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Transmission and Distribution Capital Investment Plan

CASE 24-E-0322

February 2nd, 2026

PREPARED FOR:

THE STATE OF NEW YORK PUBLIC SERVICE COMMISSION

THREE EMPIRE STATE PLAZA

ALBANY, NY 12223

nationalgrid

2026 NY Capital Investment Plan

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List of Abbreviations and Acronyms

3V0	Zero-Sequence Voltage
AC	Asset Condition
ACR	Asset Condition Refurbishment
ADMS	Advanced Distribution Management System
ADSS	All-Dielectric Self-Supporting
ALS	Aerial Laser Survey
AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
BAAH	Breaker and a Half
BCA	Benefit-Cost Analysis
BESS	Battery Energy Storage System
BPO	Broadband Program Office
BPS	Bulk Power System
CCRP	Climate Change Resiliency Plan
CCVS	Climate Change Vulnerability Study
CCVT	Coupling Capacitor Voltage Transformer
CGPP	Coordinated Grid Planning Process
CH	Control House
CHG&E	Central Hudson Gas and Electric
CHI	Customer Hours Interrupted
CI	Customers Interrupted
CIAC	Contribution in Aid of Construction
CIP	Capital Investment Plan
CLCPA	Climate Leadership and Community Protection Act of 2019
CLEC	Competitive Local Exchange Carriers
CMI	Customer Minutes Interrupted
Commission	New York State Public Service Commission
ConEd	Consolidated Edison
CS	Circuit Switcher
CS2.0	Cost Sharing 2.0

CVR	Conservation Voltage Reduction
DER	Distributed Energy Resources
DG	Distributed Generation
DGA	Dissolved Gas Analysis
DMX	Digital Multiplexer
DPS	Department of Public Service
DR	Demand Response
DS0	Digital Signal 0
DS1	Digital Signal 1
DSCADA	Distribution Supervisory Control and Data Acquisition
DSO	Distribution System Operator
DSP	Distributed System Platform
DWDM	Dense Wavelength-Division Multiplexing
EE	Energy Efficiency
EMS	Energy Management System
EPR	Ethylene Propylene Rubber
ERR	Engineering Reliability Review
EV	Electric Vehicles
FAA	Federal Aviation Administration
FAN	Field Area Network
FERC	Federal Energy Regulatory Commission
FEMA	Federal Emergency Management Agency
FLISR	Fault Location, Isolation, and Service Restoration
FOC	Fiber Optic Cable
FP	Funding Project
FTM	Front of the Meter
GCB	Gas Circuit Breaker
GHG	Greenhouse Gas
HPFF	High Pressure Fluid Filled
I&M	Inspection and Maintenance
IHC	In House Construction
ILEC	Incumbent Local Exchange Carriers
IM	Inventory Management

IPWG	Integrated Planning Working Group
IRU	Indefeasible Right to Use
JU	Joint Utilities
LED	Light-Emitting Diode
LiDAR	Light Detection and Ranging
LMR	Land Mobile Radio
LTC	Load Tap Changer
LVAC	Low Voltage Alternating Current
MGP	Manufactured Gas Plant
MHDV	Medium and Heavy-Duty Vehicles
MIT	Massachusetts Institute of Technology
MPLS	Multi-Protocol Label Switching
MRP	Make Ready Program
MSH	Minor Storm Hardening
MVD	Multi-Value Distribution
MVT	Multi-Value Transmission
NERC	North American Electric Reliability Corporation
NESC	National Electrical Safety Code
NIMO	Niagara Mohawk Power Corporation
NPCC	Northeast Power Coordinating Council, Incorporated
NWA	Non-Wires Alternative
NY	New York
NYS	New York State
NYISO	New York Independent System Operator
NYPA	New York Power Authority
NYS DEC	New York State Department of Environmental Conservation
NYSEG	New York State Electric and Gas
NYSERDA	New York State Energy Research and Development Authority
OCB	Oil Circuit Breaker
OEM	Original Equipment Manufacturer
OH	Overhead
OHGW	Overhead Ground Wire
OHL	Overhead Line

OPGW	Optical Ground Wire
OpTel	Operational Telecommunication
PAL	Private Area Lighting
PAR	Phase Angle Regulator
PILC	Paper in Lead Cable
PIT	Pole Inspection and Treatment
PON	Program Opportunity Notice
PPI	Per-Plug Incentive
PITPP	Policy Initiative Transmission Planning Process
PSC	New York Public Service Commission
PSS	Photonic Service Switch
QoS	Quality of Service
RC-MOD	Remote Control-Motor Operated Device
REV	Reforming the Energy Vision (Case 14-M-0101)
RFP	Request for Proposal
RG&E	Rochester Gas and Electric
ROW	Right Of Way
RTU	Remote Terminal Unit
Safety Order	Commission's Safety Order in Case 04-M-0159
SCADA	Supervisory Control and Data Acquisition
SERR	Substation Equipment Replacement Request
SF6	Sulfur Hexafluoride
SN	Summer Normal
SOC	Syracuse Oswego Cortland
SONET	Synchronous Optical Network
SPC	Smart Path Connect
SSVT	Station Service Voltage Transformer
Staff	New York Department of Public Service Staff
SUNY- ESF	State University of New York College of Environmental Science and Forestry
SVC	Static Var Compensator
T&D	Transmission and Distribution
TB	Transformer Bank
TCC	Transmission Control Center

TDM	Time Division Multiplexing
TGP 28	Transmission Planning Guide
TLM	Transmission Line Maintenance
TLS	Transmission Line Services
TRF	Transformer
TVP	Time Varying Pricing
UCD	Underground Commercial Distribution
UG	Underground
URD	Underground Residential Distribution
VCB	Vacuum Circuit Breaker
VT	Voltage Transformer
VVO	Volt-Var Optimization
WL	Watertown/Lowville
WM	Warehouse Management
WN	Winter Normal
WPF	Worst Performing Feeders
ZEV	Zero Emission Vehicles

Chapter 1: Executive Summary

Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid" or the "Company") hereby submits its Five-Year Capital Investment Plan (the "Plan") in compliance with the New York State Public Service Commission ("PSC" or the "Commission") Order, issued August 14, 2025, in Case 24-E-0322.[1] The Plan outlines projected capital investment levels during fiscal years 2027 to 2031 (FY27 to FY31).[2] The Plan's investment levels are summarized in Table 1-1, below, and reflect the Company's present estimate of investment levels needed to meet its obligation to provide safe and adequate service at reasonable cost to customers, as well as to continue to modernize the electric system to address the evolving needs of customers.

Table 1-1
Capital Investment Plan by System/Funding Mechanism ($ millions)

System/Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Transmission	667.9	540.6	620.0	714.3	785.6	3328.4
Sub-Transmission	57.6	64.3	83.9	116.9	132.0	454.8
Distribution	730.4	779.7	886.1	999.1	1095.0	4490.2
Local Spending Total	**1455.9**	**1384.6**	**1590.0**	**1830.3**	**2012.6**	**8273.4**
Local Supplemental	45.5	51.2	29.9	26.2	27.2	180.1
Local Supplemental Spending Total	**45.5**	**51.2**	**29.9**	**26.2**	**27.2**	**180.1**
Regional	642.0	759.5	580.5	307.0	66.4	2355.4
Regional Total	**642.0**	**759.5**	**580.5**	**307.0**	**66.4**	**2355.4**
Capex Total	**2143.4**	**2195.3**	**2200.4**	**2163.5**	**2106.2**	**10808.9**
Indirect - Capex	52.5	58.0	59.8	69.7	113.5	353.5
Indirect – Cost of Removal	6.5	7.6	5.3	5.0	7.4	31.8
Cost of Removal	89.7	153.2	125.4	129.2	128.8	626.3
Grand Total	**2292.2**	**2414.1**	**2390.9**	**2367.4**	**2355.8**	**11820.4**

The five-year investment plan presented here reflects the investments necessary to maintain reliability, continue to increase system resiliency, advance the State's clean energy objectives, and enable a more animated, dynamic energy marketplace that will deliver greater value and benefits for customers. Table 1-1 details investments within three primary funding categories, Local, Local Supplemental, and Regional. The Local mechanism depicts investments to be

[1] *Case 24-E-0322 et al., Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service*, Order Adopting Terms of Joint Proposal and Establishing Rate Plans (Aug. 14, 2025).

[2] *The period FY27 to FY31 covers April 1, 2026 - March 31, 2031.*

executed within the latest approved rate plan, while Local Supplemental and Regional investments are funded through alternative recovery mechanisms and rates. These investments also enable the energy infrastructure needed to meet the goals in New York's Climate Leadership and Community Protection Act of 2019 ("CLCPA") and the Accelerated Renewable Energy Growth and Community Benefit Act. The Company continually reviews the Plan relative to current risks and information and will revise the Plan as required to meet emergent needs while continuing to provide safe and adequate service at a reasonable cost. Two additional investment areas, Indirect and Cost of Removal ("COR"), are described further below.

Chapter 6, Exhibit 9 provides a comparison of the capital investment levels detailed above and the levels approved by the Commission's Rate Case Order in Case 24-E-0322.[3] The Company is working to identify efficiencies and reprioritize work to reduce costs and align with approved investment levels, while still maintaining safe and reliable service for customers at reasonable cost, and will continue to communicate with Department of Public Service Staff ("Staff") on efforts to do so as part of its regular quarterly reporting cadence, or more frequently upon Staff's request.

1. A. Capital Investment Plan Summary

The Plan is presented by system and spending rationale. A view of planned investments by system and funding mechanism is presented in Table 1-1 above, while a view of planned investments by spending rationale is summarized below.

Investment by Spending Rationale and Investment Area

The Company classifies capital projects in this Plan according to 11 spending rationales based on the project's primary investment driver: Customer Requests / Public Requirements; Damage/Failure; System Capacity; Asset Condition; Multi-Value Distribution ("MVD"); Multi-Value Transmission ("MVT"); Reliability; Resiliency; Communications/Control Systems; Non-Infrastructure; and Policy Initiative. In addition, the Company has investments in six areas distinct from the approved rate plan, located within the Local Supplemental, and Regional funding categories: Cost Share 2.0; Approved Proactive Planning; Policy Initiative - CLCPA Phase 2; Policy Initiative - Priority Transmission Project, Interregional Transmission, Electric Vehicle ("EV") Make Ready Program ("MRP"). Furthermore, the Company is reporting on two other investment categories: Indirect and Cost of Removal.

Customer Requests / Public Requirements
Customer Requests / Public Requirements projects include capital expenditures required to address items including new business requests (residential and commercial), new metering installations, outdoor lighting, third-party attachments, land rights, municipal relocations, generator interconnections, and other requirements such as municipal and customer interconnections. This also includes the complete roll-out of Advanced Metering Infrastructure ("AMI").

[3] Case 24-E-0322, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service* ("2024 Rate Case") (Aug. 14, 2025).

Damage / Failure
Damage / Failure projects are required to replace failed or damaged equipment and to restore the electric system to its original configuration and capability following equipment damage or failure. Damage may be caused by storms, vehicle accidents, vandalism, or other unplanned events. The Damage/Failure spending rationale is typically non-discretionary in terms of scope and timing. The Damage/Failure budget may also include the cost of purchasing strategic spare equipment to respond to equipment failures.

System Capacity
System Capacity projects are required to upgrade the capability of the Transmission and Distribution ("T&D") delivery system to provide adequate stability, thermal loading, and voltage performance under existing and anticipated system conditions.

Asset Condition
Asset Condition projects are required to reduce the likelihood and consequences of failures of T&D assets. Examples of such projects include system element replacements such as overhead ("OH") lines, underground ("UG") cable, or substation equipment. Asset Condition investments reflect targeted replacement of assets based on condition, rather than wholesale replacement based on "end of useful life" criteria.

Multi-Value Distribution ("MVD")
MVD projects are driven by asset condition needs while also proactively addressing system capacity/hosting capacity constraints in support of state and federal clean energy goals.

Multi-Value Transmission ("MVT")
MVT projects satisfy traditional asset condition, reliability, safety, and compliance planning needs. They also address bottlenecks or constraints that limit the delivery of renewable energy or load serving capacity within the transmission system.

Reliability
Reliability projects are required to improve power quality, storm hardening,[4] and system performance.

Resiliency
Resiliency projects are intended to ensure the electric power system can recover quickly following a disaster or, more generally, the ability to anticipate extraordinary and high-impact, low-probability events and rapidly recovering from these disruptive events. Projects included in the resiliency spending rationale are intended to invest in infrastructure identified as vulnerable based on weather projections. These types of weather hazards and projects were evaluated through the Climate Change Vulnerability Study ("CCVS") and Climate Change Resiliency Plan ("CCRP") (Case 22-E-0222).

Communications / Control Systems
Communications / Control Systems projects are required for monitoring and controlling the transmission and distribution systems and includes the Energy Management System ("EMS"), Remote Terminal Unit ("RTU") installations, and Operational Telecommunication ("OpTel") investments.

[4] *Storm Hardening is defined as the ability of the system to withstand the damaging effects of storm activity. Storm Hardening falls under reliability because it is pre-contingency focused, whereas resiliency is more focused on post-contingency.*

Non-Infrastructure
Non-Infrastructure projects do not fit into one of the foregoing categories but are necessary for the safe and reliable operation of the electric system. Example projects include: substation physical security measures, radio system upgrades, and purchases of test equipment.

Policy Initiative
Policy Initiative projects are non-discretionary and are associated with a determination or directive from an external entity having authority. Examples are CLCPA or FERC1000 projects.

Cost Share 2.0
The Cost Sharing mechanisms outlined in the Standardized Interconnection Requirements ("SIR") provide developers with the opportunity to share the costs of significant substation upgrades identified during a Coordinated Electric System Interconnection Review ("CESIR") study. According to the SIR, once an identified upgrade reaches the construction trigger point (either 25% or 75% of the total cost), the company will proceed with the construction of the project and will be responsible for funding the remaining balance of the upgrade. The Company can recover its costs for a period of five years following the in-service date of the upgrade. In addition to market-initiated upgrades, Cost Sharing 2.0 ("CS2.0") mechanisms of the SIR gives utilities the opportunity to offer Utility-Initiated Upgrades. These include Proactive Zero-Sequence Voltage ("3V0") projects and CS2.0 Multi-Value Distribution projects. CS2.0 Multi-Value Distribution projects are substation projects in the Plan with a baseline scope for a traditional need and the opportunity to increase scope for added hosting capacity.

Approved Proactive Planning
Investments in this mechanism relate to new electric infrastructure upgrades to meet the demand in electrification "hotspots" as identified under Case 24-E-0364. This includes large electric demands from electrifying fleets, highway fast-charging, and heating electrification. As indicated in the originating Order (Aug. 15, 2024), these needs often arise on very specific areas of the electric system (e.g., in commercial districts where fleets "cluster"; at highway interchanges; in areas with concentrated building stock or new residential developments), requiring granular study and upgraded infrastructure to ensure capacity is available when needed to serve future interconnection requests. Particularly, the capital projects detailed within this mechanism are those approved within the Order Addressing Urgent Upgrade Filings, issued on June 12, 2025.

Policy Initiative - CLCPA Phase 2
CLCPA Phase 2 Projects are specifically to fund projects in "Areas of Concern". These are certain areas of the State that have been identified by the Utilities, Staff, New York State Energy Research and Development Authority ("NYSERDA"), and others to be in critical need of transmission investment. These areas are characterized by the presence of existing renewable generation experiencing curtailments and a strong level of developer interest that exceeds the capability of the local transmission system. These projects have been approved for funding by the PSC under Case 20-E-0197.

Policy Initiative - Priority Transmission Projects
Priority Transmission Projects are intended to meet the requirements of the first New York Power Authority ("NYPA") Priority Transmission Project(s) affecting National Grid facilities. Among these projects, National Grid was selected as a development partner by NYPA for Smart Path Connect

("SPC"). These projects support New York State transmission needs and are recovered through the applicable Federal Energy Regulatory Commission ("FERC") Jurisdictional tariff.

Distribution – Electric Vehicle ("EV") Make Ready Program ("MRP")
The EV MRP is intended to supplement Front of the Meter ("FTM") costs of grid-side infrastructure upgrades required to serve qualified EV service applicants.

Indirect
The Indirect investment area includes other capital investments essential to running the business, including facilities and properties, fleet assets, and investments to support the inventory management and warehouse management ("IM/WM") functions.

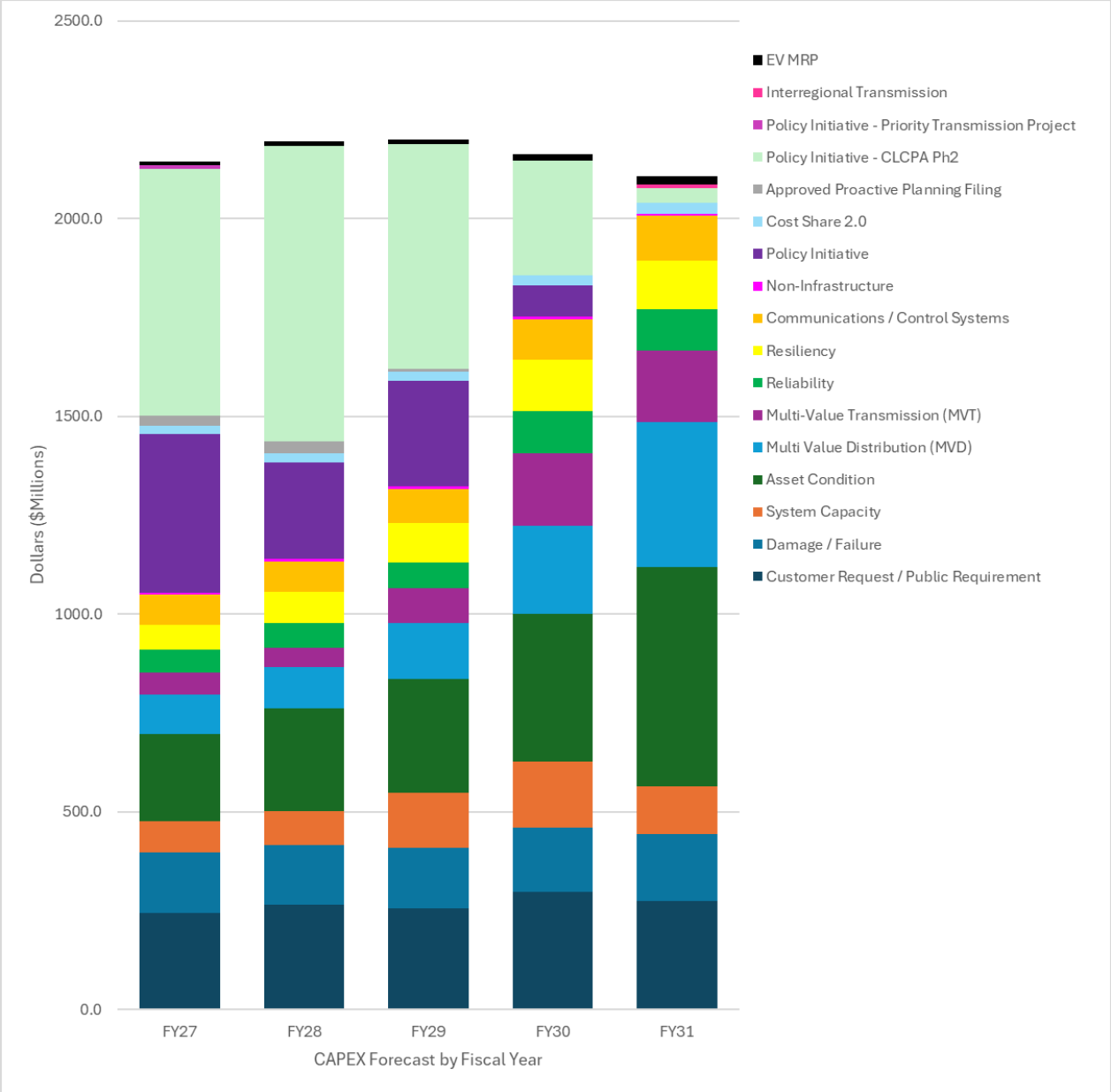
Cost of Removal ("COR")
COR is required for the Company to implement the infrastructure Capital Investment Plan ("CIP") articulated in Table 1-1. The Company defines removal as any work on an existing capital asset that results in the asset being removed from the asset inventory, whether or not a different asset is subsequently added in its place. This type of work would include, but is not limited to, all the activities associated with disconnection, removal, and disposal of capital units of property such as circuit breakers and transformers; disconnection, removal, and disposal of secondary items of equipment such as relays and control equipment; removal and/or demolition of foundations; disconnection, removal and disposal of insulator strings; removal of wood poles or steel structures; and disconnection and removal of conductor and shield wire. Additionally, COR associated with indirect capital is detailed in Table 1-1. Candidates for CS2.0 Multi-Value Distribution are noted in Exhibit 7. The Company plans to gauge market interest before proceeding with CS2.0 Multi-Value Distribution projects.

Investment by spending rationale for fiscal years FY27 – FY31 is provided in Table 1-2 below and in Figure 1-1.

Table 1-2
Investment by Spending Rationale ($ millions)

Spending Rationale / Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Customer Requests/Public Requirements	244.4	265.6	255.8	298.9	275.3	1340.0
Damage / Failure	152.4	149.8	153.0	160.6	167.5	783.1
System Capacity	80.7	87.3	138.8	168.0	121.1	595.8
Asset Condition	219.8	258.0	287.9	374.1	555.1	1695.0
Multi Value Distribution (MVD)	99.0	106.1	142.3	221.6	366.0	935.0
Multi-Value Transmission (MVT)	55.1	48.5	87.4	184.6	181.2	556.9
Reliability	58.8	61.5	66.0	106.3	104.7	397.3
Resiliency	63.1	78.4	99.8	130.4	122.9	494.6
Communications / Control Systems	75.0	78.7	85.7	101.8	112.7	453.8
Non-Infrastructure	5.1	5.2	5.4	5.5	5.7	27.0
Policy Initiative	402.5	245.4	268.0	78.6	0.4	994.9
Local Spending Total	**1455.9**	**1384.6**	**1590.0**	**1830.3**	**2012.6**	**8273.4**
Cost Share 2.0	19.7	22.0	24.1	25.8	27.2	118.9
Approved Proactive Planning Filing	25.8	29.2	5.8	0.4	0.0	61.3
Local Supplemental Total	**45.5**	**51.2**	**29.9**	**26.2**	**27.2**	**180.1**
Policy Initiative - CLCPA Ph2	623.8	748.7	568.9	291.1	36.2	2268.8
Policy Initiative - Priority Transmission Project	9.5	0.0	0.0	0.0	0.0	9.5
Interregional Transmission	0.0	0.0	0.0	0.0	10.0	10.0
EV MRP	8.7	10.8	11.5	15.9	20.2	67.1
Regional Total	**642.0**	**759.5**	**580.5**	**307.0**	**66.4**	**2355.4**
Capex Total	**2143.4**	**2195.3**	**2200.4**	**2163.5**	**2106.2**	**10808.9**
Indirect - Capex	52.5	58.0	59.8	69.7	113.5	353.5
Indirect - COR	6.5	7.6	5.3	5.0	7.4	31.8
Cost of Removal	89.7	153.2	125.4	129.2	128.8	626.3
Grand Total	**2292.2**	**2414.1**	**2390.9**	**2367.4**	**2355.8**	**11820.4**

Figure 1-1
Investment by Spending Rationale by Year FY27-FY31 ($ millions)



1. B. Investment by System

The following is a summary of planned investment by system. Chapters 2, 3, and 4 detail the transmission, sub-transmission, and distribution system spending, respectively.

Transmission System Summary

The transmission system consists of approximately 5,720 miles of transmission line, 193 transmission substations, about 500 large power transformers, and over 850 circuit breakers at operating voltages of 69kV and above.[5] To serve the needs of customers over the five-year period covered by this Plan, the Company expects to invest $5,873 million on the transmission system, as shown in Table 1-3 below. The majority of planned transmission system investment is in the Multi-Value Transmission, System Capacity, Asset Condition, Public Initiative spending rationales, and CLCPA Ph2 funding mechanisms. Multi-Value projects satisfy traditional asset condition, reliability, safety, and compliance planning needs, and can also address bottlenecks or constraints that limit the delivery of renewable energy or load serving capacity within the transmission system. The System Capacity mechanism includes spending to address generator retirements, the North American Electric Reliability Corporation ("NERC") / Northeast Power Coordinating Council ("NPCC") standards and transmission owner-led system studies. The Policy Initiative, CLCPA, and Priority Transmission Projects spending rational/funding mechanisms support external entity goals and/or mandates. Substantial portions of the planned investment in the Asset Condition mechanism relate to substation rebuild and overhead line refurbishment programs. The Communications / Control Systems mechanism includes spending on the OpTel program, EMS/RTU for Distribution Supervisory Control and Data Acquisition ("DSCADA"), Digital Signal 0 (64Kb/s) ("DS0"), Replacement of Digital Multiplexer ("DMX"), Microwave (Harris 5200), and older fiber optic cable ("FOC") projects for end-of-life assets.

Table 1-3
Transmission System Capital Expenditure by Spending Rationale ($ millions)

Spending Rationale / Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Customer Requests/Public Requirements	7.7	43.8	31.1	66.5	30.2	179.2
Damage/Failure	15.4	12.7	10.2	13.1	16.1	67.5
System Capacity - NY	29.1	14.0	23.8	48.8	44.8	160.4
Asset Condition	106.0	114.0	135.5	199.7	368.2	923.4
MVT	55.1	48.5	87.4	184.6	181.2	556.9
Reliability	18.7	26.7	21.2	66.4	76.1	209.2
Resiliency	5.9	6.2	4.7	4.8	7.3	29.0
Communications/Control Systems	33.6	32.1	39.6	51.5	60.9	217.7
Non-Infrastructure	0.3	0.3	0.3	0.3	0.3	1.5
Policy Initiative	396.1	242.3	266.2	78.6	0.4	983.6
Local Total	**667.9**	**540.6**	**620.0**	**714.3**	**785.6**	**3328.4**
Policy Initiative - CLCPA Ph2	619.1	746.8	568.8	291.0	36.2	2261.9

[5] *In prior CIP reports, assets operating at 69kV had been classified as sub-transmission.*

Policy Initiative - Priority Transmission	9.5	0.0	0.0	0.0	0.0	9.5
Interregional Transmission	0.0	0.0	0.0	0.0	10.0	10.0
Regional Total	**628.6**	**746.8**	**568.8**	**291.0**	**46.2**	**2281.4**
Capex Total	**1296.5**	**1287.3**	**1188.8**	**1005.3**	**831.8**	**5609.8**
Cost of Removal	38.4	83.6	50.0	46.7	44.6	263.3
Grand Total	**1334.9**	**1370.9**	**1238.8**	**1052.0**	**876.4**	**5873.1**

Sub-Transmission System Summary

The sub-transmission system is comprised of lines and substations typically operating at 46kV, 34.5kV, 23kV, and some 13.2kV, and 12kV. National Grid has approximately 3,000 circuit miles of overhead sub-transmission lines and approximately 640 circuit miles of sub-transmission underground cable. To serve the needs of customers over the five-year period covered by this Plan, the Company expects to invest approximately $508 million on the sub-transmission system, as shown in Table 1-4 below

Table 1-4
Sub – Transmission System Capital Expenditure by Spending Rationale ($ millions)

Spending Rationale / Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Customer Requests/Public Requirements	1.5	0.5	0.5	2.8	6.6	11.9
Damage/Failure	4.9	5.0	5.1	5.2	5.4	25.5
System Capacity - NY	1.6	6.1	5.3	3.1	0.2	16.3
Asset Condition	33.4	34.8	38.7	65.8	71.8	244.5
Multi Value Distribution (MVD)	7.6	5.5	5.8	9.6	20.7	49.0
Reliability	3.0	2.4	5.2	6.9	4.1	21.5
Resiliency	5.3	9.9	22.3	23.5	23.3	84.3
Communications/Control Systems	0.3	0.0	0.0	0.0	0.0	0.3
Policy Initiative	0.1	0.2	1.2	0.0	0.0	1.4
Local Spending Total	**57.6**	**64.3**	**83.9**	**116.9**	**132.0**	**454.8**
Approved Proactive Planning Filing	2.8	2.5	2.1	0.3	0.0	7.8
Local Supplemental Spending Total	**2.8**	**2.5**	**2.1**	**0.3**	**0.0**	**7.8**
Policy Initiative - CLCPA Ph2	0.3	0.1	0.1	0.1	0.0	0.6
Regional Total	**0.3**	**0.1**	**0.1**	**0.1**	**0.0**	**0.6**
Capex Total	**60.8**	**66.9**	**86.2**	**117.2**	**132.0**	**463.2**
Cost of Removal	4.8	6.7	10.6	11.3	12.1	45.6
Grand Total	**65.6**	**73.6**	**96.8**	**128.6**	**144.2**	**508.7**

Distribution System Summary

The Company's distribution system consists of lines and substations operating at 15kV and below. There are over 36,700 circuit miles of overhead primary wire and over 8,100 circuit miles of underground primary cable on the system supplying approximately 425,000 overhead, padmount and underground distribution transformers. Additionally, there are 514 substations providing service to the Company's over 1.69 million electric customers. To serve the needs of customers over the five-year period covered by this Plan, the Company expects to invest $5,438 million on

the distribution system, including Indirects, as shown in Table 1-5 below. The majority of planned distribution system investment is in the Multi-Value Distribution, Customer Requests / Public Requirements, Asset Condition, and Damage / Failure. Multi-Value projects are driven by Asset Condition needs while also proactively addressing system capacity and hosting capacity constraints in support of state and federal clean energy goals The Customer Requests / Public Requirements mechanism includes projects required to address such items as new business requests (residential and commercial), new metering installations, outdoor lighting, third-party attachments, land rights, municipal relocations, and generator interconnections. Substantial portions of the planned investment in the Asset Condition mechanism relate to substation rebuild and overhead line refurbishment programs. Damage Failure spending replaces failed or damaged equipment and to restore the electric system to its original configuration and capability following equipment damage or failure.

Table 1-5
Distribution System Capital Expenditure by Spending Rationale ($ millions)

Spending Rationale / Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Customer Requests/Public Requirements	235.3	221.2	224.2	229.6	238.6	1148.9
Damage/Failure	132.1	132.1	137.7	142.3	146.0	690.1
System Capacity - NY	49.9	67.2	109.7	116.1	76.1	419.1
Asset Condition	80.5	109.2	113.7	108.5	115.2	527.2
Multi Value Distribution (MVD)	91.4	100.7	136.5	212.1	345.3	885.9
Reliability	37.1	32.4	39.6	32.9	24.5	166.6
Resiliency	51.9	62.3	72.9	102.0	92.2	381.3
Communications/Control Systems	41.0	46.6	46.0	50.4	51.8	235.8
Non-Infrastructure	4.8	4.9	5.1	5.2	5.4	25.4
Policy Initiative	6.3	2.9	0.7	0.0	0.0	9.9
Local Spending Total	**730.4**	**779.7**	**886.1**	**999.1**	**1095.0**	**4490.2**
Cost Share 2.0	19.7	22.0	24.1	25.8	27.2	118.9
Approved Proactive Planning Filing	23.0	26.7	3.7	0.1	0.0	53.5
Local Supplemental Total	**42.7**	**48.7**	**27.8**	**25.9**	**27.2**	**172.4**
Policy Initiative - CLCPA Ph2	4.4	1.8	0.0	0.0	0.0	6.2
EV MRP	8.7	10.8	11.5	15.9	20.2	67.1
Regional Total	**13.1**	**12.6**	**11.6**	**15.9**	**20.2**	**73.3**
Capex Total	**786.1**	**841.0**	**925.4**	**1040.9**	**1142.4**	**4735.9**
Indirect - Capex	52.5	58.0	59.8	69.7	113.5	353.5
Indirect - COR	6.5	7.6	5.3	5.0	7.4	31.8
Cost of Removal	46.5	62.9	64.8	71.2	72.0	317.5
Grand Total	**891.7**	**969.5**	**1055.3**	**1186.9**	**1335.3**	**5438.7**

1. C. Significant Investment Areas Addressed by 2026 Plan

The Plan is designed to effectively address system investment needs, which include emergent as well as long-term issues. Significant areas of investment and focus in this year's Plan include:

- Asset Condition
- CLCPA Ph2
- MVD
- MVT
- Policy Initiative
- Resiliency
- Advanced Communications, Monitoring, Controls, and Distributed Energy Resources ("DER") Integration
- EVs
- Non-Wires Alternative ("NWA")
- CS2.0

Asset Condition
Asset Condition issues represent approximately 14.3% of the total capital investment in the Plan. Asset Condition investments proactively address deteriorated assets before failure, reducing the likelihood and consequences of electric system failures. This proactive approach is vital to the Company's ability to achieve its decarbonization goals while maintaining safety, suitable service reliability, operational flexibility, customer satisfaction, and system performance. To support data-driven decision making, the Company continually analyzes the lifespans of eight primary substation and overhead line asset classes, including wooden poles, steel towers, underground devices, substation and line transformers, metal clads, circuit breakers, and volt/var equipment (substation capacitors and voltage regulators). This analysis helps to forecast asset replacement coincident peaks across critical asset classes, so that the Company may mitigate these coincident failures and peak resource demand through proactive replacements.

CLCPA Ph2
Please see detailed descriptions for each stage of CLCPA Phase 2 work as stated in Chapter 1 section A.

