ion	Hybrid w/ PV
2023	Buchanan	7.68	21	Lithium-ion	Hybrid w/ PV
2023	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2023	White Plains	5	26	Lithium-ion	Hybrid w/ PV
2023	Washington Street	3.36	3.36	Lithium-ion	Hybrid w/ PV
2023	Fresh Kills	3851	15300	Lithium-ion	Stand-alone
2023	Northeast Bronx	1500	15000	Lithium-ion	Hybrid w/ PV
2023	Northeast Bronx	1500	15000	Lithium-ion	Hybrid w/ PV
2023	Cedar Street	6.8	13	Lithium-ion	Hybrid w/ PV
2023	Millwood West	7.6	13.5	Lithium-ion	Hybrid w/ PV
2023	Fresh Kills	3850	15300	Lithium-ion	Stand-alone
2023	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Millwood West	7.6	9	Lithium-ion	Hybrid w/ PV
2023	Flatbush	11	96	Lead-acid	Hybrid w/ PV
2023	Grasslands	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Pleasantville	7.67	35.955	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2023	Grasslands	10	27	Lithium-ion	Hybrid w/ PV
2023	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2023	White Plains	7.6	7.6	Lithium-ion	Hybrid w/ PV
2023	Harrison	10.08	10.08	Lithium-ion	Hybrid w/ PV
2023	Harrison	15	40.5	Lithium-ion	Hybrid w/ PV
2023	Buchanan	15	38.4	Lithium-ion	Hybrid w/ PV
2023	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	10	27	Lithium-ion	Stand-alone
2023	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Flatbush	30	210	Lithium-ion	Stand-alone
2023	Ossining West	7.6	27	Lithium-ion	Hybrid w/ PV
2023	Harrison	7.6	27	Lithium-ion	Hybrid w/ PV
2023	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	15.2	40.5	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2023	Elmsford No. 2	10	40.5	Lithium-ion	Hybrid w/ PV
2023	Grasslands	7.6	27	Lithium-ion	Hybrid w/ PV
2023	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2023	Maspeth	5000	20000	Lithium-ion	Stand-alone
2023	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Harrison	7.6	27	Lithium-ion	Hybrid w/ PV
2023	Grasslands	10	27	Lithium-ion	Hybrid w/ PV
2023	Harrison	20	554	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	7.6	9.8	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Flatbush	9	45.6	Lithium-ion	Hybrid w/ PV
2023	Granite Hill	7.6	27	Lithium-ion	Hybrid w/ PV
2023	White Plains	7.6	10	Lithium-ion	Hybrid w/ PV
2023	Pleasantville	15	13.5	Lithium-ion	Hybrid w/ PV
2023	White Plains	11.4	20	Lithium-ion	Hybrid w/ PV
2023	Pleasantville	10	27	Lithium-ion	Hybrid w/ PV
2023	White Plains	7.6	27	Lithium-ion	Hybrid w/ PV
2023	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2023	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2023	Ridgewood	5000	20000	Lithium-ion	Stand-alone
2023	Washington Street	10	10	Lithium-ion	Stand-alone
2022	White Plains	5	9.8	Lithium-ion	Hybrid w/ PV
2022	Harrison	5	9.8	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Mohansic	5	40.5	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	7.6	7.6	Lithium-ion	Hybrid w/ PV
2022	Grasslands	7.6	7.6	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Pleasantville	10	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2022	White Plains	11.52	30.3	Lithium-ion	Hybrid w/ PV
2022	Rockview	10	27	Lithium-ion	Hybrid w/ PV
2022	Harrison	20	54	Lithium-ion	Hybrid w/ PV
2022	Harrison	5	27	Lithium-ion	Hybrid w/ PV
2022	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Rockview	7.6	18	Lithium-ion	Stand-alone