Multi-Value Distribution ("MVD")
The MVD spending rationale was introduced in FY24 to provide visibility to projects with a primary driver of asset condition that also increase system capacity and/or hosting capacity. The MVD spending rationale highlights projects to proactively increase system capacity or hosting capacity simultaneous to the in-kind replacement of deteriorated assets. This can involve replacing existing assets with new, larger capacity assets; converting lower distribution voltages (ex: 4kV) to higher voltage classes (ex: 15kV); and/or expanding sites to allow for the retirement of nearby deteriorated assets. This approach can allow for maximized and efficient interconnection of green energy, zero emission vehicles ("ZEV"), and heating solutions.

Multi-Value Transmission ("MVT")
The Plan includes MVT projects that are intended to address both National Grid system needs and State transmission needs that address clean energy targets. These projects maximize the utilization of existing and planned renewable resources while avoiding the cost of over-built or

otherwise inefficient solutions which only address a single system need. The MVT projects satisfy traditional asset condition, reliability, safety, and compliance planning needs, and can also address bottlenecks or constraints that limit the delivery of renewable energy or load serving capacity within the transmission system.

Multi-Value Transmission upgrades include:

- Circuit rebuilds with larger current carrying conductors.
- Circuit rebuilds at higher operating voltages (e.g., from 69 kV to 115 kV) to transmit higher levels of energy on the same conductors.
- Replacement of existing transformers with higher capability transformers.
- Reconfigurations and/or additions of new circuits or substation transformers to increase overall transfer capability.
- Addition or capability upgrades of Phase Angle Regulators ("PARs") or series reactors, each of which help control and balance flows on the power system to make more effective use of the system and increase overall system transfer capability.
- Replacement and upgrade of existing "weak-link" equipment (notably in substations) which currently serve as "choke points" that restrict overall transfer capability.

Policy Initiative
Please see detailed descriptions for underlying projects and mandates in chapters 2, section J, section K, and section L; chapter 3, section I and section K; chapter 4, section K and section M.

Resiliency
The Plan includes several projects specifically intended to address resiliency efforts. The Resiliency spending rationale was created to provide clear visibility on projects that give the utility the ability to recover quickly following a large-scale interruption or, more generally, the ability to anticipate extraordinary and high-impact, low-probability events and then rapidly recover from said events. This involves not only increasing the flexibility of the grid with feeder ties, but also making the grid smarter by installing Fault Location, Isolation, and Service Restoration ("FLISR") schemes and distribution line sensors. Currently, only about 13% of the 15kV class distribution feeders and circuits on the system have automated feeder ties. Through the installation of FLISR on 15kV feeders in New York ("NY") with a target of approximately two-thirds (66%) of 15kV class feeders, the Company expects the impact of outages to be reduced by isolating unaffected portions of feeders and restoring customers via automated feeder ties.

In addition to adding automated FLISR schemes on the distribution system, the Company plans to target deployments of FLISR schemes to approximately a quarter (25%) of its NY sub-transmission circuits, which will further reduce the impact of outages by restoring entire feeders at a given time by re-routing power from the source. These sub-transmission schemes will further reduce outage impacts across the State by automatically restoring customers whose source is connected to the sub-transmission system and will enhance the resiliency of the areas where these schemes are deployed. Once FLISR is deployed to all eligible 15kV feeders and sub-transmission circuits, the Company expects to have approximately 60% of NY customers connected to feeders or fed from circuits with FLISR schemes. In addition to specific resiliency projects, resiliency-related costs are reflected in other projects and programs in the form of enhanced standards or equipment costs. At the transmission level this includes an updated system design to reduce the number of customers interrupted by a transmission-level event and minimizing the time to restore service through additional breakers, switching capability, and the installation of additional supplies to load pockets.

In addition to projects and programs to prepare for high-impact, low-probability events across the distribution and transmission system, the Company performed a CCVS and developed a Resilience Plan to understand projected climate hazard impacts and how to adapt and build a resilient system to maintain reliability. As a result of the CCRP, investments to adapt to climate change now include: transmission, sub-transmission, and distribution line standard upgrades; distribution-targeted undergrounding for wind and icing projections; substation transformer ambient temperature specification upgrades to withstand higher temperatures; substation flood walls to withstand low probability; and high impact flooding events. A resilient system will reduce reliability impacts caused by increasingly volatile weather and storm events but will take several years to fully implement.

Advanced Communications, Monitoring, Controls, and DER Integration
The Company is continuing to evolve in the role of the Distributed System Platform / Distribution System Operator ("DSP"/"DSO") provider by expanding the ability of third-party providers of DER to deliver value to both customers and the electric system, and by modernizing the electric grid. Investments in advanced communications, monitoring, and controls technologies are essential to enhance DER integration. Examples of such investments included in this Plan include:

- Telecommunications enhancements
- System monitoring (RTUs)
- Energy Storage monitoring and control
- DSCADA
- Clean innovation projects
- AMI

AMI is a foundational component of the Company's grid modernization efforts. The Company's AMI implementation plan was approved by the Commission on November 20, 2020 with modifications that included adjusting the Benefit-Cost Analysis ("BCA") to reflect "opt-in" time-varying pricing ("TVP") assumptions, enhanced data latency, and a cap on capital investments at $475.2 million in the first six years after implementation commences. The subsequent NMPC Rate Order approved further details regarding project implementation and cost treatment. A detailed design and back-office systems installation began in FY22. The Field Area Network ("FAN") deployment started in February 2023, with a soft launch in April 2023 and full deployment in August 2023. More details on the Company's AMI investments are presented in Chapter 4 of the Plan.

Electric Vehicles ("EV")
The Plan includes a robust set of EV programs intended to promote and accommodate EV adoption across all customer segments while maximizing utilization of existing grid infrastructure. The program aligns with the State's policies and goals as set forth in several Commission proceedings focused on EVs, including: 1) Case 18-E-0138, which enables a light-duty EV make-ready program, residential managed charging program, a Medium and Heavy-Duty Vehicle ("MHDV") Pilot Program, fleet assessment services, and Transit Authority Make-Ready support; 2) Case 18-E-0206, which addresses modifications to the Company's voluntary time-of-use rate to better support residential customers who own EVs; 3) Case 22-E-0236, which sunset the Per-Plug Incentive ("PPI") program and created the commercial EV Phase-In Rate for EV charging sites, the demand charge rebate program, the commercial managed charging program, and the load management technology incentive program; 4) Case 23-E-0070, which addresses barriers

to MHD EV charging infrastructure, and 5) Case 24-E-0364 Proactive Planning. The Plan also includes infrastructure investment to accommodate EV load growth identified through the Company's typical system capacity planning procedures, which may not be directly associated with the PSC programs and cases noted above. Additionally, the Company anticipates the need for distribution and transmission infrastructure in support of electric fleets and highway charging, particularly in certain concentrated pockets across Upstate NY as highlighted in the Transmission section above. The Company is actively identifying and evaluating these areas through various planning and load forecasting studies.

Non-Wires Alternatives ("NWA")
The NWA processes/guidelines are continuously under review and are periodically updated in conjunction with the Reforming the Energy Vision ("REV") proceeding, New York State Joint Utility ("JU") discussions, and/or internal efforts. Implementing the NWA process internally and socializing the process externally creates consistency with the JU and creates a cohesive process that helps animate markets, create realistic expectations for DER stakeholders, increase DER sourcing, and ultimately saves money for National Grid's customers. Review and evaluation of projects for both interim bridge-to-wires solutions and for the deferral of capital projects is consistently completed each year to assess whether a DER solution can fulfill the planning requirements to support National Grid customers with safe and reliable service. Exhibit 4 lists the projects currently being evaluated for potential NWA solutions.

Cost Sharing 2.0 ("CS2.0")
Please see detailed descriptions for CS2.0 work as stated in Chapter 1 section A.

1. D. Development of the Capital Investment Plan

The Plan is based on the Company's current assessment of the needs of the electric delivery system over the Plan period. Known mandatory programs and projects (*i.e.*, those under Customer Requests / Public Requirements and Damage / Failure spending rationales) are included in the Plan. Such programs and projects include new customer connections, regulatory commitments, public requirements that necessitate relocation or removal of facilities, safety and environmental compliance, and system integrity projects, such as response to damage/failure and storms.

Programs and projects in the other categories (*e.g.*, System Capacity and Asset Condition spending categories) are developed based on system studies and evaluation of existing assets by subject matter experts for inclusion in the Plan. While each project is given a single spending rationale, many projects serve needs related to several spending rationales as the Company strives to identify and capture overlapping investment drivers/system needs and develop cost effective multi-valued solutions. Inclusion/exclusion of any given project is based on several factors including, but not limited to, changes in the need date for the project, changing priorities within the electric portfolios, new or changing customer requirements, resource availability, value score, project in-progress status, and regulatory input through rate cases. In addition, when it can be accomplished, the bundling of work and/or projects is analyzed to optimize the total cost and outage planning. In general, unless the ultimate system or customer need for the project has been eliminated, projects not included in the current year's budget will normally be prioritized within the outer years of the capital plan and included in a future year's budget. Exhibit 6 shows a list of capital projects greater than $500,000 that were actively considered but not included in the current year's budget during the annual budget build cycle.

The time-period over which the Company must budget its infrastructure investments can result in changes to budgets and project estimates. Such changes may be due to project scope, material or resource costs, customer needs, or a more refined estimate based on where the project is in its development. External factors, such as generation retirement announcements or new regulatory or legislative requirements or initiatives, may also drive changes in the Plan budget.

Costs for projects that are already in process, or are soon to be in process, generally have +/- 10% cost estimates. Other projects at earlier stages in the project evolution process, and the budgets for those projects, are accordingly less refined and are more susceptible to changes in scope and estimate. The projects in the Company's portfolio are continuously reviewed for changes in assumptions, constraints, project delays (particularly related to novel supply chain challenges), accelerations, weather impacts, outage coordination, permitting/licensing/agency approvals, system operations, performance, safety, and customer-driven needs that arise. The portfolio is updated throughout the year.

The Plan includes certain reserve line items to accommodate contingencies not known at the time the Plan is developed and to allocate funds for projects in future years whose scope and timing have not yet been determined. As specific project details become available, emergent projects are added to the Plan with funding drawn from the reserve funds or from re-prioritization of individual projects in the Plan. The Company tracks and manages budgetary reserves and emergent work as part of its investment planning and current-year spending management processes and reports that information quarterly to Staff.

The Company uses different approaches to deliver the Plan based on the differences in scope and character of transmission and distribution construction. With respect to the transmission portion of the Company's investment plan, the Company will supplement its internal workforce with competitively procured contractor resources. On the distribution side, the Company's internal workforce will continue to be primarily supplemented by the Company's contractor-of-choice arrangements and competitively procured contractor resources.

The Company continually reviews the Plan relative to current risks and information and will revise the Plan as required to meet emergent needs while continuing to provide safe and adequate service at a fair cost. The Company has implemented and continues to calibrate a digital tool, known internally as FutureNow, built by Copperleaf Technologies Inc., to enhance its ability to manage its investments across the entire electric portfolio. The tool provides functionality that establishes a common, data driven approach to managing and prioritizing system investments, as well as model impacts of changes to project forecasts and estimates.

The Company's risk-based approach to selecting projects and programs for inclusion in the Plan, data driven approach for managing and prioritizing expenditures, efforts to improve cost estimating, and service quality metrics that include substantial financial consequences for project/portfolio estimate variations, results in a Plan that aims to meet the needs of customers at a fair cost.

1. E. Organization of this Filing

The remainder of this filing provides details on the programs and projects that comprise the Plan. The document is divided into the following chapters:

- Chapter 2 - Transmission System
- Chapter 3 - Sub-Transmission System
- Chapter 4 - Distribution System
- Chapter 5 - Investment by Transmission Study Area
- Chapter 6 - Exhibits

Chapter 2: Transmission System

The Company expects to invest approximately $5873.1 million on the transmission system over the next five years, as shown in Table 2-1 below.

Table 2-1
Transmission System Capital Expenditure by Spending Rationale ($ millions)

Spending Rationale / Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Customer Requests/Public Requirements	7.7	43.8	31.1	66.5	30.2	179.2
Damage/Failure	15.4	12.7	10.2	13.1	16.1	67.5
System Capacity - NY	29.1	14.0	23.8	48.8	44.8	160.4
Asset Condition	106.0	114.0	135.5	199.7	368.2	923.4
MVT	55.1	48.5	87.4	184.6	181.2	556.9
Reliability	18.7	26.7	21.2	66.4	76.1	209.2
Resiliency	5.9	6.2	4.7	4.8	7.3	29.0
Communications/Control Systems	33.6	32.1	39.6	51.5	60.9	217.7
Non-Infrastructure	0.3	0.3	0.3	0.3	0.3	1.5
Policy Initiative	396.1	242.3	266.2	78.6	0.4	983.6
Local Total	**667.9**	**540.6**	**620.0**	**714.3**	**785.6**	**3328.4**
Policy Initiative - CLCPA Ph2	619.1	746.8	568.8	291.0	36.2	2261.9
Policy Initiative - Priority Transmission	9.5	0.0	0.0	0.0	0.0	9.5
Interregional Transmission	0.0	0.0	0.0	0.0	10.0	10.0
Regional Total	**628.6**	**746.8**	**568.8**	**291.0**	**46.2**	**2281.4**
Capex Total	**1296.5**	**1287.3**	**1188.8**	**1005.3**	**831.8**	**5609.8**
Cost of Removal	38.4	83.6	50.0	46.7	44.6	263.3
Grand Total	**1334.9**	**1370.9**	**1238.8**	**1052.0**	**876.4**	**5873.1**

This chapter briefly describes major investment categories that comprise a significant portion of the Company's overall five-year transmission Plan. A complete list of transmission projects in the Plan is found in Exhibit 1.

The sections below describe the investment drivers and customer benefits of the projects along with a description of significant changes from the most recent prior Plan. Specific asset condition and performance issues are described in further detail in the bi-annual Report on the Condition of Physical Elements of Transmission and Distribution Systems filing to the PSC, most recently filed on September 30, 2024, in Case 20-E-0380.

2. A. Customer Requests/Public Requirements

Transmission investments in this spending rationale include acquisition of necessary land rights and public requirements (including municipal requests), customer interconnections, and wind farms. Because customer interconnection projects are typically reimbursable (i.e., costs incurred by the Company are paid by the customer), there is no net impact to the Plan from such projects.

Dewitt 115kV Station Rebuild (C081783 – $60.8M, C098377 - $3.6M)
This project rebuilds the 115kV portion of DeWitt Station to meet NPCC Directory 4 requirements for [redacted] Transmission Substations. This includes additional relaying and new control wiring and new conduit systems as well as relocation of transmission lines to terminate at the new site.

Drivers:
New York Independent System Operator ("NYISO") conducted the NPCC A-10 test on the DeWitt 115kV bus, and the bus failed. Therefore, it must be rebuilt so that the configuration of breakers, relaying and control wiring will meet NPCC Directory 4 requirements.

Customer Benefits:
Maintain the reliability of the Transmission System.

2025 to 2026 Variance:
The project schedule and scope have been adjusted to meet the agreed dates with NPCC.

Table 2-2
Transmission – Dewitt Station 115kV Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.2	4.2	4.6	6.5	39.2	-	54.6
2026	-	3.2	4.6	5.9	25.7	25.0	64.4

FAA Online Monitoring Program (C095714 - $1.8M)
This program will add radio packs to all existing Federal Aviation Administration ("FAA") lights to have them monitored on National Grid's in-house monitoring system, T-MON.

Drivers:
Obstruction marking and lighting are required by the U.S. Department of Transportation's Federal Aviation Administration to promote aviation safety in the National Airspace System. For National Grid's Transmission system, the most prevalent tool that is applied to the towers is aircraft warning lights.

Customer Benefits:
The installation of radio packs onto the FAA lights will allow for more reliable monitoring of the FAA lights on National Grid's structures by allowing crews to review the active status of each light 24/7 and will support and promote aviation safety surrounding National Grid's lines and assets.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-3
Transmission – FAA Online Monitoring Program
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.05	0.05	0.05	0.05	1.6	1.8

FAA Lighting Replacement Program (C095713 - $3.4M)
This program will focus on replacing non-functioning and broken FAA lights as well as adding new FAA lights on National Grid's transmission towers.

Drivers:
Obstruction marking and lighting are required by the U.S. Department of Transportation's Federal Aviation Administration to promote aviation safety in the National Airspace System. For National Grid's transmission system, the most prevalent tool that is applied to the towers is aircraft warning lights.

Customer Benefits:
The replacement and installation of FAA lights on National Grid's structures will support and promote aviation safety surrounding National Grid's lines and assets and will sustain the safety levels National Grid currently has in place.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-4
Transmission – FAA Lighting Replacement Program
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.05	0.05	0.05	0.05	3.2	3.4

Reynolds Rd Short-Term Upgrades (C096212 - $1.2M)
This project modifies the 115kV portion of Reynolds Road Station to meet NPCC Directory 4 requirements for [redacted] transmission substations.

Drivers:
NYISO conducted the NPCC A-10 test on the Reynolds 345 and 115kV buses and the busses failed. Therefore, changes are required so that the configuration of breakers, relaying and control wiring will meet NPCC Directory 4 requirements.

Customer Benefits:
Maintain reliability of the transmission system.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-5
Transmission – Reynolds Rd Short-Term Upgrades
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.2	0.8	0.4	0.0	0.0	-	1.4
2026	-	0.8	0.4	0.0	0.0	0.0	1.2

Rotterdam Asset Replacement and 230kV Upgrades (C034850 - $1.8M)
This project is to replace deteriorating assets with limited-to-no spare parts and limited to no Original Equipment Manufacturer ("OEM") support. The equipment to be replaced includes three 230kV breakers, two 230kV disconnect switches, and five sets of three (15 total) 115kV CVTs. Ground grid upgrades are also required. This project may also require a small amount of rewiring work to make the 230kV yard [redacted] compliant, if the prior project to retire a portion of the 230kV yard [redacted].

Drivers:
This project will complete work required as part of the Energy Highway Initiative.

Customer Benefits:
Maintain the reliability of the transmission system.

2025 to 2026 Variance:
This project is progressing to meet outage requirements.

Table 2-6
Transmission – Rotterdam Asset Replacement and 230kV Upgrades
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	0.1	0.1	0.1	0.6	0.0	1.0
2026	-	0.3	0.5	0.3	0.4	0.3	1.8

Customer
Customer 345kV Service (C092142 - $30.9M)
Customer Clay Sub Interconnection (C092344 - $18.9M)
Transmsn Strctr Relo (C093492 - $3.6M)
Customer Trans Line Work (C094246 - $2.2M)
Customer (Clay Interconnect) (C094582 - $27.6M)
Customer UG 345kV Service (C094819 - $18.4M)

These projects provide for installation of three 345kV circuit breakers, eight motor operated disconnects, riser structures and associated equipment in existing bays at Clay Station as well as provide for the relocation of an existing 345kV transmission line and the installation of two 345kV cables to accommodate the service request. The work scope requires installation of three 345kV bays at Clay including circuit breakers, relays and associated equipment, and two 345kV cables to connect the customer substation to Clay Station.

Drivers:
This is in response to a customer request for service.

Customer Benefits:
Requested by customer to supply their manufacturing facility.

2025 to 2026 Variance:
This project is progressing to meet the customer schedule.

Table 2-7
Transmission – Customer Project
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	24.5	35.8	0.0	8.0	40.3	0.0	108.6
2026	-	0.0	37.7	23.7	40.2	0.0	101.6

Customer Solar T-Line & Stations (C092783 - $0.4M, C092784 - $0.6M)
This project installs several spans of 115kV transmission, 115kV circuit breakers and associated relaying and equipment.

Drivers:
This is required to interconnect the Developer's Project to the National Grid Transmission system.

Customer Benefits:
Providing Requested service to Customer.

2025 to 2026 Variance:
This project is proceeding as planned.

Table 2-8
Transmission – Customer Solar T-Line & Stations
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	(0.5)	1.2	(0.5)	1.9	0.5	-	2.6
2026	-	1.6	(1.6)	0.9	0.1	0.0	1.0

Customer Data Center – Customer Project (C098226 - $5.6M)
This project installs the transmission line and substation facilities necessary to connect the Customer to the transmission System.

Drivers:
This project is required to provide the requested service to the customer.

Customer Benefits:
Providing Requested service to Customer.

2025 to 2026 Variance:
This project is progressing to meet the customer schedule.

Table 2-9
Transmission – Customer Data Center – Customer Project
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	(0.2)	5.5	0.0	0.0	0.0	-	5.3
2026	-	5.5	0.03	0.0	0.0	0.0	5.6

2. B. Damage / Failure

The Damage / Failure investment levels for the transmission system are based on historical actual costs.

Gardenville-Five Mile 151/152 Culverts 40 & 42 (C087268 - $3.8M, C099690 - $2.5M)
This project will address the high-priority failed culverts along the 115kV Gardenville-Five Mile 151/152 corridor. The Gardenville – Five Mile Culvert Replacement project, C086795, was created to capture all the estimates and inspection cost of the damaged culverts. As each individual or group of culverts progress through engineering, a new specific funding project is generated. Then in the portfolio, C086795 is debited the corresponding amount. C087268 will address culverts 40 and 42 in the corridor.

During Fall 2018, Transmission Line Maintenance ("TLM") was notified by a landowner of a slope failure in the 151/152 Gardenville-Five Mile Rd corridor just north of Abbott Hill Rd in the Town of Concord. Following a site visit and subsequent comprehensive inspections of the corridor from the air, numerous other areas were identified. Currently, no 115kV double circuit transmission structures are in imminent danger. However, slope stability and culvert deterioration need to be remediated so landowner property, access roads and electric assets are not damaged.

A civil and environmental consulting engineering firm was retained to inspect the corridor and triaged sites that required immediate attention from those that could be repaired/replaced later. It was determined by the consultant and confirmed by National Grid that 20 of the 108 culverts under the 151/152 Gardenville-Five Mile Rd corridor between Str 127 at the north end at Omphalius Road and Str 208 at the south end south of Sharp Road were in immediate need of replacement.

To date, National Grid has replaced or is replacing four culverts and has a plan to continue replacing the highest priority culverts each year.

Drivers:
As culverts or wing walls fail, there is a potential for fine-grained soils to mix with stormwater. The Company's consultant has identified 20 culverts in need of near-term replacement.

Customer Benefits:
The community supports this project as many of them have been affected by flooding caused by inadequately sized or plugged culverts over the past few years. The community and wildlife will benefit from conserving a clean Eighteen Mile Creek.

2025 to 2026 Variance:
The project is progressing; however, culvert replacements originally scheduled for FY26 have been deferred to FY27 and FY31 based on project priorities to meet resource & emergent needs to maintain continued, safe, and reliable service.

Table 2-10
Transmission – Gardenville-Five Mile Culvert Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.5	0.5	-	1.0
2026	-	2.1	0.4	0.0	0.0	3.8	6.3

Ridge – Replacement Transformer Bank ("TB") #2 (C097171 - $1.7M)
The 115/34.5kV Transformer #2 located at Ridge Station had tripped offline during a weather event and upon inspection, and further testing, it was discovered that the bank had internal component failure from a fault, as well as having winding damage. Therefore, the bank was deemed not fit to be placed back in-service and was replaced.

Drivers:
The transformer was deemed a failed unit.

Customer Benefits:
The replacement of a failed asset to maintain customer reliability.

2025 to 2026 Variance:
The project is currently in progress while the failed unit is being replaced with a transformer procured to replace the spare utilized.

Table 2-11
Transmission – Ridge – Replacement TB#2
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.2	1.0	0.0	0.0	0.0	-	2.2
2026	-	0.0	1.7	0.0	0.0	0.0	1.7

Spier Falls-Lasher Rd: SW 30125 DF (C097912 - $1.7M)
Spier Falls Lasher Road 302 - SW 30125 allows isolation at the Kesselring Nuclear Laboratory (Government facility). The disconnect switch 30125 failed thermally in November 2024 in the closed position and presently in-service and unable to operate. This project will replace SW 30125 with three new phase over phase remote control-motor operated devices ("RC-MOD") switches. A new structure on the tap will be needed to support the disconnect switch. Structures 2, 3, and 4 on the tap will be replaced to support the added weight of the switch.

Drivers:
The primary driver for this project is the reliability of the Kesselring Tap and the asset condition of the switch. By replacing the switch, the Kesselring Nuclear Laboratory can be isolated in case of a fault.

Customer Benefits:
The primary benefit is maintained reliability to our customers.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-12
Transmission – Spier Falls-Lasher Rd: SW 30125 DF
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	1.7	0.0	0.0	0.0	-	1.8
2026	-	1.7	0.0	0.0	0.0	0.0	1.7

Curtis – Teall #13 SW X13-2 (C094940 - $1.5M)
The Transmission Control Center requested replacement of the deteriorated disconnect switch X13-2 on Curtis Street-Teall Avenue 13 line. An RC-MOD will also be installed to allow for the switch to be operated remotely.

Drivers:
This project aims to maintain system reliability and maintain continued safe operation.

Customer Benefits:
The proactive replacement of deteriorated assets will maintain reliability of the electric system.

2025 to 2026 Variance:
There is no significant variance from the prior CIP filing.

Table 2-13
Transmission – Curtis – Teall #13 SW X13-2
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.2	0.0	0.0	0.0	1.3	-	1.5
2026	-	0.0	0.2	0.0	1.3	0.0	1.5

UG Pumping Plant D/F (C096305 - $2.1M)
Pressurization plants are required on High Pressure Fluid Filled (“HPFF”) underground transmission cables to maintain the pressurized dielectric fluid which is crucial for the safe and efficient operation of the cable system. This funding project was created for damage and failure capital work on pressurization plants on National Grid’s underground transmission cable system.

Drivers:
The replacement of failed assets.

Customer Benefits:
The replacement of failed assets with functioning assets to maintain reliability.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-14
Transmission – UG Pumping Plant D/F
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	1.0	-	1.0
2026	-	0.0	0.0	0.0	1.0	1.1	2.1

Andover – Transformer DF (C093609 - $2.2M)
A fault occurred at Andover Station involving the 34.5kV oil circuit breaker ("OCB") R975 and Transformer #1. The 34.5kV OCB was reviewed and deemed to be a failure due to bad bushings and Transformer #1 testing determined the transformer to be unsuitable to be placed back in service.

Drivers:
The replacement of failed assets.

Customer Benefits:
The replacement of failed assets with functioning assets to maintain reliability.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-15
Transmission – Andover – Transformer DF
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.4	1.0	1.2	0.0	0.0	-	2.6
2026	-	1.0	1.2	0.0	0.0	0.0	2.2

2. C. System Capacity

The System Capacity spending rationale consists of generator retirements, transmission owner-led system studies, transmission ISO-led system studies (in compliance with NERC/NPCC and NYSRC reliability rules), and transmission projects in support of distribution capacity issues.

2 C.2 Transmission Owner-Led System Studies

These projects result from studies performed by the Company's Transmission Planning department. Transmission needs and alternative solutions are investigated during periodic area studies to determine whether the system complies with reliability standards. Included in this analysis is: compliance with NERC TPL reliability standards; NPCC Regional Reliability Reference Directory #1; NYSRC reliability rules; and the Company's Transmission Planning Guide ("TGP 28"). These standards require the entire transmission system to meet voltage, thermal, and stability criteria.

2 C.3 Transmission ISO-Led System Studies

These system projects result from studies performed by the NYISO and further analyzed by the Company's Transmission Planning department. Transmission needs and alternative solutions are investigated during periodic studies to determine whether the system complies with reliability standards. Included in this analysis is: compliance with NERC TPL reliability standards; NPCC Regional Reliability Reference Directory #1; and NYSRC reliability rules. The NYISO also considers the voltage and loading criteria in the Company's TGP 28. These standards require the entire transmission system to meet voltage, thermal, and stability criteria.

2 C.4 Transmission Projects in Support of Distribution

Transmission projects that have been identified by the Distribution Planning department to support the distribution and/or sub-transmission system.

Western NY Region Reinforcements

This program involves significant capital expenditure over the next five years and beyond to construct reinforcements of the 115kV transmission system in Western New York, including the Frontier Genesee regions that extend from the Buffalo area north to Niagara Falls. This program will strengthen the transmission network and ensure adherence to reliability standards. It will correct existing asset condition, safety, operational and environmental concerns and maintain the reliability of several circuits.

Western Division – Frontier Region

The major components in this program with investment levels greater than $1 million in any fiscal year[1]:

130/133 T-Line Reconductor (C079500 - $46.4M)
130/133 T-Line Reconductor- Land (C096737 - $0.9M)
130/133 Stations- Huntley (C084015 - $0.8M)

These projects reconductor and rebuild the thermally constrained portions of the 115kV Packard-Huntley 130 and Walck-Huntley 133 lines including replacing some terminal equipment at Huntley.

Packard-Gardenville Station Upgrades (C079506 - $10.9M)
Packard-Gardenville T-Line Reconfiguration (C081799 - $56.0M)
Installation of series reactors on the Packard-Gardenville 181/182 115kV circuit to increase circuit impedance, reduce circuit power flow and alleviate contingent thermal constraints, and install two new breakers. This project also builds limited sections of lines to connect portions of active Lines 180, 181, 182, 922, and inactive lines 92 and 105 in a new configuration to improve power flow versus capability of the conductors and relieve lines 180, 181, 182 and 922.

Drivers:
Studies of the 115kV and 230kV transmission systems were conducted for the Frontier, Southwest and Genesee regions of Western New York to determine compliance with applicable

[1] *The costs shown below are limited to the period covered by this Plan.*

reliability standards. The studies evaluated the system for existing load levels up to a fifteen-year forecasted load level. Included within each of these evaluations was N-1 and N-1-1 testing design criteria and compliance with NERC TPL Standards, NPCC Directory #1, NYSRC reliability rules and the Company's TGP 28. These standards require the entire transmission system to meet N-0 and N-1 voltage, thermal and stability criteria and [redacted] and long lead time items to meet the same criteria for N-1-1 conditions. Several reliability criteria issues for the study area were identified under various study conditions. In the Frontier Region, multiple reinforcement projects are required to correct adverse conditions.

In 2017, the NYISO solicited and evaluated proposed solutions, in accordance with the Policy Initiative Transmission Planning Process ("PITPP"), to address transmission needs in Western New York that are driven by Policy Initiative Requirements for greater utilization of renewable energy from the Niagara hydroelectric facility and through imports from Ontario, Canada. However, the completed NYISO-selected NextEra project did not address overloads on the National Grid local area 115kV transmission system. This results in the need for multiple area projects to relieve thermal constraints under contingency scenarios. These scenarios have been confirmed as needs still applicable to the system by yearly Area Studies.

Customer Benefits:
Reduced exposure to service interruptions, including load shedding in the event of certain key contingencies. Reduced or eliminated need to dispatch generation out of merit to ensure acceptable facility loading, voltage support and stability, and capability to accommodate new and expanding load will be added to the system.

2025 to 2026 Variance:
The variance between the 2025 and 2026 plans is due to the continued development of the project scopes and supply chain issues required to address the remaining 115kV congestion issue in response to the NYISO Policy Initiative project selection.

Table 2-16
Transmission – Western NY Frontier Region Reinforcements
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	13.4	14.4	22.1	23.8	23.3	-	97.0
2026	-	24.8	12.5	18.3	34.1	25.3	115.0

Western Division – Frontier Region – Projects in Support of Distribution

Elm Street Relief – Add 4th Transformer (C049594 - $0.6M)
This project adds a fourth 230/23kV transformer to Elm Street Station in the City of Buffalo's downtown and replaces all 23kV circuit breakers with an interrupting rating of less than 40kA.

Drivers:
The Elm Street Station supplies the City of Buffalo's low voltage alternating current ("LVAC") network, spot network loads, and several distribution substations. Elm Street Station has four transformers, with three operating in parallel, and is designed for double contingency operation due to its supply to the Buffalo downtown area. This project includes the replacement of 23kV breakers with higher rated interrupting capability due to increased fault current at the substation.

Customer Benefits:
This project restores the capability of the substation under certain contingencies and power dispatch scenarios. This project also provides for some limited load growth in the city of Buffalo.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-17
Transmission – Elm Street Relief – Add 4th Transformer
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	0.7	0.0	0.0	0.0	-	1.7
2026	-	0.6	0.005	0.0	0.0	0.0	0.6

Katherine Street Terminal Station Suite
Katherine St Term L145/146 T-Line (C089018 - $14.7M)
Land-First Ward Terminal Station (C096888 - $0.8M)
These projects provide for 115kV line extensions to a new distribution substation as well as reconductoring a four-mile portion of existing lines 145 and 146 to support the new Katherine Street 115/13.2kV Station. The scope includes two (2) 115/13.2kV, 55 MVA transformers and associated buses, switches, and breakers for twelve 13.2kV feeders.

Drivers:
Distribution Planning has determined that the 23kV system supplying the distribution substations in and near the City of Buffalo requires reinforcement. A number of alternatives have been reviewed, and a new distribution substation near Katherine Street is the proposed source to aid in relieving Seneca Terminal and Kensington Terminal Stations. The 4.16 kV system throughout the City of Buffalo is antiquated and loads are frequently coming in above the limits of the local Distribution. To combat this and aid in future load growth, while also offloading some of the 23 kV cables in this section of the city, this new station will introduce additional 13.2 kV into the City of Buffalo.

Customer Benefits:
Improved capacity and reliability to the area given the electrification of heat and transportation. Through supplying additional feeders in the area, it will assist in improving reliability, energy efficiency initiatives, and capacity for the City of Buffalo.

2025 to 2026 Variance:
This station is transitioning from a Transmission to Distribution station. Additionally, the station has been reprioritized for Black Rock station due to specific load requests mixed with existing asset condition issues.

Table 2-18
Transmission – Katherine St. Term Station
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	3.6	0.8	0.3	0.2	3.8	-	8.7
2026	-	1.0	0.3	3.8	5.3	5.1	15.5

Western Division – Genesee Region – Projects in Support of Distribution

E. Golah 2nd 115kV Tap (C051829 - $1.5M)
This is a new four-mile 115kV line from Golah to East Golah to provide a second 115kV source to East Golah Station.

Drivers:
The load at risk at East Golah Station exceeds the Distribution Planning criteria threshold.

Customer Benefits:
This project improves reliability to customers supplied by the 115-13.2kV East Golah Station.

2025 to 2026 Variance:
This project has been rephased in the 2026 Plan.

Table 2-19
Transmission – E. Golah 2nd 115kV Tap
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.5	1.0	1.5

Western Division – Southwest Region – Projects in Support of Distribution

Nile Area Reinforcement (C086234 - $2.6M)
This project is to replace/rebuild Nile 115kV-34.5kV station due to System Capacity Concerns. During typical sub-transmission N-1 contingency scenarios, Nile Station becomes very overloaded and low voltage also occurs.

Drivers:
N-1 loading contingency thermal and voltage violations occur at the sub-transmission level.

Customer Benefits:
This project eliminates N-1 loading violations occurring on sub-transmission in the region.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-20
Transmission – Nile Area Reinforcement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	2.5	2.6

Central Division – Syracuse Oswego Cortland Region

Dewitt - Asset Replacement ST (C096652 - $1.3M)
This project replaces one battery and the wiring associated with the protection packages and trip coils to comply with NERC criteria for separation.

Drivers:
NYISO conducted A-10 testing on Dewitt substation and it failed. Therefore, it needs to be placed on the [redacted] and brought up to NPCC separation criteria.

Customer Benefits:
Maintain reliability of the transmission system.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-21
Transmission – Dewitt - Asset Replacement ST
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	1.3	0.01	0.0	0.0	-	1.4
2026	-	1.3	0.01	0.0	0.0	0.0	1.3

Central Division – Utica/Rome Region

Oneida-Rome LN1 new DCT - Line work (C096178 - $1.2M)
This project replaces 11.62 miles of an existing bussed line, splitting into two circuits on double circuit towers. The supply will be reconfigured to Turning Stone supporting voltage in the area as well as added capacity and reliability benefits.

Drivers:
This project addresses voltage concerns in the area centered at Rome substation.

Customer Benefits:
This project will maintain reliability for the customers served on the Oneida-Rome LN1 while providing additional voltage support to the area.

2025 to 2026 Variance:
This project is new to the 2026 Plan.

Table 2-22
Transmission – Oneida-Rome LN1 new DCT - Line work
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	1.1	1.2

Eastern Division - Northeast Region – Projects in Support of Distribution

Battenkill Station Rebuild (C093948 - $1.5M)
This project upgrades the 13.2kV transformer to a 40 MVA unit to support the retirement of the majority of the 34.5kV Schuylerville-Mechanicville 4 line and the Schuylerville Substation while mitigating overload concerns predicted by our load forecast.

Drivers:
The 34.5kV Schuylerville-Mechanicville 4 line requires the replacement of a considerable number of structures over many miles. The replacement of the substation transformer in the Battenkill Station and its associated distribution work will allow for the retirement of the majority of the line while transferring the load on the Schuylerville Station from the 34.5kV system to the more reliable 115kV system.

Customer Benefits:
This project will maintain reliability for the customers served out of the Schuylerville Station while providing additional capacity to serve future load.

2025 to 2026 Variance:
This project is progressing as requested by Distribution Planning.

Table 2-23
Transmission – Battenkill Rebuild: Substation
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	0.9	-	1.0
2026	-	0.0	0.0	0.1	0.9	0.5	1.5

Whitehall Station Rebuild (C093957 - $2.3M)
This project replaces the existing 115/13.2 kV 10.5 MVA transformer at Whitehall Station with a 25 MVA transformer.

Drivers:
This project aims to address System Capacity concerns on the Whitehall Station transformer based on the company's forecasted load projections while providing additional hosting capacity in the area. This project is in the early phases of development and will have a more defined scope once engineering analysis has taken place.

Customer Benefits:
This project will maintain reliability for the customers served out of the Whitehall Station while providing additional capacity to serve future load.

2025 to 2026 Variance:
This project is progressing as requested by Distribution Planning.

Table 2-24
Transmission – Whitehall Station Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	1.6	-	1.7
2026	-	0.0	0.0	0.1	1.6	0.6	2.3

Lasher Rebuild (C093947 - $2.1M)
This project replaces the existing 115/13.2kV 25MVA transformer at Lasher Road Station with a 40MVA transformer, while also installing a fourth 13.2kV feeder breaker.

Drivers:
This project is to meet forecasted load for Summer 2035.

Customer Benefits:
This project will maintain reliability for the customers served by the Lasher Road Station (distribution function portion) while providing additional capacity to serve future load.

2025 to 2026 Variance:
This project is progressing as requested by Distribution Planning.

Table 2-25
Transmission – Lasher Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	0.5	-	1.6
2026	-	0.0	0.0	0.1	1.5	0.5	2.1

Capital Hudson Valley Region

Eastover 115kV 70 MVAR Cap Bank (C096187 - $2.1M)
This project will install one 115kV, 70 MVAR capacitor bank at Eastover substation.

Drivers:
This capacitor bank is required for area voltage support needed to allow for retirement of the Albany area fossil-fueled generation, as required by NY state law.

Customer Benefits:
This project will provide continued reliability of the Albany area transmission system following retirement of the Albany area fossil generation plants.

2025 to 2026 Variance:
This project is new to the 2026 Plan.

Table 2-26
Transmission – Eastover 230kV 70 MVAR cap bank
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	2.0	2.1

Capital Hudson Valley Region – Projects in Support of Distribution

Ephratah Station Rebuild (C093959 - $2.0M)
This project aims to rebuild the Ephratah Station to allow for the retirement of the Ephratah-Caroga #2, 23 kV sub-transmission line due to asset condition issues on the sub-transmission as well as forecasted load growth in the area. This funding project will upgrade the existing substation transformer to a 25 MVA unit as well as upgrade / replace associated equipment while converting from 4.8 kV to 13.2 kV.

Drivers:
There are multiple drivers to this project. The primary driver is the asset condition, loading and voltage response of the Ephratah-Caroga #2, 23 kV sub-transmission line. The Ephratah-Caroga #2 will be loaded beyond its capacity in 2035 at which time it can no longer sustain voltage at 90% of nominal and allowable. The rebuild of the Ephratah Station allows for the retirement of the Ephratah-Caroga #2, 23 kV sub-transmission line by transferring the load currently served off the 23 kV line to 13.2 kV out of Ephratah.

Customer Benefits:
This project aims to maintain reliability for the existing customers who serves from the Ephratah Station as well as all customers served off the Ephratah-Caroga #2, 23 kV Sub-transmission line while providing additional capacity to serve future load adding creating automatable feeder ties to other area substations.

2025 to 2026 Variance:
This project is progressing as requested by Distribution Planning.

Table 2-27
Transmission – Ephratah Station Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	1.4	-	1.5
2026	-	0.0	0.0	0.1	1.4	0.5	2.0

Capital N Area Study Rosa Rd Rebuild (C093956 - $1.7M)
This project replaces the existing 115-13.2kV 25MVA transformer at Rosa Road Station with a 40MVA transformer.

Drivers:
This project is to meet the forecasted load for Summer 2035.

Customer Benefits:
This project will maintain reliability for the customers served by the Rosa Road Station while providing additional capacity to serve future load.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-28
Transmission – Capital N Area Study Rosa Rd Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	1.0	-	1.1
2026	-	0.0	0.0	0.1	1.0	0.6	1.7

Northern Region – Projects in Support of Distribution

Watertown 23kV (C093964 - $1.2M)
Replace the existing 115kV/23kV 25MVA transformers on the Coffeen station with two 40MVA transformers.

Drivers:
The Coffeen Station 25MVA transformers loading are expected to hit 100% Summer Normal rating by around 2040.

Customer Benefits:
The replacement of these transformers will provide increased reliability to the customers and additional capacity to support economic growth and the electrification of heating in the area supplied by this substation.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-29
Transmission – Watertown 23kV
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	1.1	1.2

Ogdensburg Station Rebuild (C096059 - $1.4M)
Rebuild the existing 115kV/13.2kV 25MVA bank station to a 40MVA bank station and increase the feeder number to 5 distribution feeders.

Drivers:
The Ogdensburg Station 25MVA transformer forecasted loading is expected to hit 100% Summer Normal rating by around 2041. Asset Condition issues are also expected at this substation.

Customer Benefits:
The rebuilding of this station will provide increased reliability to the customers and additional capacity to support economic growth and the electrification of heating in the Ogdensburg area supplied by this substation.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-30
Transmission – Ogdensburg Station Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	1.3	1.4

Black River 115/23kV Bank Upgrade (C096057 - $1.2M)
Replace the existing 115kV/23kV 25MVA transformer on the Black River station with one 50MVA bank.

Drivers:
The Black River Station 25MVA transformers forecasted loading is expected to hit 100% Summer Normal rating by around 2040.

Customer Benefits:
The replacement of this transformer will provide increased reliability to the customers and additional capacity to support economic growth and the electrification of heating in the area supplied by this substation.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-31
Transmission – Black River 115/23kV Bank Upgrade
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	1.1	1.2

Modernization (Grid Mod)

Grid Modernization is National Grid's strategic response to the changing energy landscape, the introduction of emerging technologies, and the urgency of extreme weather events which are driving customers to expect we will evolve our business to meet their evolving energy needs. Grid Mod includes updating the traditional assets of the electric system, while striving to be proactive by upgrading the system using the latest techniques and available equipment that provides better flexibility, enables remote control capabilities, and enhance system monitoring.

NY Load Tap Changers ("LTC") Controller – Transmission Substation Program (C085943 - $2.5M)
The Company plans to update existing transformer LTC controllers to newer, modern controls at FERC-T (transmission) classified substations to integrate with the Company's current Supervisory Control and Data Acquisition ("SCADA") platform and new Advanced Distribution Management System ("ADMS"). These newly updated LTC controls will enable real-time control capability and status monitoring for Control Center Operators and support engineering studies with increased data from the LTC. The Company plans to begin using an application in ADMS to control voltage at the LTC, while monitoring customer voltage readings at their meters through a new AMI feedback loop. This will allow the LTC and its associated feeders to operate at the lowest possible voltage (within the limits of ANSI C84.1) to increase efficiency, reduce energy demand, and energy consumption through LTC-only Conservation Voltage Reduction ("CVR"). This will provide benefits generated through LTC control and CVR operation to distribution feeders that will not have any full Volt-Var Optimization ("VVO") / CVR schemes within the period of this report. The transmission program for upgrading LTC controllers will start designs during FY26 in preparation for FY27 construction.

Drivers:
The Company has historically managed feeder voltage primarily through the use of remote, autonomously controlled LTCs. When installed, LTCs are typically programmed to maintain a specific voltage at the substation bus, as specified by Distribution Planning based on peak load periods.

The primary driver of this project is to provide more efficient and higher quality power by centrally monitoring the voltage performance across the distribution system in real-time and automating the control of the LTC throughout the year via an integrated ADMS-based control scheme using AMI data to feedback customer voltage. The NY LTC Controller – T Sub program adds a layer of coordination, via communication and control, to optimize the use of the LTC to respond to system dynamics in real-time.

Customer Benefits:

- Improved feeder power factor, flatter and lower voltage profiles, reduced feeder losses, reduced peak demand, and reduced energy consumption by customers which will vary based on the individual feeder characteristics.
- Increased near real-time operational data availability to the regional control centers. This data will be collected from LTCs and will improve management of the distribution system and integration of future DERs.
- Actively maintained proper voltage may potentially increase hosting capacity and allow for greater levels of DERs.
- Delivering voltages at the optimal levels will reduce energy consumption, improve service quality, and lower costs.

2025 to 2026 Variance:
The projected capital investment is shown in the table below. National Grid expects to continue statewide deployment of LTC Controllers at FERC T substations in alignment with the FERC D portion of this work.

Table 2-32
NY LTC Controller - Transmission Substation Program
Program Variance ($ millions)

CIP	FY26	FY27	FY8	FY29	FY30	FY31	Total
2025	0.1	0.8	0.2	0.3	0.9	-	2.3
2026	-	0.8	0.2	0.3	0.9	0.3	2.5

2. D. Asset Condition

Asset Condition investments, such as replacing elements of overhead circuits, underground cable, or substation equipment, are required to reduce the likelihood and consequence of the failure of transmission assets. This Plan also relies on the purchase of spare equipment to replace damaged equipment that may fail while in service for certain elements of the transmission and distribution system. This approach calls for more targeted replacement of assets based on their condition versus wholesale replacement of age-based "end of useful life" criteria.

For overhead circuits specifically, this Plan seeks to achieve compliance with National Electrical Safety Code ("NESC") requirements and will continue to implement the recommendation from Staff's 2010 rate case testimony to refurbish overhead transmission circuit facilities that are in an unacceptably severe deteriorated condition (i.e. National Grid's defined Level 1, Level 2 and Level 3 conditions), as opposed to refurbishing entire circuits, unless a compelling justification can be provided for the full refurbishment. Any overhead circuit proposed for refurbishment will undergo a field inspection by qualified transmission line engineers and will usually be supported by comprehensive aerial inspection. As part of the conceptual engineering process, refurbishment options will be thoroughly evaluated on a case-by-case basis, and the engineering economics of various options such as a complete reconductoring versus a life extension are reviewed in the project sanctioning process. In addition, longer term impacts such as a greater number of visits to the same right-of-way, multiple site establishment costs, increased storm hardening, additional permitting and licensing costs, greater levels of environmental impact, and more disturbance to property abutters will be assessed. Further detail on specific asset condition programs and projects is provided below.

Wood Pole Strategy

Wood Pole Management - (C011640, C093908, C093909, C093910 - $9.0M)
This program assures that wood transmission circuits meet the governing NESC standards under which they were constructed by replacing wood poles and wooden structures that no longer meet the governing code requirements due to damage or failure of the pole or structure.

Drivers:
As discussed in the Report on the Condition of Physical Elements of Transmission and Distribution Systems (aka Asset Condition Report) filed on September 30, 2024, in Case 20-E-0380, wood poles that are either Priority Rejects or Reject poles, as classified following a wood pole ground line inspection and treatment, as well as those severely damaged by woodpecker or insect activity, need to be replaced. The ground line inspection and treatment of wood poles is performed approximately every ten years. These inspections are in addition to the five-year foot patrols required under the Commission's Safety Order in Case 04-M-0159 ("Safety Order"). The

wood pole replacements identified through this initiative are deemed to be beyond restoration by methods of treatment, usually at the ground line or by some form of additional pole support. Similarly, “reject equivalent”, deteriorated wood poles due to severe woodpecker damage, insect damage, or rotting are also included in this program.

Reject and Priority Reject poles generally do not meet NESC strength requirements. In a limited number of cases when an extra margin of safety was included in the design, a portion of this margin may still be available before failing to meet the code. However, this usually provides only a limited amount of additional time to replace the damaged or deteriorated wood pole(s) or structures before potential failure. In FY24, this program was split into three regional funding project numbers (East, Central, and West) to allow for tracking of jobs based on region.

Customer Benefits:
The primary benefit of this program is improved public and employee safety. The combination of cyclical inspections and associated asset replacement work are the foundation for operating a safe, reliable, and adequate electric system. In addition to the public safety benefit, reducing unplanned failures of wood poles or structures can improve service reliability and overall system integrity by making the transmission system less vulnerable to disruption.

2025 to 2026 Variance:
The current variance is attributed to the cyclical inspection schedule that governs asset replacement activities under the Wood Pole Management Program. As priority rejects and rejects are identified during inspections, they are incorporated into the plan based on the assessed priority and severity of each wood pole condition.

Table 2-33
Transmission – Wood Pole Management
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	1.8	1.7	1.1	1.1	-	5.8
2026	-	2.3	3.3	1.1	1.1	1.2	9.0

Battery Replacement Program

Transmission Sub Battery Rplc (C094248, C094247, C094249 - $5.9M)
The battery and charger systems provide DC power within the substation. Batteries perform a critical function by ensuring protective relay and control systems can operate station breakers to isolate faults on the system.

Drivers:
National Grid’s policy is to replace all battery sets that are 20 years old, or sooner, if battery conditions are determined through testing and inspection of warrant replacement. The 20-year asset life is based on industry best practice and Company experience managing battery systems.

Customer Benefits:
Battery systems are important for the proper operation and control of the protection schemes for transmission stations.

2025 to 2026 Variance:
The project spending levels are based upon a 20-year life cycle replacement with allowance for some projects to be moved in due to worsening asset conditions.

Table 2-34
Transmission – Transmission Sub Battery Rplc
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	0.8	1.8	0.9	1.0	-	5.5
2026	-	0.9	1.8	0.8	1.0	1.4	5.9

Telecom DC Battery Program (C094272, C094273, C094274 - $1.2M)
The Telecom DC Plant program ensures the reliability of battery and charging systems in substations through regular maintenance and timely replacements. This proactive approach enhances operational efficiency and safeguards uninterrupted service.

Drivers:
The primary driver for this program is the condition of battery and charging systems, which are essential for maintaining Telecom operational capability in substations during both normal and abnormal conditions. Regular maintenance and timely replacement of these systems are necessary to prevent degradation or corrosion, influenced by factors such as overcharging, discharge cycles, and environmental conditions. Ensuring the reliability of these critical components supports uninterrupted Telecom operations.

Customer Benefits:
The customer benefits of this program include enhanced reliability and operational efficiency of battery and charger systems through regular maintenance and timely replacement to prevent degradation or corrosion. Implementing a strategy to replace these systems will ensure the longevity and performance of all components. This approach ultimately supports uninterrupted Telecom operations and mitigates the risk of losing monitoring, control, and protection of telecommunications equipment.

2025 to 2026 Variance:
These projects are new to the 2026 plan.

Table 2-35
Transmission – Telecom DC Battery Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.2	0.2	0.2	0.3	0.3	1.2

Relay Replacement Program

Leeds – Static Var Compensator ("SVC") Prot & Cont Replc (C091040 - $3.2M)
The control system for the Leeds Station SVC is obsolete and has limited spare parts and OEM Support. The control system has experienced two recent issues where the SVC was not available for service until repairs could be made.

Drivers:
The replacement of a control system in poor condition with limited spares and OEM support.

Customer Benefits:
The project replaces assets in poor condition and will help maintain system reliability.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-36
Transmission – Leeds - SVC Protection & Control Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.3	2.0	1.2	0.0	0.0	-	4.5
2026	-	2.0	1.2	0.0	0.0	0.0	3.2

Overhead Line Refurbishment Program

Over the next five years, the Company will partially refurbish several overhead line circuits based on their condition, focusing on elements in the most deteriorated state. This approach will only involve rebuilding an entire line when conductor replacement is also necessary. During the Needs Assessment phase of the project, wire testing will determine if the conductor or shield wire tensile strength fails to meet appropriate NESC load requirements.

For overhead lines with acceptable conductor strength, this program will ensure that transmission line structures and components meet the minimum governing NESC under which they were built. This will be accomplished through the replacement of those components that no longer structurally or electrically adhere to the governing NESC.

The costs projected for overhead line work prior to the completion of Develop and Sanction are considered preliminary in nature. As part of Needs Assessment and Option Selection, an overhead line will be field evaluated, and refurbishment options will be more thoroughly evaluated on a case-by-case basis and will be presented as part of Option Selection and Develop and Sanction. The value of various options (e.g., complete reconductoring versus a life extension) will be reviewed; however, cost estimates may continue to differ due to unforeseen circumstances, such as the need for additional swamp matting due to weather conditions, rising costs of materials, or other environmental requirements.

To manage costs during the period of this Plan, the Company is implementing an approach recommended by Staff in the Company's 2010 rate case to refurbish those structures and/or structural components that are in acceptable condition (i.e., National Grid's defined Level 1, Level 2 and Level 3 condition). While this approach reduces investment in the five years covered by this Plan, it must be balanced against long-term concerns such as increased susceptibility to storm damage, additional permitting and licensing costs, greater levels of environmental impact, future capacity needs, and more disturbance to abutters to determine the most economical solution. Therefore, for certain overhead line condition projects, a larger work scope to replace assets that are deteriorated, yet serviceable, may be more appropriate and cost-effective.

This Plan assumes that Level 1, 2 or 3 issues identified during routine foot patrols will be addressed through the five-year foot patrols. Where the Company identifies a potential systemic problem, additional inspections will be initiated. Any issues arising from these condition assessments will be addressed through this overhead line refurbishment program.

The more significant overhead line refurbishment projects in this Plan that are =/> $1.0M are listed below. Additional details are included in Exhibit 5 – Overhead Line Refurbishment Projects.

Border City-Elbridge #10/#5 Crossings (C075723 - $4.8M)
Coffeen-W. Adams 2 Asset Condition Refurbishment ("ACR") (C091986 - $9.2M)
Colton-Townline 9 Replacements (C091987 - $8.3M)
Curtis St. – Teall#13 ACR (C084496 - $3.0M)
Greenbush – N Troy Corridor ACR (C094479 - $20.5M)
Greenbush 993 Road Crossings (C096411 - $4.2)
Elbridge-Gears Lock 3 Woodard 4 ACR (C084521 - $6.0M)
Elbridge-Geres Lock 18/19 ACR (C084522 - $5.4M)
Feura Bush – N. Catskill 2 ACR (C083073 - $2.7M)
Gard-5 Mile Culvert 24 26 31.2 41.2 (C087617 - $3.0M)
Golah-NLakeville#116 Priority 2 Str (C086697 - $1.2M)
Greenbush 993 I-90 (C098716 - $2.0M)
Huntley-Lockport #36 & #37 Ayer Rd ACR (C081670 - $11.8M)
L. Colby-L Placid 3 ACR (C091989 - $6.5M)
Lockport–Mortimer 113/114 ACR (C081664 - $6.0M)
N. Scotland-Feura Bush/Long Lane ACR (C084554 $30.0M)
NS – Knickerbocker #2 I/B/G (C096415 - $6.3M)
Pannell-Border 4-977 Reins 246-303 (C098930 - $1.9M)
Pannell-Geneva #4 & #4A Road Crossings (C030889 - $18.9M)
Rotterdam - New Scotland 19 ACR (C084588 - $21.5M)
S. Oswego-Clay #4 T-334 ACR (C075544 - $1.1M)
Teall-Carr 6 ACR (C091985 - $7.6M)
Thompson-N Troy Corridor ACR (C081667 - $15.3M)
Volney-Marcy 19 Tower Painting (C096532 - $3.0M)
Warrensburg-Schofield Rd 10 Str Repl (C086755 - $24.6M)

Drivers:
The Company has over 5,720 circuit miles of transmission overhead lines, and many of these assets are approaching, and some are beyond their expected design life. This program will ensure the Company's transmission circuits meet the minimum requirements of the governing code under which they were built as required by the Safety Order.

Customer Benefits:
This program promotes safety and reliability through the replacement of deteriorating transmission structures and line components that no longer structurally or electrically conform to the governing NESC under which they were built.

2025 to 2026 Variance:
The Company re-phased a portion of the overhead line refurbishment projects to manage short-term capital investment as well as to accommodate other capital projects. Previously identified overhead line refurbishment projects were evaluated and, if the criteria were met, was identified

as a MVT project to rebuild the line to a higher capacity. Overhead line equipment failures and any Level 1, 2 or 3 issues identified during inspection will be addressed through the five-year foot patrols or the Damage / Failure budget.

Table 2-37
Transmission – Overhead Line Refurbishment Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	24.9	20.5	16.9	22.0	58.8	-	143.1
2026	-	16.8	17.7	30.6	50.9	108.8	224.8

Worst Performing Circuits – NY (C084553 - $12.5M)

The worst performing circuit program specifically addresses the cause of the transmission circuit being on the worst performing list. These are typically short turnaround projects that have the potential to improve the circuits' reliability. Projects typically include targeted re-insulating, grounding/bonding replacements, structure replacements, and potentially upgrading switches with RC-MOD. These RC-MODs would be operated remotely from the Transmission Control Center ("TCC"). RC-MODs avoid the need for a Traveling Operator to visit the disconnect switch to operate it. There is also a specific program for RC-MOD installations.

Drivers:
The key driver of this project is to improve customer reliability associated with interruptions on these specific circuits.

Customer Benefits:
The key benefit to customers is improvement in both the short-term and long-term reliability of the system by focusing on the primary causes of transmission events.

2025 to 2026 Variance:
The program is progressing forward, and the forecast was adjusted to meet resource & emergent needs to maintain continued, safe, and reliable service. Some inspections of the of the WPC circuits and post event inspections have indicated the necessity for a larger ACR project to further address reliability concerns.

Table 2-38
Transmission – NY Worst Performing Circuits
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	1.0	1.0	5.1	-	7.1
2026	-	0.0	1.0	1.0	5.1	5.4	12.5

Reinsulate

Huntley-Gardenville 38/39 Reinsulation (C075543 - $3.6M)
The Huntley – Gardenville 38/39 lines are one of the older circuits in the Buffalo area. It was ranked #1 on National Grid's Worst Performing Circuit list in 2018 due to its outage history at the time. After further investigation, an aerial inspection and tower shake revealed that most of the insulators are flashed and heavily deteriorated, but the lattice structures were in good condition.

Drivers:
The insulators and insulator hardware are deteriorating due to environmental conditions and age, which are causing outages on the line.

Customer Benefits:
Deteriorating insulators and insulator hardware are the causes of the outages. Replacing them will prevent future outages.

2025 to 2026 Variance:
This project was originally listed as a rebuild due to its outage history. However, after re-evaluating the structures and their inspections, the scope was reduced to encompass only reinsulating.

Table 2-39
Transmission – Huntley-Gardenville 38/39 Reinsulation
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.7	1.1	2.1	0.2	-	4.1
2026	-	0.2	1.0	2.4	0.0	0.0	3.6

McIntyre-Colton 8 Rein. 275-359 (C086662 - $4.7M)
The section of the McIntyre–Colton #8 115 kV transmission line between Colton and McIntyre stations has experienced multiple line faults. Transmission Line Services ("TLS") has recently completed the replacement of insulators on a portion of the transmission line. The upcoming project will address the remaining segments by replacing all existing insulators with equivalent toughened glass units on a one-to-one basis.

Drivers:
This upgrade is intended to enhance system reliability and ensure that this line section meets current regulatory standards.

Customer Benefits:
This project promotes transmission reliability through the planned replacement of insulators and hardware on the line. Replacing insulators and insulator hardware will ensure continued reliability on the line.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-40
Transmission – McIntyre-Colton 8 Rein. 275-359
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.0	4.7	4.7

NY Transmission Underground ("UG") Line Strategy (C084550 - $23.5M)

Across upstate New York, National Grid has roughly 53 miles of UG transmission cable from 115kV to 345kV. These 53 miles are divided into two types of cable: 41.9 miles of HPFF pipe type cable and 11.7 miles of solid (extruded) dielectric cable. The average age of the HPFF pipe type cable is 52 years with the oldest install dating to 1959. The average age of the solid dielectric cable is 21 years with the oldest install dating to 1988.

These assets are mostly original since their in-service date and the Company has taken the approach of fixing problems as they arise. However, as these assets continue to experience increased condition issues, maintaining them has become increasingly difficult and costly. The current condition and difficulty to repair and replace obsolete pipe-type cable equipment places the electrical system at risk and raises concerns for our employees and contractors. Increased inspection and maintenance ("I&M") are required to assure these assets continue to provide reliable electric service to our customers based in the deteriorating asset condition.

The goal of this program is to address asset condition issues as these assets reach, or exceed, the end of their useful life and failure risk is high. The determination of the need for cable replacements will be through critical load assessments and the increased I&M program results.

Drivers:
This program is driven by deteriorating UG infrastructure, risk mitigation, and the obsolescence of assets. Increasing the inspections and maintenance of the UG transmission system will give the Company the full picture of asset health and allow the most efficient investment decisions moving forward.

Customer Benefits:
Addressing asset issues on transmission UG infrastructure as condition deteriorates is necessary to maintain safe and reliable electric service to customers. Replacing pipe-type cables with solid dielectric cables mitigates risks associated with a single cable manufacturer, limited resources to repair the cable, and difficulty in obtaining spare equipment.

2025 to 2026 Variance:
Variance relates to the continued development and implementation of a robust inspection program to properly assess and rank the Company's UG transmission system. Specific capital projects are expected to begin in FY28 and FY29.

Table 2-41
Transmission – NY Transmission UG Line Strategy
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.2	0.0	1.0	5.0	7.5	-	13.7
2026	-	0.0	1.0	5.0	7.5	10.0	23.5

Breaker Replacements

Medina – CB Replacements (C097123 - $1.0M)
The project will replace two (2) 34.5 kV circuit breakers that have deteriorated over their lifetime, have limited or no OEM support, and limited or no spare parts. The existing interruption device is vacuum but contains Sulfur Hexafluoride ("SF6") which can leak. This project will remove this gas from service.

Drivers:
The replacement of deteriorated assets that are nearing their end of life, have limited/no spare parts and limited/no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain system reliability.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-42
Transmission – Medina – CB Replacements
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	1.0	0.0	0.0	0.0	-	1.1
2026	-	1.0	0.0	0.0	0.0	0.0	1.0

Scriba – Replacement CB R200 (C093255 - $1.1M)
This project is to replace one (1) 345 kV gas circuit breaker ("GCB") that has deteriorated over its lifetime, has had leaks, has limited or no OEM support, and limited or no spare parts.

Drivers:
The proactive replacement of the deteriorated asset that is nearing end of life, has limited/no spare parts and limited/no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain system reliability.

2025 to 2026 Variance:
The project is progressing as planned with some schedule adjustment.

Table 2-43
Transmission – Scriba-Replacement CB R200
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	1.0	0.0	0.0	0.0	-	1.1
2026	-	0.7	0.0	0.4	0.0	0.0	1.1

Tran Sub Spare 345kV CB (C093864 - $1.6M)
This project is to purchase four (4) spare 345kV circuit breakers due to the long lead times, which currently stand around 200 weeks, and to reduce time in repairing damaged and failed units by having units readily available.

Drivers:
To have the ability to quickly respond to a failure or unpredictable event with a spare on hand to alleviate the waiting to procure an asset with long lead times to maintain reliability.

Customer Benefits:
The impact of substation circuit breaker failure events on customers could cause a long-term outage. These critical spare assets are necessary to respond to unpredictable events or failures to maintain reliability

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-44
Transmission – Tran Sub Spare 345kV CB
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	1.6	0.0	0.0	0.0	0.0	1.6

Oil Circuit Breaker Replacements

Dennison – Rplc OCB w Vacuum Circuit Breaker ("VCB") (C099219 - $1.2M)
The project will replace one (1) 115kV OCB that has deteriorated over its lifetime, has a history of mechanical issues, slow operations, oil leaks, has limited or no Original Manufacturer Support, or limited or no spare parts.

Drivers:
The replacement of the deteriorated asset that is nearing end of life, has limited or no spare parts, and limited or no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-45
Transmission – Circuit Breaker Replacements
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.1	0.4	0.7	0.0	0.0	1.2

345kV Laminated Cross-Arm Replacement Program

Scriba-Volney 20/21 Lam Arm/ACR (C093004 - $25.8M)
This project will address the deteriorating condition of 345kV laminated crossarms and wood pole structures on the 345kV Scriba-Volney 20/21 lines in Central NY. The 345kV Scriba-Volney 20/21 lines include two lines with 8.8 miles of 345kV structures with laminated cross arms. Based on the most recent inspections, NY Transmission Asset Management has identified 112 wooden H-Frame structure replacements on the line.

Five Mile - Stolle Rd 29 Lam Arm (C093153 - $10.9M)
This project will address the deteriorating condition of 345kV laminated crossarms and wood pole structures on the 345kV Five Mile - Stolle Rd 29 line in Western NY. The 345kV Five Mile - Stolle Rd 29 includes 25.17 miles of 345kV structures with laminated cross arms. Based on the most recent inspections, NY Transmission Asset Management has identified 37 structure replacements, and six bonding replacements on the line.

Oswego-Lafayette 17 Lam Arm (C097086- $8.6M)
This project will address the deteriorating condition of 345kV laminated crossarms and wood pole structures on the 345kV Oswego – Lafayette 17 line in Central NY. The 345kV Oswego – Lafayette 17 includes 48.55 miles of 345kV structures with laminated cross arms. Based on the most recent inspections, NY Transmission Asset Management has identified 106 wooden H-Frame structure replacements on the line.

Pierce Brook-Five Mile 37 Lam Arm (C097638 - $14.7M)
This project will address the deteriorating condition of 345kV laminated crossarms and wood pole structures on the 345kV Pierce Brook – Five Mile 37 line in Western NY. The 345kV Pierce Brook – Five Mile 37 includes 12.34 miles of 345kV structures with laminated cross arms. Based on the most recent inspections, NY Transmission Asset Management has identified 31 structure replacements on the line.