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	6	40.5	Lithium-ion	Hybrid w/ PV
2022	Buchanan	5	9.8	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Ossining West	7.6	12	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Brighton Beach	9	19	Lithium-ion	Hybrid w/ PV
2022	Pleasantville	10	27	Lithium-ion	Stand-alone
2022	Ossining West	5	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	5.76	9.6	Lithium-ion	Hybrid w/ PV
2022	Rockview	7.6	10	Lithium-ion	Hybrid w/ PV
2022	Maspeth	1000	1000	Lithium-ion	Stand-alone
2022	Washington Street	20	54	Lithium-ion	Hybrid w/ PV
2022	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	3.84	3.8	Lithium-ion	Hybrid w/ PV
2022	Ossining West	5.76	9.8	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	19.2	Lithium-ion	Hybrid w/ PV
2022	White Plains	13.5	40.5	Lithium-ion	Hybrid w/ PV
2022	White Plains	1250	5000	Lithium-ion	Hybrid w/ PV
2022	Buchanan	8.99	9.8	Lithium-ion	Hybrid w/ PV
2022	Grasslands	5	27	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	543.6	2174.4	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	3.8	9.8	Lithium-ion	Hybrid w/ PV
2022	Pleasantville	10	27	Lithium-ion	Hybrid w/ PV
2022	White Plains	500	2000	Lithium-ion	Hybrid w/ PV
2022	Buchanan	10	10	Lithium-ion	Hybrid w/ PV
2022	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	6	9.8	Lithium-ion	Hybrid w/ PV
2022	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	15.2	36	Lithium-ion	Hybrid w/ PV
2022	Buchanan	5	13.5	Lithium-ion	Stand-alone
2022	Washington Street	6	6	Lithium-ion	Hybrid w/ PV
2022	Ocean Parkway	9	19	Lithium-ion	Hybrid w/ PV
2022	Millwood West	10	27	Lead-acid	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Harrison	5	10	Lithium-ion	Stand-alone
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2022	White Plains	7.6	13.5	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	7.6	11.4	Lithium-ion	Hybrid w/ PV
2022	Grasslands	6	27	Lithium-ion	Hybrid w/ PV
2022	Washington Street	10	27	Lithium-ion	Hybrid w/ PV
2022	Grasslands	10	9.8	Lithium-ion	Hybrid w/ PV
2022	Rockview	7.6	16	Lithium-ion	Hybrid w/ PV
2022	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2022	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Granite Hill	10	27	Lithium-ion	Hybrid w/ PV
2022	White Plains	11.52	30.24	Lithium-ion	Hybrid w/ PV
2022	Sheepshead Bay	9	68.4	Lithium-ion	Hybrid w/ PV
2022	Rockview	10	27	Lithium-ion	Hybrid w/ PV
2022	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Maspeth	3.84	10.08	Lithium-ion	Hybrid w/ PV
2022	Millwood West	20	50.4	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	14	16	Lithium-ion	Hybrid w/ PV
2022	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2022	Rockview	5	40.5	Lithium-ion	Hybrid w/ PV
2022	Buchanan	5	40.5	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	741.2	2964.8	Lithium-ion	Hybrid w/ PV
2022	Washington Street	7.68	20.16	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Buchanan	5	9.8	Lithium-ion	Hybrid w/ PV
2022	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2022	White Plains	5	5	Lithium-ion	Hybrid w/ PV
2022	Richmond Hill	18	62.4	Lead-acid	Hybrid w/ PV
2022	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2022	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2022	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2022	White Plains	50	250	Lithium-ion	Stand-alone
2022	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2022	White Plains	5	9.8	Lithium-ion	Hybrid w/ PV
2022	Buchanan	15	40.5	Lithium-ion	Stand-alone
2022	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Maspeth	18	62.5	Lead-acid	Hybrid w/ PV
2022	Ossining West	5	9.8	Lithium-ion	Hybrid w/ PV
2022	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Millwood West	10	27	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2022	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2022	Borough Hall	45	186	Lithium-ion	Stand-alone
2022	Millwood West	10	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Grasslands	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Harrison	20	54	Lithium-ion	Hybrid w/ PV
2022	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Ossining West	5	5.1	Lithium-ion	Hybrid w/ PV
2022	Jamaica	18	62.4	Lead-acid	Hybrid w/ PV
2022	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	15.2	40.5	Lithium-ion	Hybrid w/ PV
2022	Southeast Bronx	30	91.3	Lithium-ion	Hybrid w/ PV
2022	Ocean Parkway	18	62.5	Lead-acid	Hybrid w/ PV
2022	Granite Hill	4.5	12	Lithium-ion	Hybrid w/ PV