Drivers:
The 345kV New Scotland–Alps 2 line has experienced two failures on tangent (D-1501) structures in prior years. The identified root cause is ageing wood laminated cross arms used to support suspension insulators. These specific laminated cross arms were used by National Grid prior to approximately 1975.

Several D-1501 wood cross arm samples were obtained from structures replaced along the 345kV New Scotland-Alps 2 line due to normal maintenance. These cross arms were destructively tested in the field by forcing a shear failure parallel to their lamination. Once split, the laminations were examined for glue adhesion quality. Concurrently, samples were sent to the State University of New York College of Environmental Science and Forestry (“SUNY-ESF”) for laboratory analysis. SUNY-ESF performed mechanical testing on large length samples to measure and compare their bending strengths to the original design specifications. The results indicated the in-service cross arms were weaker than specifications.

A related aerial inspection also identified deteriorated cross arms and overstressed vee braces for D-1501 structures constructed prior to 1975. This multi-year Plan will initially investigate structures at road crossings and then systematically evaluate remaining structures.

Customer Benefits:
This program promotes transmission reliability through the planned replacement of laminated cross arms that are deteriorated and no longer structurally or electrically conform to their design specifications.

2025 to 2026 Variance:
The variance in this program is due to its segmentation into individual projects for those with total expenditures exceeding $1 million. These projects will be funded separately, with allocations drawn from the overall program budget. These projects are progressing forward, project forecasts have been adjusted to meet resource & emergent needs to maintain continued, safe, and reliable service.

Table 2-46
Transmission – Laminated Cross-Arm Replacement
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.7	6.3	9.0	9.5	6.8	-	37.3
2026	-	6.2	5.4	4.4	13.2	30.8	60.0

NY Priority OH Switches

Priority Overhead Line ("OHL") Transmission Switch Replacement Program (C093902, C093904, C093905 - $23.1M)
This program will address disconnect switches in need of replacement, prior to failure, to maintain system reliability and operability. These switches are identified and prioritized by the TCC.

These switches have been identified as a need by the Transmission Control Center and agreed to by the Transmission Overhead Line Priority Switch Replacement team. The goal is to remain proactive in replacing identified line switches, so they are operable when called upon to avoid an emergency damage and failure situation for a switch replacement.

This job was split into three divisional funding project numbers (East - C093905, Central - C093904, and West - C093902) to allow for easier tracking of jobs. The former funding project number was C076621. Projects can be driven by both Asset Condition (see below) and Reliability.

Drivers:
Leaving tagged switches inoperable for long periods of time, or removing them, leaves the transmission system operationally deficient and less flexible. In many cases, this is not acceptable for emergency system operations.

Customer Benefits:
The primary benefit is improved reliability to our customers. By replacing older, non-functioning switches, the functionality of the switch will be increased, which will in turn increase the reliability of the line, allowing customers to be brought back online quicker. The efficient operation of transmission line switches allows for improved emergency system restoration. Additionally, adding a RC-MOD provides the field switch supervisory control functionality. This gives the TCC the ability to operate a field switch remotely, which has the potential to isolate faults and bring back customers quickly. Finally, by replacing the old switches, the safety experienced by the line crews who operate these switches will be improved.

2025 to 2026 Variance:
This program is progressing as planned with variances due to material costs and the forecast was adjusted to meet resource & emergent needs.

Table 2-47
Transmission – Priority Line Switch Program Replacements
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.1	5.0	2.9	8.8	-	16.8
2026	-	0.1	2.0	2.9	8.8	9.3	23.1

Volney Station-Repl Disconnect SWs (C098938 - $3.9M)
As part of the investigation following the failure of a 345kV MEMCO disconnect switch, inspections using drone, infrared, and visual reviews were performed at this and other similar substations across New York. These inspections identified and called out the recommendation to replace twelve (12) 345kV MEMCO switches at this substation.

Drivers:
The disconnect switches identified by inspection show signs of failure like the initial failure and/or have other concerns that warrant more urgent replacement.

Customer Benefits:
Replacement of the identified disconnect switches will reduce the likelihood of a similar failure and maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-48
Transmission – Volney Station-Repl Disconnect SWs
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.1	1.7	2.1	3.9

Leeds Station-Repl Disconnect SWs (C098939 - $4.2M)
As part of the investigation following the failure of a 345kV MEMCO disconnect switch, inspections using drone, infrared, and visual reviews were performed at this and other similar substations across New York. These inspections identified and called out the recommendation to replace thirteen (13) 345kV MEMCO switches at this substation.

Drivers:
The disconnect switches identified by inspection show signs of failure like the initial failure and/or have other concerns that warranted more urgent replacement.

Customer Benefits:
Replacement of the identified disconnect switches will reduce the likelihood of a similar failure and maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-49
Transmission – Leeds Station-Repl Disconnect SWs
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.1	1.7	2.4	4.2

Substation Asset Replacements

South Oswego: 115kV Asset Rplc CH (C092436 - $3.0M)
South Oswego: 115kV Asset Rplc (C081781 - $9.9M)
This project replaces deteriorated and obsolete assets at South Oswego including the Control House, six (6) oil circuit breakers, voltage transformers ("VTs"), and associated relays.

Drivers:
The six (6) 115kV OCB are manufactured by McGraw Edison in 1971 through 1974 have deteriorated over their lifetime, have limited/no spare parts and have operational concerns with closing due to recent issues. The OCBs are manufactured with Bushing Potential Devices and therefore once removed, new line Coupling Capacitor Voltage Transformers ("CCVTs") The six (6) 115kV VTs, which were manufactured by General Electric in 1973, have deteriorated over their lifetime, have rust and corrosion on the bottom of the assets. The corrosion can allow for water ingress and/or leak areas for the oil. The control house contains the protection and control devices for the substation equipment. The control house has deteriorated over its lifetime even with maintenance to fix cracks and leaks from the roof. There are some obsolete relays that have limited spare parts and limited to no OEM support within the control house. The existing yard does have water ingress/flooding in the southern portion of the substation which has occurred on repeated occasions. The five (5) lighting masts have deteriorated over their lifetime and have rust and corrosion.

Customer Benefits:
This proactive replacement of deteriorated and obsolete assets to maintain the reliability of the Transmission System.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-50
Transmission – South Oswego 115kV Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.2	1.1	1.4	2.0	-	4.7
2026	-	0.2	1.1	1.4	2.0	8.2	12.9

Browns Falls Station – Asset Separation/Replacement (C081427 - $2.2M)
The Browns Falls Station is a 115/34.5kV interconnection point with Customer. The 34.5kV assets in the lower 34.5kV yard are in poor condition and have caused potential safety and clearance concerns. There are four (4) 34.5kV OCBs in service that are in poor condition, lack OEM support, and have mechanism issues.

This project will expand the 115kV yard fence to allow for the installation of a new metal-clad for the 34.5kV equipment as well as the relocation of the 115kV relay and controls from the Customer Powerhouse. The 115kV circuit breakers were recently replaced and are in good condition.

Drivers:
The 34.5kV OCBs are in poor condition. There is a lack of spare parts and maintenance support from the OEM. The separation of the assets from those owned by Brookfield Power allows for equipment access in the event of an emergency or planned maintenance.

Customer Benefits:
The planned replacement of these assets reduces the likelihood of failures and customer outages.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-51
Transmission – Browns Falls – 115kV Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	6.3	0.9	0.0	0.0	0.0	-	7.2
2026	-	2.2	0.0	0.0	0.0	0.0	2.2

Colony - Asset Replacement (C091871 - $4.9M)
This project will replace the two existing 34.5 kV OCBs and add one new breaker position for one 34.5 kV sub-transmission line that is currently connected directly to the bus. Additionally, the substation yard will be expanded to allow for the installation of a control enclosure and the associated protection and controls.

The two 34.5kV OCBs General Electric Type FKA were installed in 1965, have indications of leaks, limited-to-no spare parts and limited-to-no OEM support. The associated protection and control equipment are electromechanical relays which have limited spare parts, limited/no OEM support, and the internal components have fatigued over their lifetime to where they could fail.

Drivers:
The proactive replacement of deteriorated assets which if left could lead to a failure and an extended outage duration.

Customer Benefits:
The planned replacement of this substation equipment reduces the possibility of an in-service failure which could lead to long-term interruptions of the system as well as customer outages. The addition of a third circuit breaker will increase system reliability.

2025 to 2026 Variance:
The project timeline was adjusted based upon project review and feasibility of the installation of a new circuit breaker and the relocation of a 34.5kV sub-transmission line from a bus connection to a circuit breaker location to increase reliability. There is no significant variance from the prior CIP filing.

Table 2-52
Transmission – Colony - Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.1	0.6	0.8	3.4	-	4.9
2026	-	0.0	0.0	0.6	0.9	3.4	4.9

Deerfield: Asset Replacement (C081797 - $13.1M)
Deerfield Station is a 115kV, 46kV and 13.2kV substation. The 115kV, 46kV and 13.2kV bus presently are designed as a straight bus configuration. The assets located at the substation are in deteriorated condition, have limited spare parts and limited-to-no OEM support. In addition, the original oil-filled assets have a history of leaks.

The 46kV relays and controls in the control house are obsolete, have limited spare parts and limited-to-no OEM support.

The 13.2kV relay and controls, constructed within a metal-clad, are obsolete, have limited spare parts, and limited OEM support. The metal-clad switchgear is in poor condition.

The Deerfield Substation project is planned to replace deteriorated assets at the 115kV, 46kV and 13.2kV voltage levels which includes OCBs, VCBs, disconnects, insulators, potential transformers, one 115/13.2kV transformer and one 15kV metal-clad.

Drivers:
The proactive replacement of deteriorated assets, and the OCBs have limited spare parts and limited OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain reliability of the electric system.

2025 to 2026 Variance:
The project is progressing forward and from team reviews the scope was further defined and cost was adjusted accordingly.

Table 2-53
Transmission – Deerfield: Asset Replacements
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	2.7	5.8	4.2	0.4	-	14.1
2026	-	2.5	6.5	3.5	0.6	0.0	13.1

Gardenville 230kV – Asset Rplc (C089270 - $21.2M)
The Gardenville 230kV Station has a mix of original and replaced assets. The 230kV bus is presently designed as a straight bus configuration with three bus circuit breakers and three 230/115/13.2kV autotransformers. The 230kV substation is connected to a 115kV substation located in a separate yard nearby. The 115kV substation was recently replaced along with the transformers.

The original assets in the 230kV substation are in deteriorated condition, have limited spare parts and limited-to-no OEM support. In addition, the original oil filled assets have had a history of leaks.

The 230kV assets that are targeted for replacement are nine OCBs, nine bus VTs, six PTs, and 15 Surge Arresters.

The protection and control equipment associated with the Power Transformer and Circuit Breakers are also to be replaced since they are obsolete with limited spare parts and OEM support.

The land has recently had some water ingress, and the grade will be adjusted to reduce the risk of water ingress and reduce the possibility of soil erosion occurring over time.

Drivers:
The proactive replacement of deteriorated assets, and the OCBs have limited spare parts and limited OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to help maintain system reliability.

2025 to 2026 Variance:
The timeline was adjusted based upon additional review of the project scope, adjustments due to an overall review of the financial plan, and the anticipated duration to complete.

Table 2-54
Transmission – Gardenville 230kV - Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.2	0.3	0.5	4.4	-	5.4
2026	-	0.2	0.3	0.5	4.4	15.8	21.2

New Scotland R93&R94 Asset Replacement (C062752 - $20.0M)
Leeds L93 & L94 "A" Relay Upgrade (C096221 - $1.3M)
The replacement of deteriorated assets, and obsolete technology and upgrades to make the 115kV portion of the station BPS compliant

The 345kV GCBs R93 and R94 are in deteriorated condition, have leaked SF6 gas, and have limited spare parts and limited OEM support. There are three (3) 345kV Bus VTs (Bus 77K) that have deteriorated over their lifetime, have oil leaks and have limited spare parts.

The 115kV OCB R51 has deteriorated over its lifetime, had leaks, has limited spare parts and limited OEM support.

Drivers:
The targeted assets for replacement are in deteriorated condition. The circuit breakers have limited spare parts.

Customer Benefits:
The proactive replacement of deteriorated assets to help maintain system reliability.

2025 to 2026 Variance:
The project is progressing as planned and was updated based upon scope review and estimates.

Table 2-55
Transmission – New Scotland R93&R94 Asset Replace
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	4.2	9.2	7.4	0.5	-	22.3
2026	-	3.1	10.1	7.6	0.5	0.0	21.3

Mortimer – Asset Replacement (C093538 - $5.0M)
The targeted asset replacement for nine (9) 115kV OCBs and the associated protection assets which are a combination of General Electric model FK and Siemens – Allis Chalmers model BZO which have both had family class issues pertaining to deteriorated internal components which could lead to asset failure.

Drivers:
The replacement of deteriorated assets that are nearing their end of life, have limited/no spare parts and limited/no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain reliability

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-56
Transmission – Mortimer – Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	0.9	-	1.0
2026	-	0.0	0.0	0.1	0.9	4.0	5.0

Solvay: Asset Replacement (C079463 - $16.2M)
Solvay - Asset Rplc T-line (C096564 - $0.2M)

The Solvay Station has 115kV and 34.5kV voltage levels. The assets are in poor condition specifically, the 115kV circuit switchers (“CSs”), 115/34.5kV transformers, 34.5kV OCBs, potential transformers and the protection and control system.

The two 115kV CSs have limited spare parts, and limited OEM support.

The four 115/34.5kV transformers have a history of leaks, are individual phase units, and have limited-to-no spare parts and limited-to-no OEM support.

There are 10 34.5kV OCBs in service that are in poor condition, lack OEM support, have mechanism issues, and are part of the New York 69kV to 4kV OCB Replacement Strategy.

The control house is of cinder block construction and has degraded over its lifetime. In addition, there are cracks which allow for water and insect intrusion.

There are obsolete protection relays and controls within the control house.

Drivers:
The proactive replacement of deteriorated assets and the OCBs have limited spare parts and limited OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to help maintain system reliability.

2025 to 2026 Variance:
The project is progressing forward but was adjusted to account from an overall review of the capital plan and other projects, and updated information on the review of the scope and feasibility of construction.

Table 2-57
Transmission – Solvay: Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.8	2.3	6.7	5.7	2.2	-	17.7
2026	-	0.6	7.9	5.7	2.2	0.0	16.4

Trinity Pumping Plant Refurb (C091980 - $2.0M)
The Trinity Pressurizing Plant, manufactured in 1965, is necessary to circulate insulating oil in four 115kV UG cables in the Albany area. The pressurizing plant is equipped with four pumps with more frequent pump starts than any other plant in our service territory. This project will replace the existing pumping plant.

Drivers:
The frequency of equipment failure has been increasing, resulting in operational issues, which impacts reliability and is an end-of-life sign. Without the pumps in operational condition, there is the potential need to de-rate the 115kV UG cables impacting the ability of the transmission system to operate at designed.

Customer Benefits:
This pumping plant serves four 115kV UG 115kV cables in the Albany region, and the refurbishment will help ensure safe and reliable service going forward.

2025 to 2026 Variance:
This project is progressing as planned. The scope of the job was further refined by the Transmission Underground Engineering team.

Table 2-58
Transmission – Trinity Pumping Plant Refurb
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	2.1	0.0	0.0	0.0	-	2.2
2026	-	2.0	0.0	0.0	0.0	0.0	2.0

Yahnundasis Station: Asset Replacements (C081794 - $16.5M)
Yahnundasis Station is a 115kV, 46kV and 13.2kV substation. The 115kV and 13.2kV bus are designed as a straight bus configuration and the 46kV bus is designed as a main and transfer configuration. The assets located at the substation are in deteriorated condition, have limited spare parts and limited-to-no OEM support. In addition, the original oil filled assets have a history of leaks.

The 46kV relays and controls in the control house are obsolete, have limited spare parts and are limited-to-no OEM support.

The 13.2kV relay and controls are constructed within a metal-clad that are obsolete, have limited spare parts, limited OEM support and the metal-clad switchgear is in poor condition.

The Yahnundasis Station project is planned to replace deteriorated assets at the 115kV, 46kV and 13.2kV voltage levels which includes OCBs, VCBs, disconnect switches, insulators, PTs, two 115/46kV transformers, one 115/13.2kV transformer and one 15kV metal-clad switchgear.

The metal-clad is planned to be built as an open-air design.

Drivers:
The proactive replacement of deteriorated assets, while the OCBs and protection and control systems have limited spare parts and limited OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets will maintain reliability of the electric system.

2025 to 2026 Variance:
The project is progressing forward, and the review of the project indicated a higher total cost due to an updated estimate.

Table 2-59
Transmission – Yahnundasis: Asset Replacements
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.1	2.9	4.6	7.5	1.5	-	17.6
2026	-	2.7	6.0	6.8	1.0	0.0	16.5

Station 078: Asset Replacement (C081792 - $10.1M)
The Tonawanda Terminal Station 078 was originally constructed in the early 1950s. The substation consists of 115kV, 23kV and 5kV voltage yards. The substation consists of assets that

have deteriorated over their lifetime, have limited/no spare parts, limited-to-no OEM support and with some assets original to the substation.

The 115kV assets that are to be replaced are two 115/23kV transformers ("TRFs") (TRF 1 and TRF 4) and two 115/4.16kV transformers.

The 23kV assets that are to be replaced are nine 23kV OCBs (R472, R462, R392, R372, R362, R272, R192, R182 and R172).

Two 4.16kV Circuit Breakers are looking to be replaced with a metal-clad switchgear.

Drivers:
Asset Condition is the primary driver of this project with multiple deteriorated assets needing to be replaced. If not replaced, unexpected failures may occur which may cause prolonged outages for multiple customers.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain reliability of the electric system.

2025 to 2026 Variance:
The project is progressing forward and may have some fluctuations to accommodate financial adjustments from schedule modifications and external influences to support clean energy initiatives.

Table 2-60
Transmission – Station 078: Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.2	0.2	0.9	-	1.3
2026	-	0.0	0.2	0.2	0.9	8.8	10.1

Ridge Station 142 – Asset Replc (C097565 - $8.6M, C086898 - $0.3M)
The Ridge Station 142 is a 115 kV, 34.5 kV, and 4.16 kV substation. The substation has a mix of original and replaced assets with the 115 kV and 4.16 kV sections arranged in a straight bus configuration while the 34.5 kV section has a straight bus and transfer bus configuration. The assets located at the substation are in deteriorated condition, have limited spare parts and limited to no OEM support.

The associated protection and control equipment are electromechanical relays which have limited spare parts and limited to no OEM support. The 4.16 kV protection and controls are constructed within a metal-clad, with the metal-clad switchgear being in poor condition.

The Ridge Station project is planned to replace deteriorated assets at the 115 kV, 34.5 kV, and 4.16 kV voltage levels which includes OCBs, GCBs, two (2) 115/34.5 kV transformers, the associated protection and controls, metal-clad, and the control enclosure.

Drivers:
The proactive replacement of assets in deteriorated condition. The OCBs, GCBs, and metal-clad lack spare parts and OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain reliability of the electric system.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-61
Transmission – Ridge Station - Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	4.2	-	4.3
2026	-	0.0	0.0	0.1	4.3	4.5	8.9

Bristol Hill – Asset Replacement (C084072 - $9.6M)
The Bristol Hill Station is a 115kV/34.5kV substation. There is one (1) 115/34.5kV transformer, five (5) 34.5kV circuit breakers, and four (4) 34.5kV sub-transmission lines. The substation was built in the early 1960s and has assets that have deteriorated over their lifetime, have limited/no spare parts, limited/no OEM support and have leaks or corrosion where water ingress is an issue.

The Bristol Hill substation project is planned to replace the one (1) 115/34.5kV transformer, two (2) GCBs, the associated disconnect switches and the associated protection and controls.

Drivers:
The proactive replacement of deteriorated assets that have limited or no spare parts and limited or no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain reliability of the electric system.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-62
Transmission – Bristol Hill - Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.1	0.4	1.9	5.7	1.5	9.6

Seneca Term – 23kV Asset Rplc (C089269 - $9.3M)
The Seneca Terminal Station is a 115/23kV substation that also contains a terminal point for two (2) 230kV UG cables, each with their own shunt reactor. The 115kV and 23kV portions of the substation are presently designed in a straight bus configuration. The assets located at the substation, primarily the 23kV assets, are in deteriorated condition, have limited or no spare parts, and limited or no OEM support.

Many of the 23kV assets are original to the substation. These assets are in deteriorated condition, have limited or no spare parts, and limited or no OEM support. Additionally, the original oil-filled assets have a history of leaks and water ingress.

The protection and controls equipment associated with the 23kV assets are also to be replaced as they are in deteriorated condition, have limited or no spare parts, and limited or no OEM support.

The Seneca Terminal project is planned to replace the deteriorated assets at the 23kV voltage level which includes the OCBs, series reactors, disconnect switches, insulators, VTs, the associated protection and controls, and support structures.

Drivers:
The proactive replacement of deteriorated assets that have limited or no spare parts and limited or no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to help maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-63
Transmission – Seneca Term – 23kV Asset Rplc
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.1	0.8	8.4	9.3

Kensington – 23kV Replacements (C091035 - $9.3M)
The Kensington Terminal Station is a 115kV and 23kV substation. The 115kV and 23kV sections of the substation are presently designed in a straight bus configuration. The assets located at the substation, primarily the 23kV assets, are in deteriorated condition, have limited or no spare parts, and limited or no OEM support.

Much of the 23kV assets are original to the substation. These assets are in deteriorated condition, have limited or no spare parts, and limited or no OEM support. Many of the oil circuit breakers at the 23kV voltage level are General Electric model FK which have had family class issues pertaining to deteriorated internal components. Additionally, the original oil-filled assets have a history of leaks, mechanical issues, and hotspots.

The protection and controls equipment associated with the 23kV assets are also to be replaced as they are in deteriorated condition, have limited or no spare parts, and limited or no OEM support.

The Kensington Terminal project is planned to replace the deteriorated assets at the 23kV voltage level which includes the OCBs, series reactors, disconnect switches, insulators, VTs, the associated protection and controls, and support structures.

Drivers:
The proactive replacement of deteriorated assets that have limited or no spare parts and limited or no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to help maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-64
Transmission – Kensington – 23kV Replacements
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.1	0.8	8.4	9.3

School St – Asset Replacement (C091969 - $5.3M)
The School Street Station is a 34.5kV interconnection point with Customer. The substation is presently designed in a straight bus and transfer bus configuration. The substation yard contains a mixture of National Grid and Customer assets, with National Grid protection and control assets located within Customer's powerhouse. The 34.5kV assets are in poor condition, have limited or no spare parts, and limited or no OEM support.

This project involves replacing two 34.5kV GCBs, related disconnect switches, four (4) VTs, and 34.5kV surge arresters. It will also evaluate building a new control house with updated protection and control equipment to replace existing deteriorating units and ensure asset separation from Customer.

Drivers:
The 34.5kV assets are in poor condition, have limited or no spare parts, and limited or no OEM support. Additionally, the substation is a shared site with Customer. The separation of assets from those owned by Customer allows for equipment access in the event of an emergency or planned maintenance.

Customer Benefits:
The proactive replacement of assets to maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-65
Transmission – School St – Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.8	4.5	5.3

Norwood – Asset Repl/Sep (C093552 - $4.3M)
The Norwood substation is a 23/4.8/2.4kV interconnection point with Customer. The 23/4.8kV transformer banks and one (1) 4kV VCB are in deteriorated condition, have limited spare parts, and limited or no OEM support.

This project will replace the 23/4.8kV transformer banks and the 4kV VCB with the associated disconnect switches. Additionally, a new control enclosure will look to be installed with new protection and controls, as the protection and controls are presently installed within customer's powerhouse.

Drivers:
The 23/4.8kV assets are in poor condition, have limited or no spare parts, and limited or no OEM support. Additionally, the substation is a shared site with customer. The separation of the assets from those owned by customer allows for equipment access in the event of an emergency or planned maintenance.

Customer Benefits:
The proactive replacement of assets to maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-66
Transmission – Norwood – Asset Repl/Sep
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.1	0.4	3.8	4.3

Glens Falls – Asset Replacement (C097182 - $1.0M)
The Glens Falls substation is a 34.5kV/4.16kV substation that has six (6) 34.5kV Sub transmission lines, one (1) 34.5/4.16kV power transformer and four (4) 4.16kV feeders. The 34.5kV portion of the substation has deteriorated assets with little to no OEM support and spare parts. There have been two (2) 34.5kV circuit breakers that had interrupters and mechanisms of failures.

There are nine (9) 34.5kV circuit breakers with four (4) being targeted which are all manufactured by McGraw Eddison. There are two (2) oil circuit breakers, model CG and two vacuum circuit breakers, VACG. This would include the associated disconnects and protection and controls.

Drivers:
The proactive replacement of deteriorated assets that have limited or no spare parts and limited or no OEM support.

Customer Benefits:
The proactive replacement of assets to maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-67
Transmission – Glens Falls – Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.2	0.8	1.0

Projects in Support of Distribution

Patroon Substation Rebuild/Expand (C092739 - $9.0M)
The Patroon substation is a transmission substation that serves distribution customers. The distribution capacity of the substation needs to be expanded replacing the existing 25 MVA, 115/13.2 kV transformer with two 40 MVA, 115/13.2 kV transformers and replacing the existing 4 feeder IMCS with an 8 feeder IMCS to provide more feeders allowing more load to be served from Patroon.

Drivers:
An extensive Area Study of Albany was performed which determined that in order to serve the customers within the City of Albany in the future it would be necessary to convert the distribution within the City of Albany from 4.16 kV to 13.2 kV and provide additional capacity. Instead of trying to upgrade the existing inner city substations served from the mostly UG 34.5 kV sub-transmission system, it was determined that the expansion of the existing 115/13.2 kV substations around the perimeter of the city, of which the Patroon substation is one, would better serve the customers within the city reducing the load on and need to rebuild the 34.5 kV UG system while also addressing multiple asset conditions issues at the various 34.5/4.16 kV substations by retiring those substations.

Customer Benefits:
This project addresses multiple asset condition issues and future load constraints at the Colvin Avenue, Delaware Avenue, Partridge Street and Seminole substations by replacing and expanding upon the capacity provided by those substations with expanded distribution capability from Patroon. It also allows the distribution within the City of Albany to be converted to 13.2 kV creating 13.2 kV feeder ties which will be automated with FLISR schemes to improve reliability.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-68
Transmission – Patroon Substation Rebuild/Expand
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.2	3.0	3.0	6.7	-	12.9
2026	-	0.0	0.0	0.3	4.2	4.5	9.0

Mill St Station Rebuild (C093267 - $11.0M)
This project provides for the rebuild of the 23-4.8kV Mill Street Station that was built in 1956 and includes supply to six distribution feeders and to another six feeders that supply the low voltage network in Watertown.

Drivers:
Mill St. Station is in a deteriorated condition including the 23/4.8kV transformers, the voltage (instrument) transformers and the station service transformer. Additional equipment is also deteriorated and needs to be replaced. The substation is also located in another company's building and needs to be relocated.

Customer Benefits:
This project addresses component fatigue identified in the asset condition report. This project is adjacent to the Black River in the City of Watertown. Rebuilding the substation mitigates against environmental risks and reliability risks due to the failure of a station transformer.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-69
Transmission – Mill St Station Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	1.1	1.2	1.4	-	3.7
2026	-	0.0	1.1	1.2	1.4	7.3	11.0

West Adams Radial 115kV Line Tap (C096831 - $2.2M)
This project is to create a new T-line tap into a new bay that will be built out as part of the West Adams Substation Rebuild. The tap is needed so that customers can remain in service while work is being done to the substation.

Drivers:
The West Adams station currently has loading and asset condition issues that need to be addressed as soon as possible. The 2021 Asset Condition Report recommends the replacement of vacuum circuit breakers R510, R530 and R540, the replacement of the existing UG cable getaways due to cable terminations and corrosion on pipe risers, and replacement of the 13.2kV bus GE JVW-5.

Customer Benefits:
The rebuilding of this station will provide increased reliability to the customers and additional capacity to support economic growth and the electrification of heating in the South Watertown area supplied by this substation.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-70
Transmission – West Adams Radial 115kV Line Tap
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.1	0.2	0.4	1.5	2.2

GCB to VCB

GCB to VCB Projects (C091903 - $26.9M)
Alcoa – Rplc GCB w VCB (C095691 - $0.3M)
Battle Hill – Rplc GCB R50 (C099220 - $1.2M)
Falconer – Rplc GCB w VCBs (C095688 - $1.5M)
Long Lane – Rplc GCB w VCB (C095695 - $1.2M)
McIntyre – Rplc GCB w VCB (C095694 - $5.6M)
North Ogdensburg – Rplc GCB w VCB (C095687 - $1.2M)
Queensbury – Rplc GCB w VCB (C095690 - $1.1M)
Scriba – Rplc GCBs w VCBs (C095689 - $4.0M)
Watkins Road – Rplc GCB w VCB (C095692 - $3.4M)

The GCB to VCB program will allow for specific projects to be created to replace leaking SF6 GCBs that are not practical or economical to repair, with new VCB interruption technology at 115kV level and new alternative Gas at higher voltages. Until a new technology is developed that proves to be dependable, reliable and safe to operate/work around. The new VCBs will be targeting high leaking GCBs to be replaced and are more environmentally friendly than SF6 gas breakers. This initiative will support New York State goals to reduce greenhouse gas ("GHG") emissions.

Drivers:
The replacement of leaking SF6 GCBs with environmentally friendly VCBs will help support the New York State GHG emission limits and net zero goals which are expected to be regulated by the New York State Department of Environmental Conservation ("NYS DEC") starting in CY2025.

Customer Benefits:
The replacement of leaking GCBs will maintain the reliability of the system.

2025 to 2026 Variance:
This project was updated to account for the rise in cost for material and work to expedite some project work as needed to meet environmental requirements.

Table 2-71
Transmission – GCB to VCB Projects
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.6	1.3	10.7	5.0	17.5	-	36.1
2026	-	1.4	5.3	5.6	12.2	21.9	46.4

Protection

T-Sub Obsolete Protection Replc NYE, NYC, NYW (C096986 - $12.2M, C096987 - $12.2M, C096988 - $12.2M)
This program is designed to facilitate the development of targeted projects aimed at replacing protection assets that have experienced lifecycle deterioration, lack sufficient OEM support, or present challenges regarding spare parts availability and operational functionality. Relay replacements are scheduled based on performance reviews, according to the most reliable and reported information.

Drivers:
There are protection system assets that have deteriorated over their lifetime, pertaining mostly to electromechanical relays and microprocessors that are nearing the end of their useful life.

Customer Benefits:
The proactive replacement of assets in poor condition to maintain system reliability.

2025 to 2026 Variance:
These programs are progressing as planned. The program spend has shifted due to project/portfolio review with other projects to bundle where possible to create efficiencies.

Table 2-72
Transmission – T-Sub Obsolete Protection Replc
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.9	5.7	10.2	15.3	-	32.1
2026	-	2.0	3.0	3.6	12.8	15.3	36.6

NY Inspection and Refurbishment Programs

NY Inspection Repairs - (C026923, C093940, C093941, C093942 - $176.8M)
The goal of this program is to replace damaged or failing components on the transmission overhead line system identified during field inspections referred to as five-year foot patrols. Three divisional funding projects have been created for the three National Grid divisions (East, Central, and West). The three divisional funding projects have been created to ensure resourcing allocation, and spending is dispersed appropriately across New York State.

Drivers:
This program ensures that both steel tower and wood pole transmission lines meet the governing NESC standards by replacing hardware, wood poles, and structure components that no longer meet the code requirements. This follows standard industry practice and the Safety Order[2]

Customer Benefits:
This program enhances public safety by assuring that damaged or failed transmission overhead line components are replaced and continue to meet the governing NESC under which they were built. Replacing damaged and failed components identified during inspection also promotes reliable service performance.

2025 to 2026 Variance:
The variance in forecasted capital expenditures is attributed to enhancements in the company's Quality Assurance/Quality Control (QA/QC) program. Specifically, wood pole assets have undergone re-inspection utilizing drone-based aerial surveys and groundline inspection techniques. These advanced methods have provided a more accurate assessment of asset condition, enabling the identification and elimination of false positive replacements during foot patrol inspections. As a result, the Company is able to refine its asset replacement efforts and continue to precisely target infrastructure that has reached the end of its service life.

Table 2-73
Transmission – New York Inspection Projects
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	30.0	31.9	31.1	32.6	37.3	-	162.9
2026	-	42.5	23.2	32.6	37.3	41.2	176.8

Inspections Identified Replacement Program (C082106 - $2.0M)
This program addresses replacement of overhead line components found by inspection outside of the mandatory foot patrol inspections and the wood pole management program such as the post-fault aerial patrol.

Drivers:
This program addresses deteriorated overhead line issues found through alternative inspection methods.

Customer Benefits:
This program will enhance the reliability of the transmission system.

2025 to 2026 Variance:
The variance in capital expenditure is driven by the ongoing identification of deteriorated assets identified through alternative inspection methodologies. This project is progressing forward, and the project forecast was adjusted to align with resource & asset condition needs to ensure continued, safe, and reliable service.

[2] *Case 04-M-0159, Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems, Order Adopting Changes in the Electric Safety Standards (issued and effective Dec. 15, 2008, revised in March 2013) ("Safety Order").*

Table 2-74
Transmission – Inspections Identified Replacement
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.4	1.2	0.7	0.3	0.3	-	2.9
2026	-	0.4	0.7	0.3	0.3	0.3	2.0

Transmission Footer Inspection & Refurbishment Program (C094239, C094240, C094241 - $16.5M)
The Company performs a 20-year cycle program of transmission steel tower footer inspections and refurbishment. This program systematically inspects foundations above and below grade, repairs damage and coats tower legs to extend the useful life of the asset.

This program is split into three divisional funding project numbers (East, Central, and West) to allow for easier tracking of programs.

Drivers:
This program identifies capital work through the footer inspection and refurbishment program.

Customer Benefits:
Reduces future CapEx spending required for structure replacements by extending their useful life.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-75
Transmission – Footer Inspection & Refurbishment Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.9	2.9	3.0	3.1	3.3	-	15.2
2026	-	2.9	3.0	3.1	3.3	4.2	16.5

Transmission Wood Pole Inspection & Treatment ("PIT") Program (C094237, C094244, C094245 - $4.6M)
The Company inspects and treats the ground line and below grade on all wood poles and structures on approximately a 10-year cycle. The wood PIT program installs/adds a preservative coating to the wood pole to enhance the structure durability. This treatment limits corrosion or rot and extends the useful life of the pole.

This program is split into three divisional funding project numbers (East, Central, and West) to allow for easier tracking of programs.

Drivers:
This program identifies capital work through the PIT inspection and treatment program.

Customer Benefits:
Reduces future CapEx spending required for structure replacements by extending the wood poles and structure's useful life.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-76
Transmission – Wood Pole Inspection & Treatment ("PIT") Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.8	0.9	0.9	0.9	0.9	-	4.4
2026	-	0.9	0.9	0.9	0.9	1.0	4.6

Transmission Steel Tower Coating Program (C094238, C094242, C094243 - $27.6)
The Company's steel tower coating program applies protective/cathodic protection on structures. The coating provides neutralization and transforms eventual remaining rust as an inhibitor and provides active long-term protection from degradation and abrasion. Therefore, the life expectancy of the rehabilitated structure is essentially reset to the original expected design life when the structure was erected. This program enables the structure to remain in service for many more years than originally estimated. A steel tower coating program guides our approach toward the coating of steel structures to extend the service life of towers rated visual category 4 or better. The Company is working toward coating all 345kV and 230kV steel structures on an as-needed basis. For 115kV circuits, coating priority is determined by applying visual rating codes.

This program is split into three divisional funding project numbers (East, Central, and West) to allow for easier tracking of programs.

Drivers:
Tower coating provides long term, life extension without maintenance with an expectation of a minimum of 25-50 years, therefore, increasing the asset's useful life over that which was originally estimated. This program improves the quality and reduces the costs associated with operating the asset.

Customer Benefits:
Reduces future CapEx spending required for structure replacements by extending the structures useful life.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-77
Transmission – Steel Tower Coating Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.7	3.8	5.5	5.8	6.1	-	23.9
2026	-	3.7	5.5	5.8	6.1	6.5	27.6

Physical Security

Transmission Substation PS (C093611 - $3.1)
(C095851, C095852, C095853, C095854, C095855, C095856, C095857, C095858, C095859, C095860, C095861 - $0.7M)

These projects are to be planned to replace deteriorated assets to maintain the physical security parameters that met NERC CIP requirements and install new physical security assets as deemed necessary to meet the NERC CIP requirements.

Drivers:
The proactive replacement of deteriorated assets and to be in compliance with regulatory requirements.

Customer Benefits:
To maintain the reliability of the system and reduce the possibility of risk to the electrical assets pertaining to individual(s) attempting to physically damage the equipment.

2025 to 2026 Variance:
During the project review a whole new substation was added to the list per the most recent transmission planning studies which increased the total project cost.

Table 2-78
Transmission – Physical Security Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.5	0.3	0.3	0.1	0.0	-	1.1
2026	-	0.3	0.3	0.1	0.0	3.1	3.8

Other Asset Condition

Substation Small Cap Blanket East, West, Central (C099222, C099226, C099221 - $1.1M)
The Substation Small Cap Blanket will allow for specific projects to be created to replace substation assets that have deteriorated over their lifetime, have limited/no OEM support, limited/no spare parts, and limited functionality. The asset replacements are targeted for replacement based on reviews on performance, as best known and reported on the Substation Equipment Replacement Request ("SERR") system.

Drivers:
The proactive replacement of deteriorated assets that are nearing their end of life, have limited/no spare parts and limited/no OEM support.

Customer Benefits:
The replacement of assets in poor condition to maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-79
Transmission – Substation Small Cap Blanket East, West, Central
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.2	0.2	0.2	0.2	0.3	1.1

Knapp Road Storage Building (C083804 - $2.0M)
This project looks to create a storage building and marshalling yard for construction material at the Knapp Road Substation for western projects.

Drivers:
Marshalling yards provide space to store assets and equipment before construction of a project. The alternative is renting area/Connex boxes which can become costly and is temporary.

Customer Benefits:
This project is planned to create a permanent marshalling yard which reduces rental payments and reoccurring charges.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-80
Transmission – Knapp Road Storage Building
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.0	2.0	2.0

Transformer Replacement Program

T-XFR Spare 115kV-23kV 50 MVA (C081732 - $1.2M)
The NY Spare Substation Transformer Procurement was implemented to purchase spare transformers due to the long lead times and to reduce time in repairing damaged and failed units by having units readily available. The spares are purchased based on analysis conducted by the company identifying gaps in coverage per poissons calculations.

Drivers:
To have the ability to quickly respond to a failure or unpredictable event with a spare on hand to alleviate the waiting to procure an asset with long lead times to maintain reliability.

Customer Benefits:
The impact of substation transformer failure events on customers could cause a long-term outage. These critical spare assets are necessary to respond to unpredictable events or failures to maintain reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-81
Transmission – T-XFR Spare 115kV-23kV 50 MVA
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.6	0.6	1.2

Overhead Line Rebuild

Gard – Five Mile 151-152 & 167 North Rebuild (C027425 - $4.3M)
This project addresses asset condition related issues on the 115kV Gardenville-Arcade #151 (T6440), Gardenville-Five Mile Rd #152 (T6830), and Arcade-Five Mile Rd #167 (T6850) lines. The line will be rebuilt using steel structures and new conductor from structure 200 to the Ischua Switch Station (North). This work will address the remainder of the line that was not covered by C04718.

Drivers:
The Gardenville – Arcade 151, Arcade – Five Mile 167, Five Mile - Homer Hill 169, Gardenville – Five Mile 152, and Five Mile – Homer Hill 170 lines (formerly known as the Gardenville - Homer Hill 151/152 lines) have asset condition concerns and a history of outages that marked it as the 12th worse performing circuit in 2021. Advanced insulator hardware deterioration and insulator flashing has been reported on this line, in addition to structural deterioration as well. This project will address the section from structure 200 to the Ischua Switch station (North). The work is related to C093901, which addresses the portion of the line from the Ischua Switch station to Five Mile Road Station (South).

Customer Benefits:
The project replaces assets in poor condition and will maintain system reliability.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-82
Transmission – Gard – Five Mile 151-152 & 167 North Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.1	0.1	0.1	4.0	4.3

2. E. Multi-Value Transmission (MVT)

MVT Asset Condition

Multi-Value Transmission - Asset Condition ("MVT AC") projects address asset condition issues while also addressing load growth. MVT AC projects encompass proactively replacing assets identified to be in poor condition with higher rated equipment and associated asset replacements or installations as needed to support the system capacity increases.

Drivers:
The investments in this strategy are driven by the need to address the Company's deteriorating infrastructure, risk mitigation and obsolescence of assets and the ever-increasing customer electrification and decarbonization demands to maintain reliable network operation.

Customer Benefits:
The MVT AC projects maximize the utilization of existing asset condition projects and planned system capacity needs while avoiding the cost of constructing limited capacity infrastructure or otherwise inefficient solutions that only address a single asset condition issue.

MVT – Substation Asset Replacement

MVT Substation Asset Replacement projects address asset condition issues while addressing load growth. These projects encompass proactively replacing substation assets identified to be in poor condition with higher rated equipment and associated asset replacements or installations as needed to support the system capacity increases.

Reynolds Road Station – Asset Replacement (C077616 - $23.5M)
Reynolds Rd - Asset Replacement CH (C098141 - $8.9M)

The Reynolds Road Station is a 345kV, 115kV, and 13.2kV substation.

The 115kV assets that are targeted for replacement are six OCBs, 12 disconnect switches, and six VTs.

Two (2) 115kV/13.2kV Transformers are being replaced with larger MVA transformers to support the local area growth and in anticipation of possible Distribution Generation interconnections for clean energy.

The 15kV assets that are targeted for replacement are four VCBs and two 115/13.2kV transformers.

Drivers:
The replacement of deteriorated assets and the support of local distribution planning by increasing capacity.

Customer Benefits:
The project replaces assets in poor condition and will maintain system reliability.

2025 to 2026 Variance:
The project scope has been refined to meet NPCC Directory 4 requirements, including a new control house.

Table 2-83
Transmission – Reynolds Road – Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.1	0.3	7.1	14.1	-	21.6
2026	-	0.1	1.5	5.3	15.0	10.5	32.4

Tilden Station - Asset Replacement (C081785 - $14.2M)
Tilden - Asset Rplc CH (C095820 - $2.5M)
Tilden Station is a 115kV/34.5kV substation. Majority of the assets are original, and some assets were replaced due to condition or failures. There are two 115/34.5kV transformers that connect the 115kV to the 34.5kV system. The 115kV bus is presently designed as a single straight bus, while the 34.5kV bus is presently designed as two straight busses.

The original assets in the substation are in deteriorated condition, have limited spare parts and limited-to-no OEM support. In addition, the original oil filled assets have had a history of leaks.

The 115kV assets that are targeted for replacement are two 115/34.5kV transformers, three 115kV OCBs, and six 115kV VTs.

The two (2) 115/34.5kV transformers are being replaced with larger MVA transformers to support the local area growth and in anticipation of possible Distribution Generation interconnections for clean energy.

The 34.5kV assets that are targeted for replacement are six 34.5kV OCBs, two 34.5kV Station Service Voltage Transformers (“SSVT”), six 34.5kV VTs, and six 34.5kV bus arresters.

Drivers:
The assets are in poor condition. The OCBs lack spare parts and necessary maintenance support.

Customer Benefits:
The project replaces assets in poor condition and will help maintain system reliability.

2025 to 2026 Variance:
The project is moving forward and was shifted due to project reviews as it progresses through team meetings and site reviews.

Table 2-84
Transmission – Tilden: Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	0.6	3.4	6.6	4.6	-	16.2
2026	-	0.6	3.4	6.6	4.6	1.5	16.7

Spier Falls - Asset Replacement and Separation (C081788 - $-5.1M)
Spier Falls - Asset Rplc/Sep (C097316 - $8.2M)
Spier Falls - Asset Rplc/Sep CH LAB (C095029 - $-3.8M)

The Spier Falls Station project is to replace the 115kV GCBs and the 115kV protection and control equipment which consist of electro-mechanical relays that are deteriorated, with limited spare parts and limited OEM support. The relays and controls are currently located in the customer owned Powerhouse.

This project will construct a new control house in the substation yard including new protection and control equipment to replace the existing deteriorated equipment and provide for asset separation from customer.

The 115kV GCBs have deteriorated over their lifetime, have had leaks, have limited spare parts and limited OEM support. The new circuit breakers will be vacuum interruption to reduce the SF6 gas on the electrical system and the continuous ampacity rating will be a higher rating to support higher anticipated load flows due to clean energy initiatives.

The Funding Project C095029 now has a negative number since there was a fire at the shared facility with customer and National Grid in the fall of 2024, which consumed the 115kV protection and control assets. The funding was being reviewed as to how to manage the damage failure scenario and progressing forward will have a positive amount since a new control enclosure is to be installed instead of trying to include the protection in the substation yard as a short-term solution.

Drivers:
The assets are in poor condition. The protection assets are not located within a National Grid owned facility.

Customer Benefits:
The project replaces assets in poor condition and will maintain system reliability.

2025 to 2026 Variance:
This project is progressing forward but was modified due to a damage failure at the shared facility and therefore the protection and controls were prioritized. The asset replacement project will follow the replacement of the protection and controls project.

Table 2-85
Transmission – Spier Falls: Asset Replacement and Separation
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	6.1	3.4	-7.7	3.7	1.2	-	6.7
2026	-	2.0	-7.6	3.7	1.2	0.0	-0.7

Teall Avenue Station – Asset Replacement (C086893 - $23.9M)
The Teall Avenue Station project is to replace deteriorated assets that have limited or no spare parts, limited or no OEM support, the oil containing assets have leaks and will support increased system capacity on the distribution system.

The assets being replaced are the 34.5kV OCBs, one 115/13.2kV transformer, and one 15kV metal-clad switchgear. The associated protection and controls for these assets is also planned for replacement due to obsolescence. In addition, distribution area planning requirements call for the installation of a new 115/13.2kV transformer and 15kV feeders to enhance local system capacity and load relief.

Drivers:
The replacement of deteriorated assets with limited or no spare parts and limited or no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain system reliability, which if not completed would lead to continued deterioration and could lead to an unexpected failure. The support of local area planning needs to enhance system reliability.

2025 to 2026 Variance:
The project is progressing as planned and was updated based upon scope review and estimates. The variance accounts for planned material and minor construction costs.

Table 2-86
Transmission – Teall Ave – Asset Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.1	1.3	1.8	5.0	-	8.2
2026	-	0.02	0.3	1.6	5.0	17.0	23.9

Geres Lock Station – Control House Replacement (C090822 - $24.0M)
The Geres Lock Station project is to replace the deteriorated protection and control assets contained within the control house (“CH”). The work to replace the assets and minimize outages would be to install a new control house and then complete the cutover from the existing protection and controls to the new protection and controls.

The existing structural steel at the substation has deteriorated where there is visible cracks in the steel lattice work and replacing the entire lattice pieces would not be feasible due to outages and time durations. It is being planned for a greenfield site which planning has reviewed and determined a Breaker and a Half (“BAAH”) substation is suitable to meet the needs of future load flows in anticipation of the clean energy initiatives.

Drivers:
The replacement of deteriorated assets with limited-to-no spare parts and limited-to-no OEM support.

Customer Benefits:
The replacement of deteriorated assets with limited-to-no spare parts and limited-to-no OEM support.

2025 to 2026 Variance:
This project is progressing forward. The transmission planning and clean energy initiatives modified the electrical configuration from straight bus to BAAH to accommodate anticipated interconnections and possible load flow congestion.

Table 2-87
Transmission – Geres Lock – CH Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.05	0.9	12.0	-	12.9
2026	-	0.0	0.05	0.9	12.0	11.0	24.0

North Troy Station 34.5kV Asset Replacement (C079223 - $11.3M)
The remaining five 34.5kV OCBs were installed in 1982 and are a combination of General Electric and McGraw Edison breakers. The oil-filled equipment has indications of leaks and limited spare parts. Three have already been replaced with the most recent being in 2007.

The replacement of a 115/34.5kV transformer due to deteriorating over its lifetime, having limited spare parts, limited OEM support and being increased in MVA to support local area planning capacity.

The replacement of a 115/13.2kV transformer to support local area planning capacity.

The associated protection and control equipment are electro-mechanical relays which has limited spare parts and OEM support.

Drivers:
The proactive replacement of deteriorated assets to maintain reliability and upsize the transformers being replaced to support local planning requirements to meet future load and anticipated clean energy distribution generation interconnections.

Customer Benefits:
Maintain the reliability of the electrical system and provide for additional future Distributed Generation (“DG”) interconnections.

2025 to 2026 Variance:
The project is progressing forward and may have some fluctuations to accommodate financial adjustments due to the overall project portfolio and to support clean energy initiatives.

Table 2-88
Transmission – North Troy - 34.5kV refurb/rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	1.0	0.9	0.9	8.0	-	9.9
2026	-	0.0	0.2	2.5	2.7	5.9	11.3

Homer Hill Station (C075942 - $3.8M)
Substation - Tran Spare (C099272 - $1.5M)
The Homer Hill Station has 115kV and 34.5kV voltage levels and has 115kV asset concerns. The 115kV assets were installed in 1950, and many are original to the substation. The OCBs, oil filled potential transformers, insulators and disconnect switches are planned for replacement. The oil filled equipment has leaks and limited spare parts.

The 115/34.5kV, 7.5/9.375 MVA transformers were also installed in 1950 and are original to the substation. The automatic voltage regulating equipment for the LTC was replaced, but the remaining LTC and operating mechanism are original parts, with no spare parts available and limited OEM support.

The insulators are original to the substation, and some have already been replaced due to damage failure circumstances. The remaining insulators should be replaced because, based on industry experience, the cement around the core starts to deteriorate after being in service for 30 years. The disconnect switches that need to be replaced are those with the cap and pin insulators

There are two control houses on-site. The 115kV control house is intermixed with microprocessors and electromechanical relays. The electromechanical relays have limited spare parts and OEM support.

Drivers:
The replacement of deteriorated assets with limited-to-no spare parts and limited-to-no OEM support.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain reliability of the electric system.

2025 to 2026 Variance:
This project is new to the 2026 Plan.

Table 2-89
Transmission – Homer Hill Station
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	1.1	0.4	0.0	0.0	3.8	5.3

Lake Colby – Asset Replacement (C091042 - $7.1M)
The Lake Colby Station project is to replace deteriorated assets, that have limited-to-no spare parts, limited-to-no OEM support and the oil filled assets have had leaks. The assets to be replaced are at the 115kV, 46kV, 15kV voltage levels.

The 115kV assets that are to be replaced are the monitor and control system for the SVC, two 115/46kV, 18/24/26.8 MVA transformers and one 115/13.2kV, 12/16/22.4 MVA transformer and one (1) 115kV OCB.

The 46kV assets that are to be replaced are two (2) 46kV OCBs.

The 15kV assets that are to be replaced are two (2) 15kV OCBs.

The amount of protection and controls assets to be replaced has been reviewed and determined a control house is necessary to minimize the outage requirements to replace the assets.
Working alongside transmission planned the existing capacitor bank is to be replaced with a 27MVAR capacitor bank.

Drivers:
The replacement of deteriorated assets that if not replaced would continue to deteriorate and could fail unexpectedly, which may lead to a long-term outage.

Customer Benefits:
The proactive replacement of deteriorated assets to maintain reliability of the electric system.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-90
Transmission – Lake Colby – SVC Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.1	1.5	4.0	3.0	-	8.6
2026	-	0.05	0.3	0.6	3.3	2.9	7.1

MVT – Substation Rebuilds

MVT Substation Rebuilds projects address asset condition issues while addressing load growth. MVT - Substation Rebuild projects encompass proactively replacing substation assets identified to be in poor condition with higher rated equipment and associated asset replacements or installations as needed to support the system capacity increases with an anticipated plan to require a greenfield location due to overall scope and/or complexity of construction.

Drivers:
The investments in this strategy are driven by the need to address the Company's deteriorating infrastructure, risk mitigation and obsolescence of substation assets, and the ever-increasing customer electrification and decarbonization to maintain reliable network operation.

Customer Benefits:
The MVT - Substation Rebuild projects maximize the utilization of existing asset condition projects, equipment obsolescence, and planned system capacity needs while avoiding the cost of constructing limited capacity infrastructure or otherwise inefficient solutions that only address a single asset condition issue.

Colton Substation Rebuild (C091862 - $6.4M)
The Colton Station is a shared site with Brookfield with the hydroelectric generator building and the electrical substation at the same location. The protection and controls have deteriorated over their lifetime, have had some component failures for the electromechanical and some microprocessors that are nearing the end of their useful life.

The AC station service and DC station service are shared assets and are nearing the end of life and being reviewed to be installed to support the substation.

Greenbush Station Rebuild (base project) (C079224 - $68.5M)
Greenbush T-Line (C091535 - $16.1M)
Greenbush Land (C092621 - $0.3M)
Greenbush Control House (C091536 - $9.5M)

The Greenbush Station contains 115kV, 34.5kV and 13.2kV voltage levels. The substation was originally constructed in the mid-1960s. This project will replace deteriorated assets at the 115kV, 34.5kV and 13.2kV voltage levels which include OCBs, VCBs, disconnect switches, insulators and potential transformers, and install a new control house.

The replacement of the OCBs is part of an overall replacement strategy due to poor condition, obsolete parts and lack of original equipment manufacturer support. Similarly, the GCBs have had leaks and have limited spare parts. There have been two 34.5kV GCBs that have recently been replaced for VCBs and are in good condition.

Lockport Substation Rebuild (C035464 - $29.5M)
Lockport Sub Rebuild CH (C073991 - $0.3M)
Lockport Sub - Remote End Work (C095022 - $1.1M)
Lockport - Rebuild T-line work (C085990 - $11.7M)

Lockport Station is a 115kV switching substation with 13 115kV transmission lines serving the 115kV system in Western New York. The overall condition of the substation yard and control room is poor. Refurbishment work is required on control cable duct banks, breaker operators, structure painting and concrete equipment foundations that are significantly deteriorated.

The control room building is also in poor condition and requires significant repairs. It is an oversized building with continued maintenance costs for the original roof and the intricate brickwork. It contains a 90-ton overhead crane in the 25-cycle frequency changer portion of the building which is presently used only to store material. The control house roof was repaired in the 1990s and brick pointing was also done to limit deterioration within the last five years.

The Lockport Station project is to replace all the deteriorated assets at the 115kV and 12kV voltage levels which includes OCBs, disconnect switches, potential transformers, insulators and the 115/12kV transformer. The project will also include a new control house installation to include IEC 61850 technology. The new substation will be constructed as a greenfield and be a BAAH configuration.

Ash St. Station 34.5kV Rebuild (C088028 - $0.9M)

The Ash Street Station has a 34.5kV straight bus design where the OCBs and associated assets are in deteriorated condition.

The 34.5kV assets were installed in 1963, and many are original to the substation. The OCBs, oil filled potential transformers, insulators, surge arrestors and disconnect switches are assets planned for replacement. The oil filled equipment has indicated leaks and limited spare parts.

Multiple OCB, 34.5kV bus PT foundations, and multiple UG cable getaway structure foundations are showing signs of significant undermining and/or heaving.

UG 34.5kV cables associated with feeds to transformers TRF 7, TRF 8, and TRF 9 will be replaced as the compound filled potheads are showing signs of weeping and leaking compound. Chipped water sheds were also noted on the cable pothead off R295 that feeds transformer TRF 9.

The protection and control equipment, electromechanical relays which have limited spare parts and OEM support. The OCB protection and control equipment are in a common control house which currently has little to no free panel space.

2025 to 2026 Variance:
The substation rebuilds are continuously progressing forward although being modified to manage short term capital spending and address the layout of the proposed substation rebuilds. There are some circumstances with land availability that may affect the timeframe and support the New York State clean energy goals pertaining to CLCPA/CGPP.

Table 2-91
Transmission – MVT Substation Rebuilds
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.5	3.3	10.7	30.2	54.9	-	101.6
2026	-	2.9	8.7	28.3	56.9	47.5	144.3

MVT - Transformer Replacement Program

MVT Substation Transformer replacement projects address asset condition issues while addressing load growth concerns. MVT – Transformer replacement projects encompass proactively replacing substation transformer assets identified to be in poor condition with higher rated equipment and associated asset replacements or installations as needed to support the system capacity increases.

Drivers:
The investments in this strategy are driven by the need to address the Company's deteriorating infrastructure, risk mitigation and obsolescence of substation assets, and the ever-increasing customer electrification, clean energy initiatives and decarbonization needs to maintain network operation.

Customer Benefits:
The MVT – Transformer replacement projects maximize the utilization of existing asset condition projects, equipment obsolescence, and planned system capacity needs while avoiding the cost of constructing limited capacity infrastructure or otherwise inefficient solutions which only address a single asset condition issue.

Mohican - Rplc 115kV, 34.5kV Assets (C053133 $6.6M)
The two (2) 115/34.5kV transformers at Mohican have indications of hotspots, gassing from arcing under oil, and high moisture-in-oil levels from maintenance reviews of the transformers. The transformers were placed on the watch list in New York. In addition, the recent Moreau Area Study

recommended the installation of a 40 MVA, 115/13.2 kV distribution transformer with four new 13.2 kV feeders to allow for the retirement of the Farnan Road, Henry Street, Hudson Falls and McRea Street distribution substations.

Seneca #5 TRF Asset Replace (C069427 - $0.7M)
There is a history of failure of this particular transformer design. The transformer #4 (TR#4) at Seneca Station failed in 2014, followed by transformer #3 (TR#3) in 2015. The transformer #3 (TR#2) has been replaced following a failure in 2018. Similarly, transformer #5 (TR#5) is being replaced due to asset condition and to maintain the future reliability of the 23kV system in the City of Buffalo.

Elm St #2 TRF Asset Replacement (C069426 - $2.3M)
The transformer #4 (TR#4) at Elm Street Station failed in 2013. Similarly, transformers #1 (TR#1) and #2 (TR#2) were identified by testing as being at-risk of damage and failure. The TR#2 is the last of that vintage at the substation and has been replaced, while the protection and controls are progressing forwards for replacement for all the transformers.

Woodlawn Station (C051986 - $4.2M)
The substation's transformer #1 (TR#1) has had hotspots and arcing under oil in the past. The oil quality is below the acceptable threshold with interfacial tension and moisture and dielectric strength being outside expected in-service values. In addition, the main tank oil is increasing in moisture at a slow rate. Electrical tests also show deterioration of the winding insulation. The tight physical clearances between the low voltage and high voltage structure make an emergency replacement difficult. Transformer banks (TB#2) A, B and C all have partial discharge problems as indicated by increased hydrogen in the Dissolved Gas Analysis ("DGA") results. All three have high moisture-in-oil levels, which can lead to low dielectric strength and contribute to chemical reactions that degrade the oil quality. The three single-phase transformer design makes emergency replacement with a three-phase unit challenging.

Hoosick - Replace Bank 1 & Relays (C053132 - $4.3M) and
Hoosick Control House (C081115 - $0.2M)
The transformer bank of 115/34.5kV transformers, TB#1 A, B and C at Hoosick Station have indications of hotspots, gassing from arcing under oil, and high moisture-in-oil levels from maintenance reviews of the transformers. The transformers were placed on the watch list in New York. These projects are part of CLCPA Ph1 in the Rate Case supporting Distribution projects.

Whitman - Transformer Replacement (C091870 - $1.6M)
The 115/V/34.5kV transformer #1 (TR#1) at Whitman substation has deteriorated over its lifetime, has limited/no spare parts and limited/no OEM support. This transformer is also a connection between the 115kV and 34.5kV networks and is to be replaced with a higher MVA to support future load growth concerns and anticipated Distribution Generation interconnections.

2025 to 2026 Variance:
The variance is due to timing adjustments with longer lead times from manufacturers, accommodation of other capital projects, and to combine with substation rebuild projects where possible.

Table 2-92
Transmission – MVT Transformer Replacement Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	17.6	9.9	3.7	1.3	1.1	-	33.6
2026	-	13.8	3.7	1.3	1.1	0.03	19.9

Transmission MVT Asset Condition Projects in Support of Distribution

The following transmission projects were identified by the Distribution Planning department to support anticipated future DG Interconnections pertaining to clean energy initiatives, load growth, electrification from gas conversions and/or EV interconnection points. These interconnections are anticipated to be at 69kV and below but could have impacts at 115kV pending the transformation at the substation.

Ballston Rebuild Substation (C093946 - $2.0M)
The Ballston Rebuild Substation project calls to upgrade the existing 115/13.2 kV, 25.9 MVA distribution transformer to a 115/13.2 kV 40 MVA transformer.

Drivers:
Ballston transformer TB3 is currently projected to be over 125% of its summer normal rating by 2029 and upsizing to a 40 MVA transformer will provide adequate capacity for the Ballston Spa area.

Customer Benefits:
This project, in conjunction with its distribution line component (C093744), will enable more capacity within the surrounding Ballston Spa area to address the anticipated load increases due to the electrification of transportation and heat.

2025 to 2026 Variance:
This project is progressing as requested by Distribution Planning.

Table 2-93
Transmission – Ballston Rebuild Substation
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	1.4	-	1.5
2026	-	0.0	0.0	0.1	1.4	0.5	2.0

Schuyler Station (C093968 - $2.1M)
This project will add a second 40 MVA transformer to the Schuyler Station.

Drivers:
The additional transformer is driven by deteriorating infrastructure, risk mitigation, obsolescence of substation assets and system capacity violations based on forecasted load growth.

Customer Benefits:
The addition of the transformer addresses asset condition and load growth needs.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-94
Transmission – Schuyler Sub
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	1.5	-	1.6
2026	-	0.0	0.0	0.1	1.5	0.5	2.1

Balmat Station TB 1 & 2 (C091767 - $1.5M)
This project will install two new transformers, one 115/23kV 25MVA transformer and one 23/4.8kV 5.0 MVA transformer at the Balmat Station. This included replacing R215, R270, R240 & R610 with new relays, and replacing all switches. This is part of the Gate A project based on the Balmat-Browns Falls.

Drivers:
The need derives from the asset conditions, our aging assets needing to be replaced in the next five years based on substation asset condition reports. The secondary needs are based on Solar and EV developing on the Browns Falls line #21, along with the load forecast on Star Lake and Newton Falls. There are concerns that the existing size will be limited in its tie capacity.

Customer Benefits:
The rebuilding of the substation will provide additional hosting capacity in the area supplied by this substation and maintain the reliability of the customers.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-95
Transmission – Balmat Station TB 1 & 2
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.1	0.9	-	1.0
2026	-	0.0	0.0	0.1	0.9	0.5	1.5

Newtonville Area Study: Maplewood (C091024 - $4.3M)
This project will install a new 115/13.2kV, 40MVA transformer at Maplewood Station. This is one of several projects within the Newtonville Area Study supporting the retirement of Newtonville Station.

Drivers:
There are numerous aging assets surrounding the Newtonville area needing replacement in the next five years based on substation asset condition reports. Additionally, assets are nearing their Summer Normal rating. Being a more urban environment, EV adoption is forecasted to be high with minimal opportunity for large, DERs for load mitigation. Lastly, Newtonville Station is a 4.16kV island requiring bottlenecked, ratioed field ties, which may lead to reliability issues for customers due to the limited amount of load that can be transferred to neighboring feeders.

Customer Benefits:
Improves hosting capacity and contributes to maintaining reliability and resiliency.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-96
Transmission – Newtonville Area Study: Maplewood
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.4	1.8	1.4	1.0	0.09	-	5.3
2026	-	1.8	1.4	1.0	0.09	0.0	4.3

Terminal Station Relocation (C076242 - $17.2M)
Terminal Station Relocation_TLine (C080493 - $4.1M)
Terminal - Relocation CH (C086695 - $0.3M)
Terminal Station was constructed in 1962 and is a 115/13.2kV two transformer distribution substation with seven distribution feeders and four network feeders. Westinghouse metal-clad switchgears are arranged in a BAAH scheme. The substation is supplied from the 115kV Porter 6 transmission line and the 115kV Schuyler 7 transmission line. The substation is located within a 100-year flood plain and it is also located in a major manufactured gas plant ("MGP") environmental clean-up site. The soil under the substation is assumed to be contaminated.

An asset condition report completed in 2013 identified multiple issues with the substation electrical equipment and recommended replacement of 115kV OCBs R60 and R70 and all 115kV manually operated disconnect switches and motor-operated disconnect switches. All of the substation's 15kV circuit breakers are roll-in Westinghouse type 15-DH-750E circuit breakers that have been targeted for replacement. Replacement of transformer TRF 2 was also recommended due to oil leakage and signs of possible coking. The identical unit failed in 2008 due to a shorted winding.

The recommended plan consists of a complete rebuild of the substation at a new location south of the existing station on land owned by National Grid that is above the 100-year flood plain. The new substation will utilize an open air 115kV BAAH configuration and a 115kV ring bus. This plan reduces the scope and associated cost of the distribution feeder work by eliminating a significant portion of the UG feeder duct-bank while also limiting distribution infrastructure within the contaminated site.

Drivers:
The deteriorated state of the substation combined with environmental issues as the substation is located in a major manufacture gas plant cleanup site with hazardous material and contaminated soil.

Customer Benefits:
The replacement of the substation will maintain reliability to the customers and additional capacity to support economic growth and the electrification of heating and transportation in Utica supplied by this substation.

2025 to 2026 Variance:
This project has been rephased due to system needs.

Table 2-97
Transmission – Terminal Station Relocation
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	3.6	3.2	11.0	5.9	0.3	-	24.0
2026	-	4.6	10.8	5.9	0.3	0.0	21.6

Higley (C093965 - $1.2M)
Rebuild the existing 115kV/13.2kV 5.6MVA transformer station to a 25MVA transformer station and increase the number of feeders to 4 distribution feeders.

Drivers:
The Higley Station 5.6MVA transformer is expected to hit 100% SN loading by 2036. Asset condition issues are also expected on this station.

Customer Benefits:
The rebuilding of the substation will provide additional capacity to support economic growth and the electrification of heating in the Lowville area supplied by this substation. The operational flexibility of additional feeders provides the opportunity to improve reliability to customers.

2025 to 2026 Variance:
This project is new to the 2026 Plan.