2022	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Buchanan	2.56	6.72	Lithium-ion	Hybrid w/ PV
2022	White Plains	25	67.5	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	9.6	27	Lithium-ion	Hybrid w/ PV
2022	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2022	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	40.5	Lithium-ion	Hybrid w/ PV
2022	Richmond Hill	18	62.5	Lead-acid	Hybrid w/ PV
2022	Elmsford No. 2	7.6	18	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	7.68	20.16	Lithium-ion	Stand-alone
2022	Cedar Street	5	10	Lithium-ion	Hybrid w/ PV
2022	White Plains	6	26	Lithium-ion	Hybrid w/ PV
2022	Pleasantville	6	13	Lithium-ion	Hybrid w/ PV
2022	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	15.36	40.32	Lithium-ion	Hybrid w/ PV
2022	Pleasantville	741.2	3.039	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	31.5	31.5	Lithium-ion	Hybrid w/ PV
2022	Granite Hill	7.6	9	Lithium-ion	Hybrid w/ PV
2022	White Plains	6.8	13	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Stand-alone
2022	Harrison	5	13.5	Lithium-ion	Stand-alone
2022	Flatbush	8	48	Lead-acid	Hybrid w/ PV
2022	Flatbush	18	62.5	Lead-acid	Hybrid w/ PV
2022	Pleasantville	6	13	Lithium-ion	Hybrid w/ PV
2022	Grasslands	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2022	Elmsford No. 2	3.84	13.5	Lithium-ion	Hybrid w/ PV
2022	Ossining West	10	40.5	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	6.7	18	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2022	Ossining West	7.68	21	Lithium-ion	Hybrid w/ PV
2022	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2022	White Plains	3.8	9.8	Lithium-ion	Hybrid w/ PV
2022	Millwood West	16	16	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2022	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Rockview	5	9.8	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Washington Street	3.7	9.8	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	10	10	Lithium-ion	Stand-alone
2022	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Buchanan	7.6	18	Lithium-ion	Hybrid w/ PV
2022	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2022	Buchanan	5	9.8	Lithium-ion	Hybrid w/ PV
2022	White Plains	5.1	5.1	Lithium-ion	Hybrid w/ PV
2022	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2022	Buchanan	6	9.8	Lithium-ion	Hybrid w/ PV
2022	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2022	Granite Hill	10	27	Lithium-ion	Hybrid w/ PV
2022	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2022	Washington Street	5	13.5	Lithium-ion	Stand-alone
2021	White Plains	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Millwood West	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Pleasantville	15	15	Lithium-ion	Hybrid w/ PV
2021	Rockview	7	27	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Rockview	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Buchanan	4.3	13.5	Lithium-ion	Hybrid w/ PV
2021	Mohansic	6.7	18	Lithium-ion	Hybrid w/ PV
2021	Fresh Kills	7.68	20.16	Other	Hybrid w/ PV
2021	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2021	Granite Hill	15	40.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2021	Cedar Street	9.8	27	Lithium-ion	Hybrid w/ PV
2021	Harrison	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Millwood West	7.7	27	Lithium-ion	Hybrid w/ PV
2021	Millwood West	10	27	Lithium-ion	Stand-alone
2021	Pleasantville	6.7	18	Lithium-ion	Hybrid w/ PV
2021	Millwood West	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Southeast Bronx	1000	N/A[329]	Lithium Ion	Stand-alone
2021	Rockview	20	54	Lithium-ion	Hybrid w/ PV
2021	Ossining West	3.4	9	Lithium-ion	Hybrid w/ PV
2021	Granite Hill	10	27	Lithium-ion	Hybrid w/ PV
2021	Harrison	6.7	18	Lithium-ion	Hybrid w/ PV
2021	Ossining West	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	6.8	13	Lithium-ion	Stand-alone
2021	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Grasslands	5	27	Lithium-ion	Hybrid w/ PV
2021	Millwood West	6.8	13	Lithium-ion	Hybrid w/ PV
2021	Harrison	7.6	7.6	Lithium-ion	Hybrid w/ PV
2021	Rockview	10	27	Lithium-ion	Hybrid w/ PV
2021	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2021	Washington Street	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	20	54	Lithium-ion	Hybrid w/ PV
2021	Harrison	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2021	Pleasantville	10	27	Lithium-ion	Hybrid w/ PV
2021	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	7.6	17.1	Lithium-ion	Hybrid w/ PV
2021	Pleasantville	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Buchanan	10	27	Lithium-ion	Hybrid w/ PV