Table 2-98
Transmission – Higley
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	1.1	1.2

Parishville (C093966 - $1.2M)
Rebuild the existing 115kV/4.8kV 2MVA transformer station to a 10MVA transformer station and increase the number of feeders to 2 distribution feeders. Convert station to 13.2kV.

Drivers:
The Parishville 2MVA station transformer is expected to hit 100% SN loading by 2035. Asset condition issues are also expected on this station.

Customer Benefits:
The rebuilding of the substation will provide additional capacity to support economic growth and the electrification of heating in the Parishville area supplied by this substation. The operational flexibility of additional feeders provides the opportunity to improve reliability to customers.

2025 to 2026 Variance:
This project is new to the 2026 Plan.

Table 2-99
Transmission – Parishville
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	1.1	1.2

Bethlehem Xfrm Upgrade 40MVA (C093949 - $1.6M)
This project would replace Bethlehem Transformer Bank 3 and its related 115kV and13.2kV breakers, disconnects, and Current Transformer/Potential Transformer only.

Drivers:
Bethlehem Transformer Bank 3 has an asset condition score of 3, and load is expected to exceed its thermal limit in FY30. This drives a need to replace and upsize the bank.

Customer Benefits:
This project improves system capacity for load and generation customers and contributes to maintaining reliability by reducing the risk of an extended outage due to transformer bank failure from poor asset condition.

2025 to 2026 Variance:
This project is new to the 2026 Plan

Table 2-100
Transmission – Bethlehem Xfrm Upgrade 40MVA
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.0	0.1	1.5	1.6

MVT – Asset Condition – Overhead Line Rebuild

MVT AC projects address asset condition issues while addressing load growth. MVT AC projects encompass proactively rebuilding overhead line assets identified to be in poor condition with higher rated equipment and associated asset replacements or installations as needed to support the system capacity increases.

Drivers:
The investments in this strategy are driven by the need to address the Company's deteriorating infrastructure, risk mitigation, and the ever-increasing customer electrification and decarbonization needs to maintain network operation.

Customer Benefits:
The MVT AC projects maximize the utilization of existing asset condition projects and planned system capacity needs while avoiding the cost of constructing limited capacity infrastructure or otherwise inefficient solutions which only address a single asset condition issue.

The more significant overhead line rebuild projects in this Plan are listed below. Additional details are included in Exhibit 5 – Overhead Line Rebuild Projects.

Gard-Dun 141-142 T1260-70 Rbd Senec (C034193 - $6.8M)
Inghams-E. Springfield #7 Rebuild (C060209 - $43.8M)
Lockport-Batavia 112 T1510 ACR (C003422 - $47.4M)
Easement-Lockport-Batavia 112-Rebld (C096884 - $0.3M)
Access Rd – Lockport Batavia 112 (C089590 - $4.4M)
Colton-BF 1-2 T3140-T3150 Rebuild (C036164 - $8.0M)
Greenbush-Knickerbocker 13/14/15 DCT Rebuild (C069540 - $11.0M)

2025-2026 Variance:
The ACR projects were originally initiated to address asset condition issues, reliability & safety concerns. ACR projects were evaluated for potential load and generation growth and, if warranted, identified as an MVT AC project. The projects are progressing as planned, however the project expenditure has been adjusted due to reprioritizing other projects and to meet resource & emergent needs to maintain continued, safe, and reliable service. Additionally, permitting requirements have caused delays in the project schedules and spend.

Table 2-101
Transmission – MVT AC Overhead Line Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	23.4	26.4	21.4	16.3	20.3	-	107.8
2026	-	27.0	20.2	11.6	26.1	36.8	121.7

MVT System Capacity

This program constructs reinforcements to the system to strengthen the transmission network, ensure adherence to reliability standards and provide for the unbottling of solar (photovoltaic) and land-based wind generation. Additionally, reinforcements will improve market efficiency by alleviating transmission congestion and enhance local system security by reducing exposure to BPS disruptions.

The major components of this program with investment levels greater than $1 million in any fiscal year include:

Mortimer - Pannell 24/25 (C047816 - $97.2M)
Easements-Line Rebuild MP 24 (C093270 - $10.6M)
Access Roads-Mortimer-Pannell 24 25 (C093207 - $6.8M)
Mortimer Stn Wrk 24 25 Line Rebuild (C086307 - $0.4M)
These projects rebuild approximately 17 miles of the 115kV Mortimer-Pannell Lines 24/25 lines including new conductor and new structures.

Drivers:
The existing conductor is 336.4 MCM “Oriole” ACSR conductor dating from the 1930’s. The steel core has rotted due to failure of its zinc coating resulting in elongated and breaking strands of conductor. In addition, NYISO studies and internal Area Studies have shown overloads on these lines for various contingencies.

Customer Benefits:
Maintain reliability to customers and additional capacity to support economic growth and the electrification of heating and transportation.

2025 to 2026 Variance:
The project spend variances are due to increased scope optimization and supply chain challenges.

Table 2-102
Transmission – MVT Reliability Mortimer - Pannell 24/25
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.8	1.4	7.5	15.5	52.3	-	78.5
2026	-	1.2	5.3	17.7	52.2	38.6	115.0

2. F. Reliability

Reliability capital expenditures are required to improve power quality and reliability performance.

Conductor Clearance Programs

Conductor Clearance NY Program (C048678 - $5.9M)
Conductor Clearance NYE Program (C093895 - $30.9M)
Conductor Clearance NYC Program (C093896 - $26.8M)
Conductor Clearance NYW Program (C093879 - $20.5M)

The Conductor Clearance Correction Programs (C048678, C093895, C093896, C093879) will increase the clearance of certain overhead conductors to meet clearance standards prescribed by the NESC under certain loading conditions. Three funding projects have been created for the three NMPC divisions (East, Central, and West). The three divisional funding projects have been created to ensure resourcing allocation and spending is dispersed appropriately across New York State. Projects with a total expenditure below $1 million will remain consolidated under the above funding numbers. In contrast, projects exceeding $1 million in total spend will be allocated as individual funding projects, drawn from the overall program budget. The need to correct clearances was identified as the result of an ongoing Aerial Laser Survey (“ALS”), also known as Light Detection and Ranging (“LiDAR”), being conducted on the transmission system. Aerial surveys provide a level of accuracy which was previously only available by ground inspection. The project will continue beyond FY26 to address conductor clearance issues for 115 kV lines. This timeline assumes there will be no further directives from FERC similar to the October 7, 2010, NERC Alert (Recommendation to Industry: Consideration of Actual Field Conditions in Determination of Facility Ratings) that would prescribe a specific correction period.

Drivers:
The primary driver for this work is public and employee overhead line safety per NESC recommendations. The NESC sets conductor clearances of overhead lines from the ground and other ground-based objects. This program addresses transmission lines that do not meet current NESC standards by improving ground-to-conductor clearances in substandard spans. This follows standard industry practice and the Safety Order.

Customer Benefits:
Application of the NESC criteria lowers the risk of safety events caused by substandard clearance conductors.

2025 and 2026 Variance:
There is an increased focus on this program reflected in the spending profile. Additional locations will be addressed compared to previous capital plans. The program outlined below has been segmented into individual projects for those with total expenditures exceeding $1 million. These projects will be funded separately, with allocations drawn from the overall program budget.

Table 2-103
Transmission – Conductor Clearance Programs
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.3	0.6	12.6	16.6	17.5	-	48.6
2026	-	0.6	6.2	13.6	24.3	39.4	84.1

Greenbush-Stephentown #993 CCR (C098409 - $5.3M)
Lockport - Mortimer 113/#114 CCR (C095298 - $3.3M)
Greenbush – Schodack #13 CCR (C096911 - $1.4M)
Woodlawn-State Campus #12 CCR (C098389 - $1.9M)
Inghams-Richfield Springs 7-942 CCR (C098394 - $1.3M)
Dunkirk-Falconer 160 Rebuild/CCR (C086816 - $11.2M)

The above projects are a subset of the Conductor Clearance Program. These projects exceed $1 million in total spend and will be allocated as individual funding projects, drawn from the overall program budget. In contrast, projects with a total expenditure below $1 million will remain consolidated under the divisional Conductor Clearance Program funding numbers. Projects associated with the Conductor Clearance Correction Programs will increase the clearance of certain overhead conductors to meet clearance standards prescribed by the NESC under certain loading conditions. The need to correct clearances was identified as the result of an ongoing ALS, also known as LiDAR, being conducted on the transmission system. Aerial surveys provide a level of accuracy which was previously only available by ground inspection. The project will continue beyond FY25 to address conductor clearance issues for 115 kV lines. This timeline assumes there will be no further directives from FERC similar to the October 7, 2010, NERC Alert (Recommendation to Industry: Consideration of Actual Field Conditions in Determination of Facility Ratings) that would prescribe a specific correction period.

Drivers:
The primary driver for this work is public and employee overhead line safety per NESC recommendations. The NESC sets conductor clearances of overhead lines from the ground and other ground-based objects. This program addresses transmission lines that do not meet current NESC standards by improving ground-to-conductor clearances in substandard spans. This follows standard industry practice and the Safety Order.

Customer Benefits:
Application of the NESC criteria lowers the risk of safety events caused by substandard clearance conductors.

2025 to 2026 Variance:
The current variance is attributed to the nature of the Conductor Clearance Program. The final scope of the conductor clearance projects is neither confirmed nor approved until after the conductor clearance committee reviews and approves each project for construction. The company has placed increased emphasis on this program, with plans to expand capital expenditure aimed at improving ground-to-conductor clearances in substandard spans. In FY26, funds under the Conductor Clearance Program were drawn down from the program's overall budget and allocated towards specific funding projects to improve financial tracking and project planning.

Table 2-104
Transmission – CCR Program >$1M
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	6.0	8.9	3.2	0.1	11.1	-	29.3
2026	-	10.0	3.2	0.1	11.1	0.0	24.4

RC-MOD Packard-Gardenville 181&182 (C085238 - $1.8M)
The Transmission Control Center has identified four locations on the 115kV Packard–Gardenville 181/182 for the installation of new Cleaveland/Price disconnect switches equipped with RC-MODs. All circuit designations are in terms of post completion of projects C079506 & C081799.

Drivers:
The 115kV Packard–Gardenville 181/182 lines are installed on double-circuit towers without disconnect switches. In the event of a tower failure, this would cause an interruption to the eleven substations that are supplied by these circuits.

Customer Benefits:
The primary benefit is improved reliability for our customers. By replacing older, non-functioning switches, the exposure of faults affecting customers is reduced, and the supervisory control of the disconnect switches decreases the response time to isolate faults. Additionally, adding a RC-MOD provides the field switch supervisory control functionality. This gives TCC the ability to operate a disconnect switch remotely, which has the potential to isolate faults and bring back customers quickly. Finally, by upgrading and replacing degraded disconnect switches, the safety experienced by the line crews who operate these switches will be improved.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-105
Transmission – RC-MOD Packard-Gardenville 181&182
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.006	0.05	1.8	0.0	0.0	-	1.8
2026	-	0.05	1.8	0.0	0.0	0.0	1.8

Smart Fault Indicator Program-NY (C082281 - $2.0M)
The program will install "smart" fault indicators on the 115kV transmission system. TCC identifies select circuits that will benefit from the installation of fault indicators based on historic reliability data and any current needs.

Drivers:
Smart fault indicators are a useful tool for utilities. Currently, National Grid uses fault indicators that do not communicate with any of our systems and must be viewed in the field to determine their reading. With the advancements of "smart" technology, access to fault information can be viewed remotely. This allows the Company to more accurately dispatch field personnel, expedite switching operations, decrease the length of patrol for field personnel, and may reduce restoration times.

Customer Benefits:
The main benefit of this program is reducing outage times. Crews are dispatched closer to the fault location, have less line to patrol, and switching operations are streamlined. This has the additional benefit of reducing costs for patrols and inspections.

2025 to 2026 Variance:
The Company has been re-evaluating the smart fault indicator program to consider updated technology equipment that can streamline the process from inception to installation, reduce complexity, and reduce cost per install. A new sensor model is in the final stages of vetting. Installations are planned to be focused in FY28-FY30. This project is progressing as planned.

Table 2-106
Transmission – Smart Fault Indicator Program-NY
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.03	0.02	0.5	0.5	0.5	-	1.5
2026	-	0.03	0.5	0.5	0.5	0.5	2.0

Gardenville-Dunkirk 73 & 74 SNI ACR (C091979 - $13.4M)
This project will address asset condition issues on the 230 kV Gardenville-Dunkirk 73/74 lines and bundle with the proposed 115kV Gardenville-Dunkirk 141/142 lines Southern section project as the lines are in the same corridor. This section of Right of Way ("ROW") is within the Seneca Nations of Indians territory. It is expected that matting will be required.

Drivers:
The Gardenville - Dunkirk 73/74 line had a shield wire failure in May 2018 and after further testing, it was found to be severely deteriorated and needed replacement. The shield wire failed the strength test and is at risk of failing again.

Customer Benefits:
The main benefit to customers is a bundled work project. Typically, access and matting is a major percentage of a capital project cost. By bundling the work this should eliminate the need for future access into the area, and the replacement of wood structures with the current standard of steel should eliminate a major project in this area in the future.

2025 to 2026 Variance:
The project was deferred to FY27 to align with the 115kV Gardenville-Dunkirk 141/142 lines Southern section project. This project is progressing as planned.

Table 2-107
Transmission – Gardenville-Dunkirk 73 & 74 SNI ACR
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.08	0.2	0.5	4.0	-	4.8
2026	-	0.08	0.2	0.5	4.0	8.6	13.4

State Campus-Menands #15 and #12 Underground Cable Replacement (C088133 - $7.0M)
The project replaces the approximately 2,600 circuit feet (1,300 circuit feet per line) of UG 115kV transmission near Central Ave / NY 5 in Albany.

Drivers:
Under certain system conditions and particularly high anticipated load growth in the area, system studies show the #15 cable to be overloaded as early as 2027, with overloading becoming worse in subsequent years. This circuit is part of the path between Rotterdam and Menands and supplies two key substations in the Capital District. In addition, the terminations on both the #12 and the #15 circuit are among a population of 1990's era G&W terminations with a failure rate of 50% every 20 years. A program is in place to drive replacement of all of these terminations across the network. Once the new cables are pulled in, new terminations will be installed, and the risk will be mitigated. The #12 cable will also be replaced as it runs in a duct bank parallel to the #15 cable and will also become overloaded as loading increases in future years. It must be taken out of service to have its faulty terminations replaced anyhow, and the cable length is very short, so the added cost to replace it is small relative to the overall project cost. It is therefore cost-efficient to perform its replacement while mobilized to replace the #15 cable.

Customer Benefits:
This will maintain reliability to customers in the area including State Government buildings, SUNY/CESTM Research Facility, and many thousands of residential & commercial customers supplied by several substations. It will also support the State's clean energy goals while preparing the system for fossil generation retirements.

2025 to 2026 Variance:
This project is progressing as planned. This project's scope and outage schedule have been refined and is progressing as planned.

Table 2-108
Transmission – State Campus-Menands #15 and #12 UG Replacement
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	1.5	3.0	2.0	0.5	-	7.1
2026	-	0.6	1.9	2.0	2.5	0.0	7.0

Dunkirk Falconer Sw Ring (C093023 - $2.5M)
A series of three trips in late April 2023 on Dunkirk - Falconer 160 caused a large area manufacturing customer to lose power for a period of time. To allow the customer to be

sectionalized from the main line if such an incident recurs, three disconnect switches will be installed (the preexisting Switch 707 and two new switches), which will allow for sectionalization of the customer. If the line was ever to suffer a trip, the customer station would be able to maintain power (as long as the trip did not happen on the Tap itself).

Drivers:
The primary driver of the Dunkirk Falconer switch ring project is reliability. These switch installations will allow for the customer to be isolated and can stay online.

Customer Benefits:
These switch installations will allow the customer to be isolated and can stay online. Currently, if a fault occurs on Dunkirk – Falconer 160, the customer will lose power.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-109
Transmission – Dunkirk Falconer Sw Ring
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.01	2.5	0.0	0.0	-	2.5
2026	-	0.01	2.5	0.0	0.0	0.0	2.5

Calspan Tap In-Line Switch (C098590 - $1.2M)
A T-Line customer is requesting an outage that would also take out an adjacent customer. To prevent an unnecessary outage for the adjacent customer, and to support future customer outages on the tap, in-line switches will be installed on line 181 structure 25A.

Drivers:
Customer cannot have an outage without causing an outage on another customer.

Customer Benefits:
Installing these switches would prevent a scheduled customer outage on another customer and support future customer outages on the tap.

2025 to 2026 Variance:
This project is new to the 2026 Plan

Table 2-110
Transmission – Calspan Tap In-Line Switch
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.1	1.1	0.0	0.0	0.0	1.2

Osprey

Osprey Mitigation/Protection NYW (C093916 - $0.9M)
Osprey Mitigation/Protection NYE (C093920 - $0.9M)
Osprey Mitigation/Protection NYC (C093922 - $1.0M)

Ospreys nesting on transmission lines, specifically the construction of their nests annually, have the risk of causing fires, outages, and electrocutions. With Ospreys being protected and their population increasing, the number of nests on transmission structures have reached problematic levels. Sticks dropped from nest fall onto conductors and result in momentary outages. The nests themselves can grow to weigh several hundred pounds and jeopardize the integrity of structures that was not designed for the additional weight. To mitigate this issue, nesting platforms atop structures or adjacent poles have proven success in relocating Ospreys. The scope for each targeted line will differ depending on access, real estate rights, and constructability. Typical mitigation consists of building platforms on top of structures or installing a wood pole and platform adjacent to a structure with a nest. Each year's scope is put together by early/mid-Summer. This allows for an accurate analysis of which nests are being used that fiscal year. There are three separate funding project numbers for this work, one per division.

Drivers:
The main driver for this project is reliability. By mitigating the osprey nests, less faults will be caused by ospreys, which in turn will improve general reliability on the given line the nest is on.

Customer Benefits:
The primary customer benefit is to maintain reliability on lines with known osprey nests. Mitigating the nests will decrease the opportunity for faults caused by ospreys.

2025 to 2026 Variance:
There is no significant variance from the prior CIP filing.

Table 2-111
Transmission – Osprey Mitigation/Protection
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.5	0.5	0.5	0.6	0.6	-	2.7
2026	-	0.5	0.5	0.6	0.6	0.6	2.8

Breaker Replacement Projects – Porter-230kV (C097183 - $2.9M)
The replacement of three (3) 230kV OCBs that have deteriorated over their lifetime, had leaks, internal components fatigue, limited/no spare parts and limited/no OEM support. The circuit breakers will also be replaced to meet [redacted] pertaining to directory #4.

Drivers:
The proactive replacement of deteriorated assets to maintain reliability and meet planning regulatory requirements pertaining to NERC criteria directory #4.

Customer Benefits:
The replacement of deteriorated assets and increased reliability with the addition of dual protection packages.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-112
Transmission – Porter 230kV
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.5	2.9	0.01	0.0	0.0	-	3.4
2026	-	2.9	0.01	0.0	0.0	0.0	2.9

Projects in Support of Distribution

Cicero Substation Transmission Line Taps (C093003 - $1.5M)
This project supports the transmission line taps that are needed from the 115kV Clay - Dewitt 3 line and Clay - Teall 10 line into the new Cicero Station.

Drivers:
The new Cicero Station project is to address local system capacity issues The northern Syracuse area study pertaining to the distribution system and the in-progress housing developments and anticipated future development due to the anticipated economic development in the area has indicated significant capacity and outage exposure issues that need to be resolved. There are two (2) existing substations that presently serve the local load but need to be relieved due to the new anticipated load growth. These are the Pine Grove Station and the Bartell Road Station. The recommended solution to these concerns is to add distribution capacity to the area by constructing the Cicero Station and connect to the 115kV transmission lines Clay – Dewitt 3 and Clay – Teall 10.

Customer Benefits:
This project is necessary to meet the anticipated load growth in the local area associated with economic development anticipated in the northern Syracuse area.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-113
Transmission – Cicero Substation Transmission Line Taps
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.03	0.04	0.9	0.4	-	1.4
2026	-	0.03	0.04	0.9	0.4	0.08	1.5

New Mobile tap for East Pulaski (C098489 - $2.3M)
This work is associated with the East Pulaski distribution substation rebuild C099114. A new transmission structure will be added to support the post-rebuild mobile substation position. Additionally, a temporary mobile position will be constructed and used during the construction phase of the project.

Drivers:
East Pulaski has several loading issues. In 2025, East Pulaski hit a summer peak load of 11.16 MVA which is over its Summer Normal and Summer LTE ratings (SN = 10.9 MVA). Additionally, East Pulaski station's predicted 2028 winter load is 13.8MVA, which is 110% of its Winter Normal Rating (WN = 12.55MVA). A secondary driver is Asset Condition. An Asset Condition Report (ACR) for East Pulaski substation was issued on October 25, 2022. This ACR assessed the condition of breaker R510 at 4/5 (poor condition) on the 0-5 Asset Health scale, and TB1 and SW518 were assessed at 3/5 (fair condition).

Customer Benefits:
This substation rebuild will provide additional system capacity and DG hosting capacity in the area. Additionally, the rebuild will allow the substation to have additional capacity to accommodate load from adjacent infrastructure, increasing system resiliency.

2025 to 2026 Variance:
This project is new to the 2026 Plan.

Table 2-114
Transmission – Cicero Substation Transmission Line Taps
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.2	0.2	0.3	1.5	0.1	2.3

Gardenville 115kV - PS (C095981 - $2.6M)
The review of the transmission system from planning and the NYISO has determined that the Gardenville 115kV substation [redacted].

Drivers:
The execution of this project complies with regulatory requirements pertaining to physical threats, while maintaining station assets to remain in-service.

Customer Benefits:
The updated [redacted].

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-115
Transmission – Gardenville 115kV - PS
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	2.6	0.0	0.0	-	2.6
2026	-	0.0	2.6	0.0	0.0	0.0	2.6

NY Priority Overhead Switch Projects

This program constructs disconnect switches to allow for sectionalization of customers and improved reliability of their respective lines. These projects cover Huntley – Lockport 36/37, Menands – Riverside 3, Schenectady International 3, Amsterdam - Ephratah 7, Spier Falls – Lasher Road 302, Luther Forest - Rotterdam 43/44, and Rotterdam – Lasher Road 1.

SW41&42: H-L 36/37 - Tonawanda Tap (C097781 - $1.5M)
Menands - Riverside 3 Switch (C096966 - $0.6M)
Amsterdam Switches (C096659 - $1.0M)
SpierFalls-Lasher 302 Brook Rd Tap (C098715 - $1.2M)
Luther Forest - Rotterdam SWs (C098854 - $1.6M)
Rotterdam-Lasher Rd 1 Swagger Tap (C098901 - $1.1M)

Drivers:
The primary benefit is improved reliability for our customers. By replacing older, non-functioning switches, the exposure of faults affecting customers is reduced, and the supervisory control of the disconnect switches decreases the response time to isolate faults. Additionally, adding a RC-MOD provides the field switch supervisory control functionality. This gives TCC the ability to operate a disconnect switch remotely, which has the potential to isolate faults and bring back customers quickly. Finally, by upgrading and replacing degraded disconnect switches, the safety experienced by the line crews who operate these switches will be improved.

Customer Benefits:
Improve the resiliency of the transmission system to improve the customer experience.

2025 to 2026 Variance:
These projects are progressing as planned, variance is due to some projects being accelerated in support of available labor hours.

Table 2-116
Transmission – NY Priority Overhead Switch Projects
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.0	0.6	3.1	0.0	0.0	-	5.7
2026	-	0.7	5.2	0.1	1.0	0.0	7.0

Reinsulate Projects

This program addresses reliability and safety issues relating to deteriorating insulators and insulator hardware by replacing them with tougher glass insulators and new hardware.

Gville-Seneca 81/82 Reinsulate (C090820 - $0.7M)
G-ville-Ohio Street 146 reinsulate (C090714 - $0.3M)
145 Reinsulating (C090713 - $0.2M)
Packard-Huntley 77 78 Reinsulation (C093019 - $7.4M)
149/150 Reinsulating (C090704 - $1.1M)

Drivers:
The insulators and insulator hardware on these transmission lines were identified for replacement due to being flashed and deteriorated.

Customer Benefits:
Replacing the insulators and insulator hardware may prevent conductor down scenarios caused by failing hardware and will maintain reliability by stopping trips related to deteriorating insulators.

2025 to 2026 Variance:
These projects will begin further development for construction; variance is due to some projects being accelerated in support of available labor hours and asset condition.

Table 2-117
Transmission – Reinsulate Projects
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	0.0	0.0	0.0	1.3	-	1.4
2026	-	1.1	0.1	0.2	8.1	0.2	9.7

Generator Retirement Projects

This program constructs reinforcements to the system to strengthen the transmission network, ensure adherence to reliability standards and lessen or eliminate the reliance on particular generators to support the transmission system following the NY state mandated retirement of all fossil fuel generation by 2040.

Lasher Rd LN1 first 3 spans rcndctr (C093224 - $1.5M)
Sugar Hill Station - Station Work (C084589 - $2.2M)
Sugar Hill Station - Line Work (C093170 - $0.4M)
Spier – Queensbury LN 5 & 17 Rebuild (C093172 - $29.0M)
Luther Forest - 3rd 115kV Cap Bank (C093225 - $1.2M)
Rotterdam - Menands corridor upgrds (C093226 - $2.0M)
Feuz Rd - Oak Ridge 345kV 3.3mi line (C093354 - $1.4M)
345kV LN18 mods for Feuz Rd Station (C093360 - $0.6M)
Feuz Rd Station - Station Work (C093353 - $0.6M)
Rotterdam mods for Oak Ridge lines (C093368 - $0.5M)

The suite of projects, reconductors the first three spans out of Lasher Road on the #1 Line, rebuilds approximately 5 miles of Spier-Queensbury 5/17, installs an additional capacitor bank at Luther Forest, builds a new 230-115kV substation at Sugar Hill, a new 345-115kV substation near Feuz Road, and upgrades portions of the corridor between Rotterdam and Menands.

Drivers:
Particular generator deactivations will result in thermal overloads or low voltage on the existing transmission system without these reinforcements.

Customer Benefits:
These projects will maintain system reliability and service to customers for a wide range of generator dispatch scenarios.

2025 to 2026 Variance:
Projects are progressing as planned.

Table 2-118
Transmission – Generator Retirement Projects
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.4	1.8	11.4	-	13.6
2026	-	0.0	0.4	1.8	11.4	25.8	39.4

2. G. Resiliency

While National Grid strives to maintain its assets and networks to the criteria under which they were built, much of the system was designed to standards that differ from today's. Climate change has also led to more extreme weather events. Between March and December 2021, there were eight events in NY that impacted over 400,000 customers. The increasing number and severity of such events is driving increased customer outages and outage durations.

The Company performed a desktop review of its 115kV system to identify locations where transmission upgrades could result in an improvement to survivability. This initial identification of opportunities to improve resiliency involved reviewing single supply stations that serve over 5,000 customers and areas where the loss of a single transmission line would interrupt over 10,000 customers. After reviewing the results with the Transmission Control Center system operators, an additional desktop review was conducted for areas the loss of two circuits that would interrupt over 20,000 customers. A total of ten proposals, broken into two phases, were developed to demonstrate the range of options.

Resiliency – Eastern Area (Capital Hudson and Northeast)

Spare NYE Transmission Transformers (C090951 - $2.4M)
Spare transformers are being procured to maintain the reliability of the electrical system since the procurement lead time has been growing over the past couple of years to approximately 24 months to 36 months. The recent attacks on power substations in both North Carolina and Washington State have also indicated these assets are being targeted.

Drivers:
The increasing severity of major events is driving an increased number of customer outages and longer outage durations.

Customer Benefits:
The impact of substation transformer failure events on customers could cause a long-term outage. These critical spare assets are necessary to respond to unpredictable events or failures to maintain reliable network operation.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-119
Transmission – Eastern Area Resiliency
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.5	2.4	0.0	0.0	0.0	-	7.9
2026	-	2.4	0.0	0.0	0.0	0.0	2.4

Resiliency – Western Area (Southwest, Frontier)

Dunkirk - Falconer Resiliency (C084537 - $1.6M)
Add LN160 bypass around W. Ashville (C091079 - $0.4M)
This project is to install two 115kV circuit breakers at West Ashville Station to improve automatic line sectionalizing. This work will include the installation of six in-line disconnect switches on the 115kV Transmission Line Taps to the substation and replacement of one high side take-off structure within the substation.

Huntley - Lockport (Getzville) Resiliency (C084538 - $4.0M)
The project is to install one in-line 115kV circuit breaker at each of the Huntley-Lockport lines to split them into two sections and to change the location of the tap connections for the Ayer Road Station and Renaissance Drive Station to balance customer exposure between each line section.

Drivers:
The increasing severity of major events is driving an increased number of customer outages and longer outage durations.

Customer Benefits:
These overhead line projects will improve transmission system sectionalizing and will result in fewer sustained outages to customers due to events on the 115kV system. These projects will improve locating faults to a smaller section of the line to improve restoration.

Spare NYW Transmission Transformers (C090950 - $1.6M)
Spare transformers are being procured to maintain the reliability of the electrical system since the procurement lead time has been growing over the past couple of years to approximately 24 months to 36 months. The recent attacks on power substations in both North Carolina and Washington State have also indicated these assets are being targeted.

Drivers:
The increasing severity of major events is driving an increased number of customer outages and longer outage durations.

Customer Benefits:
The impact of substation transformer failure events on customers could cause a long-term outage. These critical spare assets are necessary to respond to unpredictable events or failures to maintain reliable network operation.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-120
Transmission – Western Area Resiliency
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	2.2	3.4	1.7	0.0	-	8.3
2026	-	2.0	3.9	1.7	0.0	0.0	7.6

Climate Vulnerability

In early 2025 the Company filed an updated CCRP that identified investments needed to adapt to changes in climate. The updated plan incorporated direction from the PSC order from late 2024 based on the Company's CCVS and Resilience Plan filings. The goal of this effort was to understand the impact future climate hazard projections would have on transmission and distribution assets and design standards and how to adapt to the impacts of climate change. The priority climate hazards identified for transmission assets were high temperature, wind, ice, and flooding. These priority climate hazards were chosen based on temperature data from Columbia University and NYSERDA, wind and icing data that was provided by Massachusetts Institute of Technology ("MIT") and flood risk data from the Company's Climate Change Risk Tool and Federal Emergency Management Agency ("FEMA") flood risk designation. The projects below were identified in the CCRP to upgrade assets and to better withstand increased intensity and frequency extreme weather events.

Drivers:
As a result of the CCVS, the below projects were recommended as part of the CCRP to adapt to projected increase in frequency and intensity of climate hazards across transmission's service territory. Priority climate hazards include wind, icing, high temperature, and flooding.

Customer Benefits:
These projects will strengthen transmission structures and assets to be able to withstand more intense weather events, such as high temperatures, wind, icing, and flooding events. The spare structures will allow for shorter restoration times for structure failures that may occur prior to upgrades.

Overhead Transmission Line Design Upgrades

Upgrade the transmission line design standard to withstand up to 120 mph wind gusts in areas of projected high winds, up from 95 mph specified by the current NESC specification. Future transmission line upgrades and rebuilds will use thicker steel, base plates, foundations, etc. as needed in areas with higher projected wind gusts.

E. Incremental Funding for Extreme Wind (C094262 - $1.5M)
C. Incremental Funding for Extreme Wind (C094263 - $1.0M)
W. Incremental Funding for Extreme Wind (C094264 - $12.8M)

Transmission Substation Transformer Specification Upgrades

Upgrade the transformer design specifications' peak average ambient temperature to 35°C (95°F), up from the present 32°C (90°F). This allows transformers to operate at projected average ambient temperatures for 2050 and beyond while maintaining capacity and reducing loss of life damage.

Transmission Sub CCRP XFR East (C094224 - $0.9M)
Transmission Sub CCRP XFR Central (C094225 - $1.1M)
Transmission Sub CCRP XFR West (C094226 - $0.1M)

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-121
Transmission – Climate Vulnerability
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.7	1.8	2.8	4.8	-	10.1
2026	-	0.7	1.8	2.8	4.8	7.3	17.4

2. H. Communications and Control Systems

Communications and control system projects are required for building-to-building communications, microwave replacements, fiber optic installations and associated equipment.

Migrate and Update Communications Equipment

Upgrade Comm Equip Verizon Retirement (C069570 - $0.6M)
Telecomm Migration - NY East (C083766 - $10.5M)
Telecomm Migration - NY Central (C083767 - $10.5M)
Telecomm Migration - NY West (C083768 - $10.5M)
The program migrates analog leased communication circuits to a National Grid-owned digital network, utilizing a combination of Dark Fiber and private fiber. This transition will create a more secure and efficient communication network, enabling National Grid to deliver reliable service while protecting transmission circuits from potential vulnerabilities.

This program migrates analog, leased communication circuits to a Grid-owned digital network to maintain protection and communication needs. This will result in a more secure and efficient communication network, ensuring that National Grid can continue to deliver reliable service while safeguarding our transmission circuits against potential vulnerabilities.

Drivers:
The protection of Company transmission circuits requires a communication path. Analog leased circuits used by National Grid are being phased out by communication providers, as evidenced by increases in monthly recurring costs and a steady decline in circuit repair services from communication providers.

The company will start migrating these analog protection circuits to Verizon Digital Signal 1 (DS1) circuits and National Grid private fiber/microwave networks to maintain protection and communication needs.

A solution proposed by communication providers to lease their digital circuits does not meet all the communications requirements outlined by National Grid's Protection Engineering department.

Firstly, communication providers do not have assets available at some Company substations. Secondly, on those circuits designated as BPS, the A and B protection packages require diverse circuit paths for compliance and reliability.

Customer Benefits:
The upgrading of analog communication circuits is required to comply with reliability standards. A company private network solution is also being reviewed for implementation to replace leased communications to avoid the uncertainty of third-party service providers. Moving away from copper-based circuits to fiber optics will increase network capacity and improve the reliability and resilience of our network.

2025 to 2026 Variance:
The scope of this project has been refined and the timing adjusted to support the other projects in the portfolio.

Table 2-122
Transmission - Migrate and Update Communications Equipment
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.2	9.4	8.8	6.5	6.2	-	31.1
2026	-	8.4	0.0	5.5	6.2	12.0	32.1

Substations Trans RTU M9000 Foreign (C099231 - $1.3M)
This project looks to replace RTUs that utilize the M9000 protocol. The RTU in conjunction with the M9000 protocol allows control centers to reliably communicate with substations. These RTUs with the M9000 protocol are located at non-National Grid substations.

Drivers:
The RTUs with the M9000 protocol are antiquated and have limited support to reliably communicate with the transmission control center.

Customer Benefits:
The project replaces assets that have limited support and will maintain system reliability and communication.

2025 to 2026 Variance:
This project is new to the 2026 plan.

Table 2-123
Transmission – Substations Trans RTU M9000 Foreign
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.2	0.7	0.4	0.0	0.0	1.3

DMX Projects/Programs

DMX Projects (C084525 - $0.5M)
DMX Tran Program NY East (C093635 - $4.1M)
DMX Tran Program NY West (C093638- $4.1M)
DMX Program NY Central Tran (C098853 - $4.1M)
The purpose of these programs is to design and install new packet-based fiber equipment to replace the existing synchronous optical network ("SONET") based multiplexer network that are nearing end-of-service life (EOL). These programs will replace outdated Alcatel/Nokia Digital Multiplexers at approximately 37 transmission site nodes. Packet-switched technology and equipment will provide upgraded bandwidth and increased quality of service ("QoS"), ensuring future network expansion demands can be met.

Drivers:
The key drivers are the replacement of assets that have reached EOL and the need to incorporate new critical services onto our network. This program will allow all equipment on the company fiber backbone networks to operate on a packet-based technology dramatically increasing capacity/flexibility and allow scalability. Grid Modernization demands will be putting more services on the network such as DG, AMI, ADMS, FLISR, etc.

Customer Benefits:
Reliable communication between substation equipment and the control centers is critical in reducing the potential for service interruptions, equipment damage, and line overloads due to faults and in the efficient operation of the transmission network.

In addition to the above, there are multiple customer benefits:

- Allows the Company to achieve effective integration with DERs.
- Facilitate improved and more timely information to customers, allowing them to make more efficient energy choices.
- It provides the ability to transport information from the grid to back-office systems that can drive increased system efficiency.
- Upgrade key communications to customer substations providing resiliency benefits for our larger customers.
- Facilitates innovative technologies that encourage distributed energy, two-way communication between customers and utilities, and more advanced metering solutions.
- Supports in-flight cybersecurity projects and aims to raise the security level for all communications to a common standard.

2025 to 2026 Variance:
This program is progressing as planned. Variations in spending are updated as program work progresses and/or scope changes are made.

Table 2-124
Transmission - DMX Projects/Program
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.2	1.6	1.0	1.0	3.0	-	7.8
2026	-	1.6	1.1	1.1	3.0	6.0	12.8

Telecom T Dark Fiber

Telecom T West Dark Fiber (C091294 - $10.2M)
Telecom T Central Dark Fiber (C091295 - $12.8M)
Telecom T East Dark Fiber (C091301 - $13.0M)

The Company needs to maintain and grow a reliable communication link between the control centers and substations. Communication providers are retiring and no longer supporting repairs to older communication circuits.

Drivers:
Dark Fiber Indefeasible Right to Use ("IRU") procurement will be used to convert the existing Incumbent Local Exchange Carriers ("ILEC") DS0 (56kb/s) leased line protection and EMS circuits for 69kV, 115kV, and 230kV substations in Upstate New York. Leasing Dark Fiber will fulfill this need, and it will allow for a more secure intranet with dedicated National Grid Fiber. Additional Capacity needs in the future can be more easily obtained by simply adding equipment to the National Grid dedicated Fiber Optic Strands. National Grid's increased demands for tele-protection requires low latency performance of the communication networks serving the Company. National Grid is now prioritizing and replacing existing leased line communication circuits with Company owned Fiber, Dark Fiber IRU, and shared (with other Power Utilities only) fiber communications.

Customer Benefits:
These projects are driven by the need to create a more reliable, secure, and modern communication link between the control centers and substations across upstate New York. National Grid must meet the increased demands of EMS, SCADA, and Tele-Protection needs while working towards a more secure privatized fiber network.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-125
Transmission – Telecom T Dark Fiber
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	9.5	6.1	6.5	6.8	8.2	-	37.1
2026	-	6.0	6.5	6.8	8.2	8.5	36.0

Nokia 1830 Photonic Service Switch ("PSS")

LH Dense Wavelength-Division Multiplexing ("DWDM") Upgrade West (C088135 - $5.0M)
LH DWDM Upgrade Cent (C088866 - $5.0M)
LH DWDM Upgrade East (C088954 - $5.0M)

National Grid needs to maintain and grow a reliable communication link between the control centers, service centers, and substations. Replacement of obsolete communication equipment supports the performance, reliability, and security of the communication links. The new DWDM equipment will receive timely support from the vendor and provide a reliable source of spares.

Drivers:
These projects upgrade existing 10GB/s Nokia 1830PSS / DMX color interface into a 100GB/s Nokia 1830PSS Long Haul Dense Wave Division Multiplexer with enough 10GB/s ports to support both the DMX and Belden as parallel systems at ring nodes in the upstate New York to support the DMX SONET existing circuits conversion to the Belden Multi-Protocol Label Switching ("MPLS") supporting the Company initiative to remove the End of Service (EOS) and EOL DMX SONET from the National Grid Network. Spare parts are either in short supply or no longer available.

Customer Benefits:
This project enables the replacement of the obsolete DMX equipment currently in use with new technology allowing more reliable and faster communication of the network.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-126
Transmission – Nokia 1830 PSS
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.1	2.6	2.6	2.6	2.7	-	10.6
2026	-	2.6	2.6	2.6	2.7	4.5	15.0

Microwave Radio Network

Microwave Radio Network NY Central (C093820 - $6.3M)
Microwave Radio Network NY East (C093818 - $6.3M)
Microwave Radio Network NY West (C093819 - $6.3M)
Rebuilding/upgrading the existing microwave network will allow the preservation of current coverage and the expansion into areas that are cost-prohibitive for fiber coverage. In transitioning to a packet-based microwave model, the Company would be able to make maximum use of the available licensed spectrum. This next generation radio technology allows software control of throughput up to 1Gb/s capacity, QoS benefits and back/dual compatibility with SONET and Time Division Multiplexing ("TDM") based systems. Microwave systems can easily be designed to operate at 99.9999% reliability while also delivering the low latency required for protection switching.

Drivers:
The National Grid private microwave network handles critical communications from company assets that do not have terrestrial-based fiber connectivity. The microwave system also provides reliable and redundant paths in places that have no fiber option. The existing microwave assets are nearing end-of-life and with product lines being discontinued, the availability of parts has become a major concern.

The project will bring the ability to better monitor and control the company owned Aviat Microwave communication system. This will reduce outages and maintenance windows, leading to lower costs for network management and operation.

Customer Benefits:
Reliability is a fundamental requirement for our communication network when transporting mission-critical information. Key factors that will improve are redundancy, QoS, proactive monitoring, enhanced fault tolerance and weather resilience which will ultimately minimize service interruptions.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-127
Transmission – Microwave Radio Network
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.7	1.8	3.8	4.0	4.5	-	16.8
2026	-	1.8	3.8	4.0	4.5	4.8	18.9

Radio Comms Systems

Radio Comms Systems T Central (C093841 - $6.2M)
Radio Comms Systems T East (C093840 - $6.1M)
Radio Comms Systems T West (C093842 - $5.8M)
The land mobile radio ("LMR") system is an important communications tool for storm restoration and blue-sky field operations. The first step of the program is a systemwide upgrade which will enable the Company LMR storm channel plan such that any line truck in the state can travel to any area during a storm and be able to communicate on the LMR system with other Company crews and service centers.

The second step is the implementation of a new LMR dispatch console system. Service centers use the console system to communicate with individual and/or groups of trucks in the field. This capability is important during switching operations, dispatching work crews and code blue emergency response. The current console system relies on older technology and lacks the capabilities of modern dispatch systems.

The third step is upgrading all the tower equipment including but not limited to radio transceivers, DC power plant, radio shelters, power back-up generators, radio towers, and antennae.

Drivers:
The LMR system and associated telecom infrastructure have been in service for many years, and component failure, obsolescence, and storm damage have contributed to the wear and tear on the system. Replacements and upgrades are required and prioritized annually to keep the system functioning as designed and maintain the reliability of voice communications for National Grid field personnel.

Customer Benefits:
Reliable voice communications from field personnel to control centers and corporate offices is needed to support efficient execution of substation and power line construction, switching, maintenance, and storm restoration work. The LMR system directly supports the company's ability to maintain the reliability of the electric networks. Our crews rely on this system for daily operations and safety. An example is the code-blue emergency procedure, where voice communications are used to provide details to the dispatch center when there is a health and safety emergency in the field.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-128
Transmission – Radio Comms Systems
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.9	1.1	3.5	3.3	4.2	-	13.0
2026	-	1.1	3.5	3.3	4.2	6.0	18.1

OpTel

NYCD Trans Verizon Disconnect (C089938 - $8.6M)
NYWD Trans Verizon Disconnect (C089903 - $8.6M)
NYED Trans Verizon Disconnect (C089943 - $7.9M)
National Grid must maintain reliable communication links between control centers and substations for operational needs, including protective relaying and energy management systems. ILEC providers are disconnecting circuits or significantly increasing monthly service costs and are not supporting repairs to their copper infrastructure, leading to extended outage times. Solutions may include ILEC or Competitive Local Exchange Carriers (CLEC) lit services, Dark Fiber, and substation work such as conduit, handholes, and network equipment.

Drivers:
Verizon is discontinuing support for its outside copper plant, a move backed by the Federal Communications Commission, which relieves Verizon of maintenance responsibilities. Maintaining legacy copper circuits is also significantly more costly than modern alternatives like fiber optic cable.

The protection of Company transmission overhead line and substation assets require a communication path. Communication providers are phasing out analog leased circuits used by National Grid. These projects address communication damage failures of the old circuits for which providers do not offer repair options, urgent/short notice disconnect notices, and any missed disconnect notices from 3rd party communication providers.

Customer Benefits:
Migrating to modern technology like Fiber Optic Cable provides a more reliable connection compared to older copper plants, which are prone to failure and have limited bandwidth. Additionally, this transition results in a significant reduction in monthly recurring charges (MRCs).

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-129
Transmission – OpTel Verizon Disconnect
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	4.2	6.3	6.0	6.0	6.0	-	28.5
2026	-	5.3	6.0	6.0	6.0	1.8	25.1

Satellite

Satellite Project NY Central (C093846 - $2.0M)
Satellite Project NY East (C093845 - $1.7M)
Satellite Project NY West (C093849 - $1.7M)
Satellite connectivity is becoming a reliable alternative communication solution for remote station locations. The traditional connectivity technologies, primarily based on radio and cellular networks, may have coverage gaps over our service territory. Satellite connectivity offers a reliable backup solution in case of temporary outages in the primary connectivity method, ensuring efficient, reliable, and secure smart grids.

Drivers:
Substations that are located in remote areas of Upstate New York are candidates, where fiber optic networks are not available and other terrestrial solutions are not viable.

Customer Benefits:
Satellite is an option for a reliable connection when fiber optic cable and microwave are not practical.

2025 to 2026 Variance:
These projects are progressing as planned.

Table 2-130
Transmission – OpTel Verizon Disconnect
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.1	0.4	1.1	1.5	-	3.1
2026	-	0.1	0.4	1.1	1.5	2.3	5.4

Private Fiber

NYE Trans Private Fiber (C098421 - $4.3M)
NYW Trans Private Fiber (C098424 - $48.5M)
This program aims to replace private fiber segments that are in poor condition and have limited capacity, as well as to construct new private fiber links to replace outdated telecom circuits when it is a cost-effective solution.

Drivers:
The company's varied operational and backup networks are primarily made up of leased communications and fiber optic cables from the 1990s, which restricts the ability to upgrade bandwidth and reduce latency. Additional capacity will be necessary to support the growing implementation of grid modernization and monitoring technology.

Customer Benefits:
Owning fiber assets allows utilities to have complete control over their connectivity, ensuring secure and high-performance communication while decreasing dependence on third-party providers. It supports scalable bandwidth and quick deployment of modern technologies, which are crucial for cloud, AI, and data-driven operations.

2025 to 2026 Variance:
These projects are new to the 2026 Plan.

Table 2-131
Transmission – Private Fiber
Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	6.3	7.5	8.8	15.2	15.0	52.8

2. I. Non - Infrastructure

Non-Infrastructure capital expenditures are for items that are not part of the electric power system but are required to run the Company network communications equipment.

IHC Capital Small Tools 5210-T NY (C054605 $0.5M)
This program is for the annual purchase of capital small tools (greater than $2,500) to be used by the In-House Construction (IHC) TLS department.

Drivers:
The Company needs to provide the TLS department with modern reliable tools to safely and effectively maintain and construct the Company's transmission line infrastructure.

Customer Benefits:
This program will support the safety, quality and timeliness of transmission maintenance and construction projects and programs.

LMR Land Mobile Radio System - Transmission (C086663- $1.0M)
This program is for the annual purchase of mobile communication radios for installation into crew vehicles. The current mobile radio communications in our vehicles will not be supported by the vendor in the future. When upgrades are completed, the new technology will improve security and compatibility with other vendors.

Drivers:
The Company needs to maintain the radio network with the latest technology for reliability and secure communications. This will maintain redundancy in radio communications, if we have a major outage with our landline and/or cellular communications.

Customer Benefits:
This program will support communications between the field and control center and help in coordination during a weather event, which will speed up restoration efforts.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-132
Transmission – Non-Infrastructure Projects
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.3	0.3	0.3	0.3	-	1.2
2026	-	0.3	0.3	0.3	0.3	0.3	1.5

2. J. Policy Initiative - Local

CLCPA Dependent

CLCPA Dependent projects are those infrastructure development projects that require tight coordination with the CLPCA projects for outage scheduling and may be required to fully realize the CLCPA goals.

Mallory 115kV Breakers (C084074 - $1.1M)
This project will install three 115kV breakers and associated equipment at Mallory Station to allow for the sectionalizing of the 115kV Lighthouse Hill-Clay 7 line as it loops in and out of the substation.

Drivers:
The performance of the 115kV Lighthouse Hill-Clay 7 line is relatively poor, and outages of this circuit can result in extended outages to the customers served from the Mallory Station.

Customer Benefits:
Improved reliability and resiliency for customers supplied by Mallory Station.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-133
Transmission – Mallory 115kV Breakers
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.2	1.1	0.0	0.0	0.0	-	6.3
2026	-	1.1	0.0	0.0	0.0	0.0	1.1

Coffeen St. Substation (C081787 - $23.1M)
Coffeen - Asset Replace CH (C087772 - $4.9M)
Coffeen - Asset Rplc T-line (C089326 - $10.6M)

Coffeen Street Station is a 115kV, 23kV and 13.2kV substation. The 115kV bus presently is designed as a straight bus without a tie-circuit breaker which raises operational concerns.

The assets located at the substation are in deteriorated condition, have limited spare parts and limited-to-no OEM support. In addition, the original, oil-filled assets have a history of leaks.

Similarly, the 115kV, 23kV and 13.2kV relays and controls in the control house are obsolete, have limited spare parts and limited-to-no OEM support.

The Coffeen Station project is planned to replace deteriorated assets at the 115kV, 23kV and 13.2kV voltage levels, including: OCBs, VCBs, disconnect switches, insulators, potential transformers, two 115/23kV transformers, and two 115/13.2kV transformers. A new control house will also be installed.

The replacement for the 115kV yard will be planned to be a BAAH layout in support of planning capacity and New York CLCPA initiatives.

Drivers:
The replacement of the assets and the installation of a BAAH substation to support clean energy goals.

Customer Benefits:
The project replaces assets in poor condition to maintain the reliability of the system.

2025 to 2026 Variance:
This project is progressing in the timeframe required to meet the overall CLCPA project schedule.

Table 2-134
Transmission – Coffeen: Asset Replacements
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	29.1	30.1	8.1	0.2	0.0	-	67.5
2026	-	30.7	7.7	0.2	0.0	0.0	38.6

Gloversville – Marshville 6 Line Refurbishment (C081458 - $21.0M)
This project rebuilds approximately eight miles of 69kV transmission line to 115kV standards. The work will be bundled with the rebuild of the 115kV Inghams-Meco 15 line: Clinton Tap which runs through the same transmission ROW to take advantage of bundling cost savings.

Drivers:
This project addresses deteriorated assets along the circuit.

Customer Benefits:
This project addresses asset condition issues with the existing transmission line and supports the State's clean energy goals through a capacity upgrade. This project also takes advantage of the cost savings associated with bundling.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-135
Transmission – Gloversville – Marshville #6 Refurb
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.9	5.7	15.8	0.3	0.0	-	22.7
2026	-	5.7	15.0	0.3	0.0	0.0	21.0

LightHH 115kV Yard Repl & cntrl hs. (C031662 - $18.4M)
LightHH 115kV CH (C073996 - $0.6M)
LightHH Trans Lines Reconnect (C073997 - $18.1M)

The Lighthouse Hill Station is a switching substation with two 115kV busses and seven transmission lines connecting to the station that allow power to flow from generation located along Lake Ontario to the Watertown area and Clay Station in the Syracuse area.

The substation has seven OCBs located 200 feet from the Salmon River, which is located 70 feet below the yard elevation. The station is also located approximately one mile upstream of the New York State Wildlife Fish Hatchery. Although the risk is low, any significant oil spill in the station could have a detrimental environmental impact.

Another significant issue at Lighthouse Hill is that the land is owned by Customer and operated as a shared facility under a contractual agreement. The lack of direct access to Customer's control room at Lighthouse Hill limits the Company's control over the housing conditions for the battery and relay systems. The Company has controls on the first floor of the control house, which is immediately adjacent and downstream of Customer's hydroelectric dam. An uncontrolled release from the dam could flood the control room area.

The plan is to build a new substation at a location approximately 1.5 miles west on land already owned-in-fee by the Company. This would reduce the likelihood and risk of oil contamination of the Salmon River. The new substation will include a 115kV BAAH bay configuration, one 115/34.5kV transformer, one 115/12kV transformer, and a control house.

Drivers:
The Lighthouse Hill Station project addresses deteriorating assets to limit risk mitigation and obsolescence of substation assets possibly failing, supports clean energy initiatives, supports the ever-increasing customer electrification and decarbonization to maintain reliable network operation.

Customer Benefits:
The rebuild of this substation to a BAAH arrangement will improve transmission system reliability and the delivery of renewable energy to support the State's Clean Energy Goals.

2025 to 2026 Variance:
This project is progressing, and the construction was spread out to support the timely completions of the overall suite of CLCPA projects.

Table 2-136
Transmission – Lighthouse Hill Substation
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	11.9	30.2	0.6	0.0	0.0	-	42.7
2026	-	20.2	16.9	0.0	0.0	0.0	37.1

Mortimer-Golah #110 ACR Rebuild (C060220 - $54.0M)
This project will completely rebuild the under ten-mile 115kV Mortimer-Golah 110 line with new structures and new conductor in the existing corridor. The existing structures and conductor will be removed**.**

Drivers:
This project relieves capacity constraints in the Genesee area and addresses asset deterioration on the existing circuit.

Customer Benefits:
This project increases capacity and maintains reliability in the Genesee area as well as supporting the State's Clean Energy goals.

2025 to 2026 Variance:
The scope of this project has been refined and the timing adjusted to support the other projects in the area as well as the overall CLCPA timeframe.

Table 2-137
Transmission – Mortimer-Golah #110 ACR Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	10.2	4.8	4.5	35.5	3.2	-	58.2
2026	-	10.8	2.4	37.8	3.0	0.0	54.0

Mortimer-Golah 109 - 69kV Rebuild (C081474 - $81.8M)
This project will completely rebuild the under ten-mile 69kV Mortimer-Golah 109 transmission line to operate at 115kV with new structures and new conductor in the existing 115kV Mortimer-Golah 110 corridor. The existing 69kV structures and conductor will be removed**.**

Drivers:
This project relieves capacity constraints in the Genesee area and addresses asset deterioration on the existing circuit.

Customer Benefits:
This project maintains reliability in the Genesee area and supports the State's Clean Energy goals.

2025 to 2026 Variance:
The scope of this project has been refined and the timing adjusted to support the other projects in the area as well as the overall CLCPA timeframe.

Table 2-138
Transmission – Mortimer-Golah 109-69kV Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	21.7	12.1	5.1	62.0	5.5	-	106.4
2026	-	16.1	10.7	49.5	5.5	0.0	81.8

New Manheim Greenfield project (C050917 - $5.3M)
New Manheim - Assoc Line work (C060240 - $3.3M)
Inghams Station is in the town of Oppenheim, New York and is a connection between a hydro generating station and the transmission and distribution electric system. The transmission voltage at Inghams is 115kV, with sub-transmission at 46kV, and distribution at 13.2kV. The Inghams station controls flows on the 115kV system with a PAR type transformer that was installed in 1979.

The Inghams Station was flooded in 2006 and remains a flood concern. After the substation was repaired, a new stone wall approximately five feet tall was constructed along the substation perimeter that is shared with the river boundary. The stone wall is considered a temporary measure as it will limit the current flow of the river if the river rises to flood heights again but will not necessarily prevent the substation from being flooded.

The Inghams Station project is to construct a new greenfield substation which will be above the 500-year flood zone, with the same straight bus configuration and existing layout. A new PAR with a wider range will be procured and the existing unit kept as a spare. A new control house will be installed at the new location.

The new location for the substation is in the town of Manheim which is approximately a quarter mile to the west of the existing Inghams Station.

Drivers:
The Inghams substation project addresses flooding concerns, network reliability to resizing the PAR deteriorating assets to limit risk mitigation and obsolescence of substation assets possibly failing, supports clean energy initiatives, supports the ever-increasing customer electrification and decarbonization to maintain reliable network operation.

Customer Benefits:
This project will maintain transmission system reliability and improve the ability to control flows between the Central and Eastern Divisions.

2025 to 2026 Variance:
This project is progressing as planned and has completed a significant amount of construction.

Table 2-139
Transmission – Inghams Station Rebuild project - Presently named New Manheim Greenfield
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	36.8	9.8	0.0	0.0	0.0	-	46.6
2026	-	8.6	0.0	0.0	0.0	0.0	8.6

Oneida Substation Rebuild (C034443 - $16.8M)
Oneida - Sub Rebuild T-line (C084674 - $1.8M)
Oneida Station is a 115kV and 13.8kV substation located in Verona, New York that was originally constructed in the 1940s. The substation includes two LTC transformers, nine 115kV circuit breakers, one 115kV capacitor bank with CS, a metal-clad switchgear with eight 13.8kV feeders, and two 13.8kV capacitor banks.

The physical and electrical layout of the 115kV substation yard makes it difficult to maintain or repair equipment. Outages to maintain the 115kV breakers are difficult because a line outage is required. The two 1959 circuit breakers manufactured by Federal Pacific are candidates for replacement due to maintenance issues and a lack of replacement parts. The 115kV lines to Rome and Yahnundasis are difficult to de-energize when maintenance is required due to voltage support issues and taking the line associated with the R40 breaker out requires a customer outage. The vertical phase configuration of the East/West 115kV busses is a concern from a maintenance standpoint as the configuration makes tasks such as disconnect repair or replacement difficult due to difficulty in maintaining safe working clearances.

One of the 115kV circuit breakers is a 1961 vintage Westinghouse GM-6B. This breaker model has a complex arcing chamber and has on multiple occasions seen high resistance forming in the contacts. These breakers are being replaced on a system-wide basis.

The Oneida Substation project is to replace deteriorated assets at the 115kV voltage level, which includes OCBs, disconnect switches, insulators, and potential transformers. The station will be a staged construction project that will install a 115kV BAAH layout with a new control house. There will be a second 115kV capacitor bank installed as part of the project to support voltage in the area.

Drivers:
The 13.2kV portion of the station was previously rebuilt. The 115kV yard continues to have asset deterioration concerns, outage scheduling issues and voltage support issues.

Customer Benefits:
This project will improve the reliability of the transmission system through the BAAH arrangement and additional capacitor bank for voltage support. The replacement of certain terminal equipment will support the State's Clean Energy Goals.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-140
Transmission – Oneida Substation Rebuild
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	16.2	15.8	2.9	0.0	0.0	-	34.9
2026	-	15.6	3.0	0.0	0.0	0.0	18.6

Gulf Road Substation (Boonville Greenfield) (C049903 - $84.2M)
Gulf Road Assc Tline work (Boonville Greenfield) (C082488 - $10.8M)
Gulf Road Control House (Boonville Greenfield) (C082487 - $7.3M)
Land-Boonville Substation-Gulf Road (C096655 - $0.5M)
Gulf Road Sub Remote End – Rome, Porter & Waters Road (C096122, C096123, C096124 - $2.4M)
The Boonville Station was constructed in the 1950s and originally designed as a switching substation for several 115kV transmission lines and as the single source of the radial 46kV line to Alder Creek, White Lake, Old Forge, Eagle Bay and Raquette Lake. The use has not changed except for the addition of a 23kV terminal for hydro generation.

The structural steel and foundations are deteriorated. Over the years, the substation has sunk to an elevation lower than the adjoining highway and farm fields resulting in a lack of drainage. This drainage issue is also present in the UG manhole and conduit system. The water surface level at the substation causes the UG control cables to continuously be under water leading to their deterioration.

The substation was designed electrically with minimal redundancy and has antiquated relaying protection. The design has the single source transformer for the 46kV line to the Old Forge area connected off the south 115kV bus with no alternate method to supply the transformer if the south bus is out of service. The 115/46kV transformer was replaced in the 1990s but is still the only source and cannot be maintained properly due to outage restrictions.

All electrical components at the station such as oil breakers, oil-filled potential transformers and switches require replacement. The station control building is brick and needs reconditioning. The size of the building has also become an issue with the addition of EMS and relay upgrades over time.

The Boonville Station project will relocate the substation to a greenfield site (Gulf Rd Station) and the 115kV yard will be constructed as BAAH to accommodate planning capacity in support of the New York CLCPA initiatives. The substation will include a new control house and be located near the existing substation.

Drivers:
The substation is in deteriorated condition and its limited capacity equipment is incompatible with the resulting transmission line rebuilds occurring north and south of it. The existing substation will not be able to support the State's Clean Energy Goals. Outage Coordination is required with the CLCPA projects.

Customer Benefits:
The new configuration and higher capacity equipment will improve the reliability of the transmission system and support the State's Clean Energy Goals

2025 to 2026 Variance:
The scope of this project has been refined and the timing adjusted to support the other projects in the area as well as the overall CLCPA timeframe.

Table 2-141
Transmission – Gulf Road Substation
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	6.1	37.1	48.4	16.4	0.7	-	108.7
2026	-	38.8	44.4	21.2	0.8	0.0	105.2

Flat Rock Upgrades - Line (C087428 - $ 1.0M)
This job will remove and replace switch 22 with a new 2000A switch. This job will also replace structure 260A with a new engineered pole which will be placed outside of the Flat Rock Hydro site. Additionally, approximately 180 feet (60 circuit feet) of conductor will be replaced.

Drivers:
The 180 feet of conductor that will be replaced is presently limiting the capability of the Colton-Browns Falls 2 circuit to support the CLCPA.

For the disconnect switch component, the switch at Colton - Browns Falls #2, specifically at the Flat Rock Hydro site, is in poor condition with glass that is in danger of falling when operated. In order to properly operate, the structure will need to be moved outside of the fence.

Customer Benefits:
The new disconnect switch and switch structure will allow the traveling operators to safely operate Switch 22. The reconductored segment of line will support the CLCPA.

2025 to 2026 Variance:
The project is new to the 2026 plan.

Table 2-142
Transmission – Flat Rock Upgrades - Line
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	1.0	0.0	0.0	0.0	1.0

MVT Rott 69kV Rebuild & New TB (C082180 - $0.7M)
MVT Scho/Sch Int-Rott 18/4 Rebld (C082182 - $13.0M)

Drivers:
There are over 200MW of solar projects in-service and 490MW of proposed solar projects in the NYISO Interconnection queue that applied to interconnect to National Grid's 115kV transmission and 69kV sub-transmission networks between the Inghams and Rotterdam substations in the Mohawk area. Over 100MW of DG applied to interconnect to the distribution stations served by these transmission and sub-transmission networks as well. A National Grid Planning analysis modeled all of the proposed projects and identified local transmission and sub-transmission elements which have the potential to become overloaded under certain system conditions with this additional generation. Frequent curtailment by system operators would be required to prevent these overloads.

Customer Benefits:
Production cost modeling determined transmission and sub-transmission constraints would result in an estimated 136GWh of annual curtailment. Through increasing the capacity of the most binding transmission and sub-transmission elements with select equipment upgrades and reconductoring, up to 115GWh of renewable energy can be unbottled annually and future asset condition needs can be mitigated.

2025 to 2026 Variance:
The variance is due to adjusted scope and schedule as the project has progressed.

Table 2-143
Transmission – MVT Reliability Rotterdam
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	9.9	12.1	2.4	0.0	0.0	-	24.4
2026	-	13.5	0.2	0.0	0.0	0.0	13.7

These projects improve the ability of the transmission system to recover from an incident while supporting the State's Clean Energy Goals.

Indian River-Indian River-Lyme Junction Line (C082190 - $2.1M)
Indian River-Lyme Junction Station (C082192 - $0.6M)

This project consists of a new approximately 8.6 mile long line between Indian River and Lyme Junction to connect to two existing radial circuits. In addition, a new breaker will be installed at Indian River and a new ring-bus substation will be built at Lyme Junction.

Drivers:
The increasing severity of major events is driving an increased number of customer outages and longer outage durations.

Customer Benefits:
The overhead line projects will improve transmission system sectionalizing and will result in fewer sustained outages to customers due to events on the 115kV system. These projects will also improve locating faults to a smaller section of adjacent lines to improve restoration.

2025 to 2026 Variance:
The variance in FY27 is due to adjusted scope and schedule as the project has progressed.

Table 2-144
Transmission – Indian River-Lyme Junction Station
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	38.3	1.8	0.0	0.0	0.0	-	40.1
2026	-	2.7	0.0	0.0	0.0	0.0	2.7

These projects improve system capacity while supporting the State's Clean Energy Goals.

Malone Station Rebuild_Tline (C059673 - $0.6M)
Malone Substation Rebuild_T_Sub (C069306 - $17.1M)
Malone Control House (C097803 - $2.8M)
The loss of the 115/13.8kV transformer TRF 3 at the Malone Station would result in outage exposure in excess of distribution planning criteria. In addition, transformer TRF 3 is forecasted to be overload by 2038. To address this criteria violation, a 115/13.8kV transformer TRF 4 will be added at the Malone substation with four new feeder positions.

Drivers:
Presently, the contingency loss of the Malone 115/13.8kV Transformer TRF 3 would result in 14.8 MW load at risk (403.26MWh). This would exceed the criteria, as there are no 13.2kV feeder ties available in the area that could be utilized as back-up.

Customer Benefits:
This project eliminates all the MWhs at risk and eliminates all the asset condition issues.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-145
Transmission – Malone Station Rebuild Transmission Line
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	4.7	10.3	10.3	0.4	0.0	-	25.7
2026	-	9.7	8.6	2.2	0.0	0.0	20.5

Reconductor Cortland Clarks Corners (C053141 - $2.0M)
This project reconductors less than one mile of Cortland-Clarks Corners 1-716 in two separate sections.

Drivers:
Both National Grid and Avangrid identified portions of this line being overloaded during the Annual Planning Assessments (TPL-001) and other studies.

Customer Benefits:
This project maintains the reliability of the 115kV system and the ability to supply load during various contingencies on the National Grid and Avangrid transmission systems.

2025 to 2026 Variance:
This project is progressing as planned.

Table 2-146
Transmission – Reconductor Cortland Clarks Corners
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.3	2.0	0.0	0.0	0,0	-	2.3
2026	-	0.1	1.8	0.1	0.0	0,0	2.0

CLCPA Phase 1

CLCPA – Phase 1 projects are designed to address both National Grid system needs, and State transmission needs to integrate renewable generation and storage. These projects will advance the development of system upgrades and create additional system benefits by increasing transmission capability for renewable energy deliverability per PSC Case 20-E-0197.