[329] Data is not available

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2021	Grasslands	20	54	Lithium-ion	Hybrid w/ PV
2021	Harrison	6.8	13	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2021	Harrison	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	20	54	Lithium-ion	Hybrid w/ PV
2021	Buchanan	6	5	Lithium-ion	Stand-alone
2021	Buchanan	6	9.8	Lithium-ion	Hybrid w/ PV
2021	Harrison	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Ossining West	7.6	12	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2021	Ossining West	3.8	9.8	Lithium-ion	Hybrid w/ PV
2021	Washington Street	10	27	Lithium-ion	Hybrid w/ PV
2021	Granite Hill	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Ossining West	406	1624	Lithium-ion	Hybrid w/ PV
2021	Millwood West	5.12	13	Lithium-ion	Stand-alone
2021	White Plains	5	27	Lithium-ion	Hybrid w/ PV
2021	Harrison	5	10	Lithium-ion	Hybrid w/ PV
2021	Buchanan	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Buchanan	15	40.5	Lithium-ion	Hybrid w/ PV
2021	White Plains	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Harrison	15	15	Lithium-ion	Hybrid w/ PV
2021	Washington Street	10	27	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Grasslands	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Ossining West	6	9.8	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	3.8	9.8	Lithium-ion	Hybrid w/ PV
2021	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Buchanan	6.84	13	Lithium-ion	Stand-alone
2021	Washington Street	6	9.8	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5.12	13	Lithium-ion	Stand-alone
2021	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	6.7	18	Lithium-ion	Hybrid w/ PV
2021	Harrison	5.12	13	Lithium-ion	Stand-alone
2021	Harrison	7.6	9	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	27	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Harrison	20	54	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	4.5	12	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2021	Millwood West	6.8	13	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Washington Street	10	13.5	Lithium-ion	Hybrid w/ PV
2021	Pleasantville	3.8	9.8	Lithium-ion	Hybrid w/ PV
2021	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	15.2	18	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Millwood West	15	4.2	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	3.8	9.8	Lithium-ion	Hybrid w/ PV
2021	Jamaica	250	243	Lithium-ion	Hybrid w/ PV
2021	Washington Street	7.6	15	Lithium-ion	Stand-alone
2021	Elmsford No. 2	10	27	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	9.8	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	0.5	9.3	Lithium-ion	Hybrid w/ PV
2021	Buchanan	6.7	18	Lithium-ion	Hybrid w/ PV
2021	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	210	174	Lithium-ion	Stand-alone
2021	Harrison	6.7	6.7	Lithium-ion	Hybrid w/ PV
2021	Pleasantville	6.8	13	Lithium-ion	Hybrid w/ PV
2021	Grasslands	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	3.8	9.6	Lithium-ion	Hybrid w/ PV
2021	Ossining West	7.6	16	Lithium-ion	Hybrid w/ PV
2021	Cedar Street	6	9.8	Lithium-ion	Hybrid w/ PV
2021	Woodrow	3.84	10.08	Lithium-ion	Hybrid w/ PV
2021	Grasslands	0.5	15.36	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	3.8	7.6	Lithium-ion	Hybrid w/ PV
2021	Ossining West	6.8	13	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	10	27	Lead-acid	Hybrid w/ PV
2021	Ossining West	10	27	Lithium-ion	Stand-alone
2021	Pleasantville	15	40.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2021	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	7.6	54	Lithium-ion	Stand-alone
2021	Elmsford No. 2	7.6	7.6	Lithium-ion	Hybrid w/ PV
2021	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Millwood West	1026	4104	Lithium-ion	Hybrid w/ PV
2021	Buchanan	1000	2000	Lithium Ion	Hybrid w/ PV
2021	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2021	Elmsford No. 2	5	9.6	Lithium-ion	Hybrid w/ PV
2021	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2021	Harrison	5	27	Lithium-ion	Hybrid w/ PV
2020	Grasslands	10	13.5	Lithium-ion	Hybrid w/ PV
2020	Buchanan	10	27	Lithium-ion	Stand-alone
2020	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2020	Fresh Kills	1000	1000	Lithium-ion	Stand-alone
2020	Elmsford No. 2	18	36	Lithium-ion	Stand-alone
2020	Buchanan	6.6	13.5	Lithium-ion	Hybrid w/ PV
2020	Lenox Hill	200	600	Lead-acid	Stand-alone
2020	Cedar Street	10	27	Lithium-ion	Hybrid w/ PV
2020	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2020	Elmsford No. 2	250	1096	Lithium-ion	Stand-alone
2020	Elmsford No. 2	250	1096	Lithium-ion	Stand-alone
2020	Pleasantville	5	13.5	Lithium-ion	Hybrid w/ PV
2020	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2020	Buchanan	500	2192	Lithium-ion	Hybrid w/ PV
2020	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2020	Elmsford No. 2	500	2192	Lithium-ion	Stand-alone
2020	Northeast Bronx	100	N/A[330]	N/A[331]	Stand-alone
2020	Pleasantville	15	40.5	Lithium-ion	Hybrid w/ PV
2020	Pleasantville	20	54	Lithium-ion	Hybrid w/ PV
2020	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2020	Buchanan	10	27	Lithium Ion	Stand-alone
2020	Grasslands	5	13.5	Lithium-ion	Hybrid w/ PV
2020	Elmsford No. 2	25	27	Lithium-ion	Hybrid w/ PV
2020	Harrison	30	30	Lithium-ion	Hybrid w/ PV
2020	Elmsford No. 2	13.5	13.5	Lithium-ion	Hybrid w/ PV
2020	Buchanan	10	27	Lithium-ion	Hybrid w/ PV
2020	Harrison	11.4	40.5	Lithium-ion	Hybrid w/ PV
2020	Ossining West	7.6	27	Lithium-ion	Hybrid w/ PV
2020	Pleasantville	11.4	54	Lithium-ion	Hybrid w/ PV
2020	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2020	White Plains	7.6	27	Lithium-ion	Hybrid w/ PV
2020	Buchanan	25	13.5	Lithium-ion	Hybrid w/ PV
2020	Pleasantville	10	27	Lithium-ion	Stand-alone
2020	Washington Street	250	548	Lithium-ion	Hybrid w/ PV
2020	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2020	West Bronx	17.25	48	Lead-acid	Hybrid w/ PV
2020	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2020	Buchanan	12.24	40.5	Lithium-ion	Hybrid w/ PV

[330] *Ibid.*

[331] Note 329, *supra.*

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2020	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2020	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2020	Prospect Park	800	2100	Lithium-ion	Stand-alone
2020	Granite Hill	15	39.6	Lithium-ion	Hybrid w/ PV
2020	White Plains	144	288	Lithium-ion	Stand-alone
2020	Grasslands	4.6	13.5	Lithium-ion	Hybrid w/ PV
2020	Millwood West	15	40.5	Lithium-ion	Hybrid w/ PV
2020	Millwood West	522	1012.8	Lithium-ion	Hybrid w/ PV
2019	Lincoln Square	100	400	Lead-acid	Stand-alone
2019	Elmsford No. 2	5	13.5	Lithium Ion	Hybrid w/ PV
2019	Harrison	10	27	Lithium Ion	Hybrid w/ PV
2019	Millwood West	15	13.5	Lithium-ion	Stand-alone
2019	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Cedar Street	5	13.5	Lithium-ion	Stand-alone
2019	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Cedar Street	5	13.5	Lithium-ion	Stand-alone
2019	Granite Hill	8	16	Lithium-ion	Hybrid w/ PV
2019	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Millwood West	10	13.5	Lithium-ion	Hybrid w/ PV
2019	White Plains	10	13.5	Lithium-ion	Hybrid w/ PV
2019	Ossining West	10	13.5	Lithium-ion	Hybrid w/ PV
2019	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Washington Street	10	27	Lithium-ion	Hybrid w/ PV
2019	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Ossining West	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Lenox Hill	125	300	Lead Acid	Stand-alone
2019	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2019	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2019	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2019	White Plains	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Rockview	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Millwood West	3.8	13.5	Lithium-ion	Hybrid w/ PV
2019	Buchanan	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2019	Ossining West	10	27	Lithium-ion	Hybrid w/ PV
2019	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Richmond Hill	2400	8000	Lithium-ion	Stand-alone
2019	Richmond Hill	2400	8000	Lithium-ion	Stand-alone
2019	Granite Hill	5	13.5	Lithium-ion	Hybrid w/ PV

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2019	Yorkville	100	N/A[332]	N/A[333]	Stand-alone
2019	Pleasantville	5	5	Lithium-ion	Hybrid w/ PV
2019	Buchanan	10	10	Lithium-ion	Hybrid w/ PV
2019	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2019	Elmsford No. 2	27	27	Lithium-ion	Hybrid w/ PV
2019	Buchanan	27	13.5	Lithium-ion	Hybrid w/ PV
2019	Rockview	10	27	Lithium-ion	Hybrid w/ PV
2019	Granite Hill	8.7	9.8	Lithium-ion	Hybrid w/ PV
2019	Lincoln Square	125	300	Lead Acid	Stand-alone
2019	Millwood West	5	13.5	Lithium-ion	Stand-alone
2019	White Plains	10	13.5	Lithium-ion	Hybrid w/ PV
2019	Lenox Hill	125	200	Lead-acid	Stand-alone
2018	Sutton	100	400	Lead-acid	Stand-alone
2018	Harrison	10	27	Lithium-ion	Hybrid w/ PV
2018	White Plains	10	27	Lithium Ion	Stand-alone
2018	Cedar Street	5	13.6	Lithium Ion	Hybrid w/ PV
2018	Millwood West	5	13.5	Lithium Ion	Hybrid w/ PV
2018	Washington Street	5	13.5	Lithium-ion	Hybrid w/ PV
2018	Washington Street	15	30	Lithium Ion	Stand-alone
2018	Harrison	5	13.5	Lithium-ion	Hybrid w/ PV
2018	Granite Hill	5	13.5	Lithium Ion	Hybrid w/ PV
2018	Buchanan	6	13.5	Lithium Ion	Hybrid w/ PV
2018	Harrison	36	72	Lithium-ion	Stand-alone
2018	Granite Hill	5	13.5	Lithium Ion	Hybrid w/ PV
2018	White Plains	10	27	Lithium-ion	Hybrid w/ PV
2018	Washington Street	10	27	Lithium Ion	Stand-alone
2018	Cedar Street	100	174	N/A[334]	Hybrid w/ PV
2018	Millwood West	5	13.5	Lithium-ion	Hybrid w/ PV
2018	Harrison	375	750	Lithium-ion	Stand-alone
2018	Harrison	10	27	Lithium Ion	Hybrid w/ PV
2018	Harrison	5	13.5	Lithium Ion	Hybrid w/ PV
2018	Buchanan	5	13.5	Lithium Ion	Hybrid w/ PV
2018	Ossining West	10	13.5	Lithium-ion	Hybrid w/ PV
2018	Riverdale	125	232	Lithium-ion	Hybrid w/ PV
2018	Harrison	5	13.5	Lithium Ion	Hybrid w/ PV
2018	White Plains	5	13.5	Lithium Ion	Hybrid w/ PV
2018	West Bronx	18	144	Lead-acid	Hybrid w/ PV
2018	Harrison	5	13.5	Lithium Ion	Hybrid w/ PV

[332] Note 329, *supra.*
[333] Note 329, *supra.*
[334] Note 329, *supra.*

Year Installed	Network Level Location	Total kW	Total kWh	Battery Chemistry	Co-location
2018	Cedar Street	5	13.5	Lithium-ion	Hybrid w/ PV
2018	Fox Hills	5	13.5	Lithium Ion	Hybrid w/ PV
2018	Elmsford No. 2	5	13.5	Lithium-ion	Hybrid w/ PV
2018	Pleasantville	10	13.5	Lithium-ion	Hybrid w/ PV
2017	Crown Heights	300	1200	Lithium-ion	Stand-alone
2017	Buchanan	10	27	Lithium Ion	Hybrid w/ PV
2017	Millwood West	15	40.5	Lithium-ion	Hybrid w/ PV
2017	Granite Hill	15	30	Lithium Ion	Hybrid w/ PV
2017	Ossining West	20	54	Lithium Ion	Hybrid w/ PV
2017	Millwood West	10	27	Lithium Ion	Hybrid w/ PV
2017	Lincoln Square	125	300	Lead Acid	Stand-alone
2017	Midtown West	125	300	Lead Acid	Stand-alone
2016	Yorkville	100	400	Lead-acid	Stand-alone
2016	Yorkville	100	400	Lead-acid	Stand-alone
2016	Pennsylvania	100	400	Lead Acid	Stand-alone
2016	Fulton	100	400	Lead Acid	Stand-alone
2015	Hudson	300	288	Lithium Ion	Stand-alone
2015	Kips Bay	100	400	Lead Acid	Stand-alone
2014	Rego Park	50	150	Lithium Ion	Stand-alone
2014	Harlem	100	200	Zinc-Manganese	Stand-alone
2014	Granite Hill	27.2	64	Lithium Ion	Stand-alone
2013	Borden	50	150	Lithium Ion	Hybrid w/ PV
2013	Park Place	200	400	Lead Acid	Stand-alone
2013	Bay Ridge	100	200	Lead Acid	Stand-alone

APPENDIX C: TOOLS AND INFORMATION SOURCES

Tools and Information Sources by Organization

Resource Name and Link	Topic(s) Covered
Con Edison Utilities Links	
Con Edison: Hosting Capacity – https://www.coned.com/en/business-partners/hosting-capacity	• Advanced Forecasting • Data Sharing • Beneficial Locations for DERs and NWS • Hosting Capacity
Con Edison: Non-Wires Solutions – https://www.coned.com/en/business-partners/business-opportunities/non-wires-solutions	• Beneficial Locations for DERs and NWS
Con Edison: Private Generation Energy Sources – https://www.coned.com/en/save-money/using-private-generation-energy-sources/applying-for-interconnection	• DER Interconnections
Con Edison: Customer Energy Data – https://www.coned.com/en/accounts-billing/share-energy-usage-data/become-a-third-party	• Data Sharing
Con Edison: Electric Vehicles – https://www.coned.com/en/our-energy-future/electric-vehicles	• Electric Vehicle Integration
Con Edison: Smart Meters – https://www.coned.com/en/our-energy-future/our-energy-vision/where-we-are-going/smart-meters	• Advanced Metering Infrastructure
Con Edison: Energy Storage – https://www.coned.com/en/save-money/rebates-incentives-tax-credits/rebates-incentives-tax-credits-for-commercial-industrial-buildings-customers/save-with-energy-efficiency-upgrades	• Energy Storage Integration
Con Edison: Cyber Security Policy – https://www.conedison.com/en/about-us/cyber-security-policy	• Data Sharing

Con Edison: Private Generation – https://www.coned.com/en/save-money/using-private-generation-energy-sources/applying-for-interconnection	• DER Interconnections • Beneficial Locations for DERs and NWS
Con Edison: EE Incentives – https://www.coned.com/en/save-money/rebates-incentives-tax-credits	• Energy Efficiency Integration and Innovation • Clean Heat Integration
NY REV and Assorted NY Government Links	
Assembly Bill 288: Residential tariff for recharging EVs – http://legislation.nysenate.gov/pdf/bills/2017/A288	• Electrical Vehicle Integration
Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision – https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=14-m-0101	• DER Integration
Case 16-M-0411, In the Matter of Distributed System Implementation Plans – https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-M-0411	• DER Integration
Case 16-M-0412, Benefit Cost Analysis Handbook – https://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=16-M-0412	• Beneficial Locations for DERs and NWS
Joint Utilities of NY Links	
Joint Utilities: Utility-Specific NWA Opportunities – https://jointutilitiesofny.org/nwa-opportunities	• Beneficial Locations for DERs and NWS
Joint Utilities: Regulatory and CLCPA Resources – https://jointutilitiesofny.org/regulatory-resources	• Various Topics
Joint Utilities: EV Readiness Framework – https://jointutilitiesofny.org/electric-vehicles	• Electric Vehicle Integration
Joint Utilities: Overview of Currently Accessible System Data – http://jointutilitiesofny.org/system-data/	• Advanced Forecasting • Data Sharing
Joint Utilities: DSP Communications and Coordination Manual – https://jointutilitiesofny.org/sites/default/files/JU_DSP_Comms_Coordination_Manual_DRAFT_2.pdf	• Grid Operations

Joint Utilities: Draft DSP-Aggregator Agreement for NYISO Pilot Program – https://jointutilitiesofny.org/sites/default/files/Draft_JU_DSP_Aggregator_Agreement_NYISO_Pilot_Program.pdf	• Grid Operations
North American Electric Reliability Corporation ("NERC") CIP Reliability Standards – https://www.nerc.com/pa/Stand/Pages/ReliabilityStandards.aspx	• Data Sharing
Other Links	
National Institute of Standards and Technology ("NIST") Special Publication (SP) 800-53, Revision 5 – https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r5.pdf	• Data Sharing
EPRI: Defining a Roadmap for Successful Implementation of a Hosting Capacity Method for NY State – https://www.epri.com/research/products/3002008848	• Hosting Capacity

List of Related Ongoing Proceedings

- In the Matter of Distributed System Implementation Plans (Case 16-M-0411)
- Proceeding on the Motion of the Commission in Regard to Reforming the Energy Vision (Case 14-M-0101)
- Proceeding on Motion of the Commission Regarding the Grid of the Future (Case 24-E-0165)
- Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act (Case 20-E-0197)
- In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure (Case 24-E-0364)
- Proceeding on Motion of the Commission Concerning Electric Utility Climate Vulnerability Studies and Plans (Case 22-E-0222)
- Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service (Case 22-E-0064)
- Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure (Case 18-E-0138)
- In the Matter of the Federal Energy Regulatory Commission (FERC) Order Nos. 2222 and 841, to Modify Rules Related to Distributed Energy Resources (Case 22-E-0549)
- In the Matter of Energy Storage Deployment Program (Case 18-E-0130)
- Petition of Consolidated Edison Company of New York, Inc. for Approval of Brooklyn/Queens Demand Management Program (Case 14-E-0302)
- Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure (Case 23-E-0700)
- Tariff Filings to Effectuate the Provisions of Public Service Law Section 66-o (Case 18-E-0206)
- Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging (Case 22-E-0236)
- In the Matter of Proactive Planning for Upgraded Electric Grid Infrastructure (Case 24-E-0365)
- In the Matter of a Comprehensive Energy Efficiency Initiative (Case 18-M-0084)

- Proceeding on Motion of the Commission to Implement the Requirements of the Utility Thermal Energy Network and Jobs Act (Case 22-M-0429)
- Proceeding on the Motion of the Commission Regarding Strategic Use of Energy Related Data (Case 20-M-0082)
- In the Matter of Utility Energy Registry (Case 17-M-0315)
- In the Matter of Regulation and Oversight of Distributed Energy Resource Providers and Products (Case 15-M-0180)
- Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service (Case 15-E-0050)
- Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio (Case 07-M-0548)
- In the Matter of the Value of Distributed Energy Resources (Case 15-E-0751)
- Proceeding on Motion of the Commission to Examine Utilities' Marginal Cost of Service Studies (Case 19-E-0283)
- In the Matter of Consolidated Billing for Distributed Energy Resources (Case 19-M-0463)
- Petition of New York Power Authority to Establish the Renewable Energy Access and Community Help Program (Case 24-E-0084)
- In the Matter of Advancement of Distributed Solar (Case 21-E-0629)
- In the Matter of Renewable Energy Facility Host Community Benefit Program (Case 20-E-0249)
- Proceeding on Motion of the Commission to Develop Dynamic Load Management Programs (Case 14-E-0423)
- Petition of New York Solar Energy Industries Association Seeking Modifications to the New York State Standardized Interconnection Requirements to Allow Use of Alternative Forms of Financial Security for Distribution Upgrades in Excess of $500,000 for New Distributed Generators and/or Energy Storage Systems 5 MW or Less Connected in Parallel with Utility Distribution Systems (Case 24-E-0414)
- Petition of Interconnection Policy Working Group Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements (Case 20-E-0543)
- Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service (Case 19-E-0065)
- Petition of Consolidated Edison Company of New York, Inc. for Implementation of Projects and Programs that Support Reforming the Energy Vision (Case 15-E-0229)
- Proceeding on Motion of the Commission Regarding Cyber Security Protocols and Protections in the Energy Market Place (Case 18-M-0376)