Drivers:
The New York State mandate to get 70% of energy from renewable sources by 2030 and achieve a 100% emission free grid by 2040 will require not only a large number of new renewable generators and storage, but also investment in the transmission and distribution systems. National Grid studies have shown that the transmission system in many of the areas of highest renewable generator interest is not capable of delivering power from the generators to the loads, both local and statewide. These projects are designed to address transmission system limitations and address the curtailment of renewable generation.

Customer Benefits:
These projects allow for additional renewable energy to reach the customers in support of the State's clean energy goals.

Marshville 115kV Rebuild (C088329 - $4.1M)
This project will replace the existing 115/69kV [redacted] TRF 1 and 115/69kV [redacted] TRF 2 with two new 115/69kV [redacted] Y:Y transformers. This will require the replacement of the existing motor operated disconnect switches 6199 and 6299 with new 115kV [redacted] CSs CS1 and CS2 on new support structures. The two existing 115kV line breakers will be replaced with new 115kV [redacted] SF6 type breakers. The four 115kV Disconnect Switches SW1188, SW1199, SW1288, and SW1299 will be replaced with new 115kV [redacted] gang operated disconnect switches.

Inghams/Rotterdam Circuit Rebuild (C088402 - $318.7M)
This project will completely rebuild the 7.12-mile 115kV Inghams – St. Johnsville 6 (T5260) line, the 23.9-mile 115kV Inghams – Stoner 9 (T5270) line, the 15.9-mile 115kV Maple Ave – Rotterdam 10 (T7040) line, the 9.86-mile 115kV St. Johnsville – Marshville 11 (T5780) line, the 1.16-mile 115kV Clinton – Marshville 12 (T5100) line, the 23.1-mile 115kV Stoner – Rotterdam 12 (T5800) line, the 23.3-mile 115kV Inghams – Meco 15 (T5250) line, the 7.51-mile tap to Clinton Substation, and the 15-mile 115kV Meco – Maple Ave 22 (T7030) line. The existing conductor will be replaced with two bundled 795 ACSR 26/7 "Drake" conductor, and the existing shield wire with one 3/8" steel and one optical ground wire ("OPGW").

Meco 115kV Rebuild (C088414 - $4.8M)
This project will replace the existing 115/69kV [redacted]TR1 with a new 115/69kV [redacted] with LTC transformer and install a new 115/69kV [redacted] with LTC TR2. The existing R22 and R21 circuit breakers will be replaced with new 115kV [redacted] circuit breakers. The existing four 115kV gang operated disconnect switches SW2288, SW2277, SW1588 and SW1577 will be replaced with 115kV [redacted] gang operated disconnect switches. The existing 115kV MOD switch SW6177 will be replaced with a new 115kV [redacted]CS. The new transformer bay will require the extension of the 115kV and 69kV buses. The new transformer bay will also have a new 115kV [redacted]CS, [redacted]69kV circuit breaker and three 69kV gang operated disconnect switches. All new equipment will require new foundations and structures.

Saltsman Rd New 5 Breaker Ring (C091495 - $28.4M)
Build a new 115kV five breaker ring bus transmission station along the right-of-way for the Inghams-Meco-Clinton 15 and Inghams-Stoner 9 lines south of Saltsman Rd near where the line is tapped to feed the Clinton Station. The new station will be constructed in such a manner that the station will operate as a five-breaker ring bus but can easily be converted to a BAAH station in the future. The new station is expected to connect a total of five 115kV lines; two 115kV line back to Inghams, one line to Meco, one line to Stoner and a tap to the Clinton Station.

Dunkirk to Laona 161/162 Rebuild (C088399 - $33.0M)
Land/ROW-Dunkirk-Laona CCPA Rebuild (C095978 - $0.07M)
This project will rebuild 4.9 miles of the Dunkirk – Laona (T1090) 161 and (T1100) 162 lines from New Road Switching Station to Laona Substation. The existing conductor will be replaced with one 1590 ACSS conductor and existing shield wire will be replaced with one 3/8" steel and install one OPGW. This project will include the replacement of structures with steel H-Frame structures on the 230kV Gardenville-Dunkirk 73/74 lines at the point of crossing.

SE Batavia - Golah LN119 Rebuild (C088631 - $84.0M)
This project is for the full rebuild of 15.9 miles of the 115kV SE Batavia - Golah 119 line from Structure 107 to Golah Station. The existing conductor will be replaced with 1590 ACSS conductor and existing shield wire with one 3/8" steel and install one OPGW.

Mortimer 109 bay 115kV Upgrade (C088632 - $11.5M)
This project will rebuild Line #109 bay at Mortimer from 69kV to 115kV. The 115/69kV [redacted]LTC transformer, 69kV UG cable/duct, 69kV breaker R214 and associated relaying will be removed. Approximately 250ft of new three-phase 115kV 4-inch AL bus tubing with nine bus support structures and foundations will be installed as a low-profile bus from the 109-bay connection to disconnect switch 172 on the north bus. The existing [redacted] GCB R174 will be relocated to the 109 bay and reused for line protection.

New Golah 853 and 116 Line Reloc (C095869 - $18.2M)
New Golah Sub - Control House (C098366 - $3.0M)
Old Golah Sub Retirement (C095871 - $2.0M)

This project provides connections from the existing 69kV Golah-South Perry 853 and 115kV Golah-North Lakeville 116 to the new Golah Station.

Golah Sub Rebuild (C051831 - $63.9M)
This project is for the 115kV rebuild of Golah Station and upgrade of the Line 109 bay from 69kV to 115kV. This will require the replacement of Golah Station with a new BAAH substation in the vicinity of the existing substation, including new breakers, switches, grading, ground grid and fencing. The existing transformer TRF 3 will be removed and one new 69/34.5kV [redacted] w/ TRF 1 installed. The mobile capacitor bank will be replaced with two new permanent 115kV [redacted] capacitor banks with two new 115kV SF6 [redacted] capacitor bank synchronous close circuit breaker. A new 24ft by 32ft control encloser will be installed. The existing obsolete electro-mechanical relays will be replaced with digital relaying for the line, transformer, and bus protection.

Drivers:
Given the volume of proposed generation projects in the NYISO interconnection queue, certain local transmission and sub-transmission components have been identified as having the potential to experience overloads under specific system conditions. Without these projects, system operators would need to implement frequent curtailments to mitigate these risks.

Customer Benefits:
Production cost modeling determined transmission and sub-transmission constraints would result in an estimated 136GWh of annual curtailment. Through increasing the capacity of the most binding transmission and sub-transmission elements with select equipment upgrades and reconductoring, up to 115GWh of renewable energy can be unbottled annually and future asset condition needs can be mitigated.

Easement-109-110-119 LN-CLCPA-West (C097443 - $5.1M)
Procurement of land rights to provide for the rebuilding of Golah-Mortimer 109, Golah-Mortimer 110 and Southeast Batavia–Golah 119.

2025 to 2026 Variance:
The project scopes, estimates and schedules have been revised as engineering has progressed.

Table 2-147
Transmission – CLCPA Ph1 - Local
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	123.4	207.8	134.9	137.4	60.0	-	663.5
2026	-	221.5	129.9	155.7	69.2	0.4	576.7

2. K. Policy Initiative – CLCPA Ph2

These projects are designed to address both National Grid system needs, and State transmission needs to integrate renewable generation and storage. These projects will be funded by National Grid ratepayers and contributions from outer Transmission and Distribution Companies' ratepayers throughout the State.

Drivers:
The New York State mandate to get 70% of energy from renewable sources by 2030 and achieve a 100% emission free grid by 2040 will require not only a large number of new renewable generators and storage, but also investment in the transmission and distribution systems. National Grid studies have shown that the transmission system in many of the areas of highest renewable generator interest is not capable of delivering power from the generators to the loads, both local and statewide. These projects are designed to address transmission system limitations and address the curtailment of renewable generation.

Customer Benefits:
These projects allow for additional renewable energy to reach the customers in support of the State's clean energy goals.

This program constructs reinforcements to the system to strengthen the transmission network, ensure adherence to reliability standards and provide for the unbottling of solar (photovoltaic) and land-based wind generation.

Ames Road Greenfield Substation (C090032 - $101.7M)
This project provides for a new 345-115kV substation interconnecting National Grid's 115kV system to LS Power's 345kV Edic-Princetown circuits. This project will construct a new 345kV/115kV station in a BAAH configuration for the 345kV and 115kV yards with two transformers tying the yards together. There will be four 115kV line bays, four 345kV line bays, and a spare 115kV bay. This station will require two 345/115kV [redacted] transformers, six 13.2kV single-phase disconnect switches, nine 115kV [redacted] circuit breakers, 24 115kV CCVTs, 26 115kV [redacted] manual operated switches, nine 345kV, [redacted] circuit breakers, 28 345kV CCVTs, four 345kV, [redacted] BIL line traps, 12 345kV [redacted] CT/VTs, 12 345kV 220kV MCOV Surge arrestors, and 24 345kV [redacted] motor operated switches. This work includes all site preparation, civil work, and fencing installation. The equipment and control enclosure will both implement IEC-61850 protocols. Four existing transmission circuits will be looped in-and-out of the substation requiring the removal of four structures and approximately 1,000 feet of conductor and the installation of 16 structures as well as the installation of approximately 12,000 feet of new conductor and 3,800 feet of new shield wire.

Clay Substation CLCPA Upgrades (C090006 - $0.7M), Clay Sub CLCPA LN5 Assoc T-Line (C093303 - $0.1M)
This project is required to increase the thermal capability of the station equipment to match the associated transmission line rating. This project will relocate the bussed portion of Line 7 to become the second 115kV transmission line terminating at the position presently occupied by Line #5 at the Clay Station. This will require the replacement of six existing circuit breakers R50, R875, R140, R70, R865, and R110 with new 115kV, [redacted] circuit breakers and 14 gang-operated disconnects. The new Line 5 position will require one new 115kV [redacted] circuit breaker with gang operated disconnects will be installed between R180 and R115. The #5 bay will also require the installation of one set of three 115kV CCVTs and one new set of 115kV [redacted] gang operated disconnects with arching horns. The overhead strain bus and the connections between breakers and nearby disconnects will be replaced in the 115kV #5, #6, and #7 bays with new 2-1272 AAC.

Duer Street – Formerly East Ave Station - Greenfield (C090027 - $45.9M)
This project will construct a new 115kV four breaker ring bus transmission station along the right-of-way for the South Oswego-Nine Mile Point 1 line south of East Ave where the South Oswego-

Indeck 6 and the Indeck-Lighthouse Hill 2 lines head north towards Indeck. The new substation is expected to connect a total of four 115kV lines; one 115kV line back to South Oswego, one line to Lighthouse Hill, and two lines up to the Indeck station. This substation will require 14 sets of 115kV, [redacted] gang-operated switches, four 115kV, [redacted] circuit breakers, two sets of three 115kV, [redacted] fused hook-stick switches,12 115kV CCVTs, and two sets of three 115kV surge arresters. This work includes all site preparation, civil work, and fencing installation. The equipment and control enclosure will both implement IEC-61850 protocols.

Lighthouse Hill – Clay Rebuild (C090028 - $222.7M)
This project will rebuild the 26.6 miles bussed 115kV Lighthouse Hill–Clay 7 line as two single circuits. This will require the removal of 177 existing structures. The project will install 86 engineered steel structures on foundations for angle, dead-end, and switch structures and 488 direct embed steel suspension structures. The existing conductors will be replaced with 52.2 circuit mi of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed on each line. Replace two existing switches with vertical load break [redacted] switches.

Lighthouse Hill – S. Oswego Rebuild (C090029 - $267.6M), Land-CLCPA P2-LHH-S Oswego (C095174 - $11.0M)
This project will rebuild the 27.3mi of double circuit and 1.2 miles of single circuit sections of the Lighthouse Hill-South Oswego corridor. This includes the South Oswego–Nine Mile Point 1, Lighthouse Hill-Indeck 2, Fitzpatrick – Lighthouse Hill 3, & South Oswego–Indeck 6 lines. This will require the removal of 264 existing structures. The project will install 30 double circuit engineered steel structures on foundations for angle, dead-end, and switch structures and 217 double circuit direct embed steel suspension structures. The project will install 16 single circuit engineered steel structures on foundations for angle, dead-end, and switch structures and eleven 11 single circuit direct embed steel suspension structures. The existing conductors will be replaced with 52.2 circuit miles of bundled 636 ACSS conductors. The existing shield wire will be replaced with 3/8” EHS shield wire and 1/2" 48 fiber OPGW. Existing switches will be replaced with vertical load break [redacted] switches. A redundant all-dielectric self-supporting (“ADSS”) fiber communication path will be installed on 35ft wood poles along the edge of the corridor.

Maiden Lane Station - Greenfield (C090031 - $51.7M)
This project will construct a new 115kV transmission substation along the right-of-way for the Indeck-Lighthouse Hill 2 and South Oswego-Nine Mile Point 1 lines east of Maiden Lane Rd. The new substation will have a BAAH configuration. The new substation is expected to connect a total of six 115kV lines; two 115kV lines back to South Oswego Station, two lines to Lighthouse Hill Station, and one each to the Nine Mile Point and Fitzpatrick stations. This substation will require 28 sets of 115kV, [redacted] gang-operated switches, 12 115kV, [redacted] circuit breakers, two sets of three 115kV, [redacted] fused hookstick switches, 24 115kV CCVTs, two 115kV [redacted] two-stage capacitor banks, two sets of three 115kV reactors, and two sets of three 115kV surge arresters. This work includes all site preparation, civil work, and fencing installation. The new station and control enclosure will both implement IEC-61850 protocols.

South Oswego Station Upgrades (C090052 - $2.3M)
This project is required to increase the thermal capability of the station equipment to correspond with the associated transmission line rating. This project will replace two existing circuit breakers R10 and R60 with new 115kV, [redacted] circuit breakers and the four gang-operated disconnects #11, #13, #61, and #63 with new 115kV [redacted] gang-operated disconnects with arcing horns. The existing conductor drops from the line terminations to the breaker R10 and R60 will be replaced

with new 2-1272 AAC. This station will also require the replacement of the RTU along with new digital line relaying, metering and control handles for lines #1 and #6.

Black River – LHH Rebuild (C089996 - $287.3M), Land-CLCPA-P2 Black River-Clay (C095172 - $21.4M)
This project will rebuild the existing 35.6 miles double circuit Black River – Lighthouse Hill 115kV corridor as two single circuit lines. These include the Black River – Lighthouse Hill 5 (T2120), Black River – Middle Road 8 (T6940), and Middle Road – Lighthouse Hill 6 (T6950) Circuits. This will require the removal of 347 existing structures. The project will install 46 engineered steel structures on foundations for angle, dead-end, and switch structures and 595 direct embed steel light duty suspension structures. The existing conductors will be replaced with 70.8 miles of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed on each line. Replace four existing switches with [redacted] switches.

Black River – Taylorville Rebuild (C089997 - $243.6M)
This project will fully rebuild the 26.1 miles double circuit 115kV T3060 Black River–Taylorville 2, T3050 Black River–North Carthage 1, T6270 North Carthage–Taylorville 8 lines as two single circuits in the same corridor. This will require the removal of 256 existing structures. The project will install 100 engineered steel structures on foundations for angle, dead-end, and switch structures and 382 direct embed steel suspension structures. The existing conductors will be replaced with 52 miles of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed on each line. Replace two existing switches and install two vertical load break [redacted] switches.

Black River Substation Upgrades (C090000 - $4.6M)
This project is required to increase the thermal capability of the substation equipment with the associated transmission line rating. This project will replace the five existing 115kV [redacted] circuit breakers R10, R20, R30, R50, and R80 with new 115kV, [redacted] circuit breakers and disconnect switches. This project will also install one new 115kV [redacted] series bus tie breaker. The existing conductor drops from the 115kV Black River-North Carthage 1, Black River-Taylorville 2, Coffeen-Black River 3, Coffeen-Black River-Lighthouse Hill 5, and Black River-Middle Rd lines 8 takeoff structures to the new line disconnects and line's breaker will be replaced with new 2-1272 AAC. New 5" AL tube bus, including foundations and steel structure will be installed for the new "B" bus sections required to accommodate the new series bus tie breaker.

Coffeen– Black River Rebuild (C090008 - $55.0M)
This project will rebuild the 7.5 miles single circuit 115kV Coffeen-Black River 3 (T3120) line. This will require the removal of 76 existing structures. The project will install 16 engineered steel structures on foundations for angle, dead-end, and switch structures and 60 direct embed steel suspension structures. The existing conductors will be replaced with 7.5 miles of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed. Replace one existing switch with vertical load break [redacted] witches. A redundant ADSS fiber communication path will be installed on 35ft wood poles along the edge of the corridor.

Coffeen-Staplin Creek 14 Rebuild – Formerly Coffeen – East Watertown Rebuild (C090009 - $61.2M)
This project will rebuild the 7.5 miles single circuit and 2.0 miles double circuit sections of the 115kV T2120 Coffeen–Lighthouse Hill–Black River 5 line. This will require the removal of 163 existing structures. The project will install 19 single circuit engineered steel structures on foundations for angle, dead-end, and switch structures and 110 single circuit direct embed steel suspension structures. The project will also install six double circuit engineered steel structures

on foundations for angle, dead-end, and switch structures and 25 double circuit direct embed steel suspension structures. The existing conductors will be replaced with 9.5 miles of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed on each circuit. Install one vertical load break 3000A switches. A redundant ADSS fiber communication path will be installed on 35ft wood poles along the edge of the corridor.

North Watertown-Coffeen 7 Rebuild Formerly Coffeen – Lyme Junction Rebuild (C090010 - $37.3M)
This project will rebuild the 7.4 miles single circuit section of the 115kV Thousand Islands-Coffeen 4 (T3350) line from Coffeen Station to Lyme junction. This will require the removal of 73 existing structures. The project will install 15 engineered steel structures on foundations for angle, dead-end, and switch structures and 58 direct embed steel suspension structures. The existing conductors will be replaced with 7.4 miles of bundled 636 ACSS" conductors. New 1/2" 48 fiber OPGW will be installed. Replace one existing switch with vertical load break [redacted]witches. A redundant ADSS fiber communication path will be installed on 35ft wood poles along the edge of the corridor.

Coffeen Synchronous Condensers (C090023 - $44.5M)
This project will expand Coffeen Station to install two 150 MVAR Synchronous Condensers. The Synchronous Condenser assembly includes the step-up transformer, secondary circuit breaker, cooling fans, generator and the enclosure. Two sets of 115kV [redacted]disconnects will be installed and a new 2-795 ACSR overhead bus section will be required to connect one Synchronous Condenser to the East bus. This work includes all site preparation, civil work, and fencing installation.

Colton – Malone #3 Rebuild (C090024 - $82.9M), Land-CLCPA P2-Colton-Malone Rebuild (C095175 - $4.4M)
This project will rebuild the 18.3 miles single circuit section of T3170 115kV Colton-Malone 3 line between the Colton Station and the Nicholville Station. This will require the removal of 197 existing structures. The project will install thirty engineered steel structures on foundations for angle, dead-end, and switch structures and 165 direct embed steel suspension structures. The existing conductors will be replaced with 18.3 miles of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed. Replace two existing switches with vertical load break [redacted]switches. A redundant ADSS fiber communication path will be installed on 35ft wood poles along the edge of the corridor.

McIntyre – Colton DLR (C090047 - $1.7M)
This project will install dynamic line rating equipment on 18 spans of the 115kV McIntyre-Colton 8 line including any work required for access and EMS integration.

Beaver River Greenfield Substation & Synchronous Condensers (C090053 - $112.8M)
This project will rebuild Taylorville Station on a greenfield location. A BAAH arrangement will be used for the 115kV equipment. The new 115kV equipment will include one 115kV/23kV, [redacted] transformer with LTCs, two new [redacted] 115kV Synchronous Condensers, 16 [redacted] circuit breakers, 41 sets of [redacted]gang-operated switches, and 36 CCVTs. The new 23kV equipment will include one [redacted] VCB, five [redacted] VCBs, one set of [redacted] gang-operated switches, 11 sets of [redacted]gang-operated switches, one set of 23kV, [redacted] fused hookstick disconnect switches, and five single-phase 23kV PTs, one for each 23kV line. This work includes all land acquisition, site preparation, civil work, and fencing installation. The equipment and control enclosure will both implement IEC-61850 protocols with all new relaying and controls.

Taylorville – Boonville Rebuild (C090050 - $293.0M)
This project will rebuild the 33.9 miles double circuit 115kV T3320 Taylorville–Boonville 5 and T3330 Taylorville–Boonville 6 lines as two single circuit lines. This will require the removal of 315 existing structures. The project will install 117 engineered steel structures on foundations for angle, dead-end, and switch structures and 516 direct embed steel suspension structures. The existing conductors will be replaced with 68 miles of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed on each line. Replace four existing switches with [redacted] vertical load break switches.

Staplin Creek Greenfield Substation (C090051 - $32.2M)
This project will replace Middle Rd. Station with a six-breaker ring substation. This requires the installation of new 3-1/2" AL tube bus three A-frame take-off & disconnect switch structures. Three new [redacted] 115kV circuit breakers, seven new sets of 115kV [redacted] gang operated disconnect switches, and three sets of three-phase CCVTs will be installed. The existing seven sets of gang-operated disconnect switches 82, 83, 61, 62, 63, 816, and 817 will be replaced with new 115kV [redacted] gang-operated disconnects. All new digital line relaying, control, and metering will be installed for the three new lines connecting to the substation.

Boonville – Porter Rebuild (C090003 - $229.4M), Land-CLCPA-P2 Black River-Porter (C095170 - $32.6M)
This project will rebuild the 115kV Boonville–Porter 1/2 lines as two single circuit lines. This will require the removal of 287 existing structures. The project will install 79 engineered steel structures on foundations for angle, dead-end, and switch structures and 451 direct embed steel suspension structures. The existing conductors will be replaced with 52 miles of bundled 636 ACSS conductors. New 1/2" 48 fiber OPGW will be installed on each line. Replace two existing switches with vertical load break [redacted] switches.

Gulf Rd CLCPA Upgrades (Boonville Greenfield) (C090005 - $20.9M)
This project will install two 115kV [redacted] PARs on the 115kV Boonville-Rome 3 & 4 lines at the future Boonville Greenfield Station location. This will also require the installation of four new 115kV [redacted] circuit breakers, eight sets of 115kV [redacted] disconnects, four single-phase 69kV CCVT. Four A-frame take-off & disconnect switch structures with be installed along with all required structures, foundations, and site work required to support the equipment being installed.

2025 to 2026 Variance:
The project scopes, estimates and schedules have been refined as the projects have progressed.

Table 2-148
Transmission – CLCPA Phase 2 – Regional
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	299.5	591.7	622.3	553.3	296.6	-	2,363.4
2026	-	615.0	769.6	558.0	289.7	36.2	2,268.5

2. L. Policy Initiative - Priority Transmission Project

Smart Path

Smart Path Connect - Transmission Line (C088956 - $9.5M)
NYPA was authorized to develop Priority Transmission Projects in the 2020 New York State ("NYS") Budget Part JJJ legislation and to solicit partners for the development of such projects. The costs of these projects will be allocated and recovered by the NYISO. The National Grid project investments presented in the Plan are the result of being selected by NYPA as its partner in Priority Transmission Projects. The NYISO Priority Transmission Projects extends between Adirondack-Porter, and from the north end of Smart Path in the Town of Massena east along the 230kV corridor to Willis and then on to Patnode and Ryan. National Grid will construct 345kV transmission lines along the 55 mile right of way between Adirondack-Marcy, Adirondack-Austin Road, Austin Road-Edic and extend the Rector Rd-Chase Lake 10 line to a new transmission substation at Austin Road. The existing 230kV substation yard at Porter Station will be partially removed and Chases Lake Station will be completely removed. A new 345kV substation will be built at Austin Road, and the Edic Station will be modified. In addition, approximately one mile of 230kV from the existing Chases Lake Station to the site of Austin Road Station will be built. At this point in time, the substation projects are nearing completion with only the transmission line spend remaining in this edition of the CIP.

Drivers:
This project is a part of New York Power Authority's Priority Transmission Project known as Smart Path Connect.

Customer Benefits:
This project supports the State's Clean Energy Goals.

2025 to 2026 Variance:
These projects are progressing as planned within the transmission outage constraint windows in partnership with NYPA's schedule.

Table 2-149
Transmission - Smart Path Connect - Transmission Line
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	50.1	18.1	0.0	0.0	0.0	0.0	69.1
2026	-	9.5	0.0	0.0	0.0	0.0	9.5

2. M. Interregional Transmission

Interregional Transmission (C094532 - $10.0M)
The Company has identified a beneficial upgrade which will increase interregional transfer capacity between New York and New England. This project, if advanced, would also modernize existing transmission assets. The Northeast states have launched a request for information (RFI) to identify such interregional transmission projects and this project's development would require state collaboration.

Drivers: Limits in transfer capacity across the AC bulk transmission interface between NYISO and ISO-NE.

Customer Benefits: Analysis by E3 and Hitachi Energy demonstrates that the project's increase in interregional transfer capacity reduces production costs in both regions, while also improving operational resilience (e.g., in winter storm events) and supporting connection of new generation resources and load growth.

2025 to 2026 Variance:
This project is new to the 2026 Plan.

Table 2-150
Transmission – Interregional Transmission - Transmission Line
Project Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2026	-	0.0	0.0	0.0	0.0	10.0	10.0

Chapter 3: Sub-Transmission System

The sub-transmission system is comprised of lines and substations typically operating at 46kV, 34.5kV, 23kV, and some 13.2kV, and 12kV. National Grid has approximately 3,000 circuit miles of OH sub-transmission lines and 640 circuit miles of sub-transmission UG cable. To serve the needs of customers over the five-year period covered by this Plan, the Company expects to invest $508.7 million on the sub-transmission system, as shown in Table 3-1 below.

Table 3-1
Sub – Transmission System Capital Expenditure by Spending Rationale ($ millions)

Spending Rationale / Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Customer Request/Public Requirement	1.5	0.5	0.5	2.8	6.6	11.9
Damage/Failure	4.9	5.0	5.1	5.2	5.4	25.5
System Capacity - NY	1.6	6.1	5.3	3.1	0.2	16.3
Asset Condition	33.4	34.8	38.7	65.8	71.8	244.5
Multi Value Distribution (MVD)	7.8	5.5	5.8	9.6	20.7	49.3
Reliability	2.7	2.4	5.2	6.9	4.1	21.3
Resiliency	5.3	9.9	22.3	23.5	23.3	84.3
Communications/Control Systems	0.3	0.0	0.0	0.0	0.0	0.3
Policy Initiative	0.1	0.2	1.2	0.0	0.0	1.4
Local Spending Total	**57.6**	**64.3**	**83.9**	**116.9**	**132.0**	**454.8**
Approved Proactive Planning Filing	2.8	2.5	2.1	0.3	0.0	7.8
Local Supplemental Total	**2.8**	**2.5**	**2.1**	**0.3**	**0.0**	**7.8**
Policy Initiative - CLCPA Ph2	0.3	0.1	0.1	0.1	0.0	0.6
Regional Total	**0.3**	**0.1**	**0.1**	**0.1**	**0.0**	**0.6**
Capex Total	**60.8**	**66.9**	**86.2**	**117.2**	**132.0**	**463.2**
Cost of Removal	4.8	6.7	10.6	11.3	12.1	45.6
Grand Total	**65.6**	**73.6**	**96.8**	**128.6**	**144.2**	**508.7**

A list of sub-transmission projects in the Plan can be found in Exhibit 2.

3. A. Customer Request / Public Requirements

Customer Request / Public Requirements investment levels are primarily based on trends as well as specific known projects. These estimates reflect consideration of inflation, estimates of materials, labor, indirect cost, market sector analysis, overall economic conditions, and historical activity.

Variances in planned program spending between 2025 and 2026 Plans are shown in the table below.

Table 3-2
Customer Request / Public Requirement Spending Rationale Variance ($Millions)

	CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
Blankets	2025	0.5	0.2	0.2	0.2	0.2	-	1.1
	2026	-	0.2	0.2	0.2	0.2	0.2	0.8
Specific Projects	2025	2.0	1.2	0.1	0.0	1.6	-	4.9
	2026	-	1.3	0.3	0.4	2.6	6.4	11.0
Total	**2025**	**2.5**	**1.3**	**0.2**	**0.2**	**1.8**	**-**	**6.0**
	2026	**-**	**1.5**	**0.5**	**0.5**	**2.8**	**6.6**	**11.9**

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Best Street Bridge Replacement (C095920) –** This project aims to relocate cables as a part of the bridge replacement of the Best Street Bridge associated with the new Kensington Expressway tunnel project in Western New York.

3. B. Damage/Failure

Damage/Failure projects are required to replace equipment and restore the electric system to its original configuration and capability following a damage or failure incident. Damage may be caused by storms, vehicle accidents, vandalism, or other unplanned events. Damage/Failure spending is typically mandatory work that is non-discretionary in terms of scope and timing.

The Damage/Failure investment level for the sub-transmission system is primarily based on historical costs for such work. Where conditions render an asset unable to perform its intended electrical or mechanical function on the system, the Company initiates the timely replacement of such assets under the Damage/Failure spending rationale.

2025 to 2026 Variance:
The variance between the 2025 and 2026 Plans, shown in the table below, is based on updating historical spending to include recent fiscal years.

Table 3-3
Damage Failure Spending Rationale Variance Summary ($Millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.9	4.9	5.0	5.1	5.2	-	26.0
2026	-	4.9	5.0	5.1	5.2	5.4	25.5

There are no specific projects in this mechanism estimated to have a spending of more than $1 million in any fiscal year.

3. C. System Capacity

System Capacity projects are required to ensure that the sub-transmission system has sufficient capacity, resilience, and operability to meet customer demand. Projects in this rationale are intended to maximize equipment service lives by limiting thermal stress, to provide appropriate degrees of system configuration flexibility to limit customer reliability impacts associated with an interruption, and to maintain the requisite power quality.

The projected investment for sub-transmission work in the System Capacity spending rationale over the Plan period is shown in the table below.

2025 to 2026 Variance:
The projected program investment is based on the specific projects discussed in the Load Relief portion of this chapter. Comparison of the overall spend in sub-transmission between the 2025 and 2026 Plans is shown in the table below.

Table 3-4
System Capacity Spending Rationale Variance Summary ($Millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.0	1.4	5.2	1.2	15.4	-	25.2
2026	-	1.6	6.1	5.3	3.1	0.2	16.3

Load Relief

Drivers:
An annual review of the sub-transmission system, including substation and circuit loading, is performed to review equipment utilization. The reviews consider both normal equipment loading and Load at Risk following an N-1 contingency. Forecasted load additions are applied to historical data, and the system is analyzed to determine where and when constraints are expected to develop. Recommendations for system reconfiguration or system infrastructure development are created as part of this annual review to ensure load can be served during peak demand periods and is documented in the Annual Capacity Plan.

The normal loading assessment identifies load relief plans for facilities that are projected to exceed normal capability (*i.e.*, maximum peak-loading allowed, assuming no system contingencies). Projects created as a result of the review are intended to be in-service within the year the violation is identified. N-1 reviews are conducted as well to identify facilities that are anticipated to exceed emergency ratings. Over the next ten years, load growth is expected to increase by an average of 0.9% per year after weather normalization to the 90/10 forecast. The forecast incorporates anticipated effects on demand due to solar, Battery Energy Storage Systems (“BESS”), electric vehicles, electric heat pumps, and energy efficiency investments. Incremental funding, particularly in the latter part of the plan, is driven by capacity needs for electrification (i.e., electric vehicles and electric heat pumps).

Customer Benefits:
The benefit to customers of completing the work identified in capacity planning studies is less exposure to service interruptions due to overloaded cables and transformers.

The majority of projects resulting from these studies are typically classified as Load Relief. Though a project is classified in one program such as Load Relief, it may have multiple drivers including reliability.

2025 to 2026 Variance:
The projected investment in this program is shown below. The variation year-on-year is due to the scope and timing of specific projects. In addition, station-related sub-transmission capacity improvements are discussed in Chapter 2 due to their FERC classification. Many of the projects in the Sub-transmission Asset Replacement and Overhead Line programs have multiple drivers and provide load relief and reliability improvements. A comparison of Load Relief spending between the 2025 and 2026 Plans is shown in the table below.

Table 3-5
Load Relief Program Variance Summary ($Millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.0	1.4	5.2	1.2	15.4	-	25.2
2026	-	1.6	6.1	5.3	3.1	0.2	16.3

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **25H Cable- New UG 23kV Cable (C097197) –** This project funding is for installing new 23kV cables to 25H from Sawyer Terminal station with the goal of connecting the 25H cable from a new circuit breaker being installed at Sawyer station under project C097293.
- **School St - N. Troy #19 Reconductor (C099660) -** Reconductor the School Street - North Troy #19, 34.5 kV, sub-transmission line to 477 ACSR in order to alleviate existing thermal overloads under loss of the Maplewood - Newark Street line due to hydro generation. The Crescent - North Troy #20 line will also be reconductored as this line shares the same structures as the School Street – North Troy #19 line.

3. D. Asset Condition

Planned asset condition investment levels for the sub-transmission system are described below.

2025 to 2026 Variance:
The projected investments for asset condition driven projects are shown in the table below and the variation year-on-year is due to the scope and timing of individual projects.

Table 3-6
Asset Condition Spending Rationale Variance Summary ($Millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	18.1	37.5	39.0	53.6	73.7	-	221.8
2026	-	33.4	34.8	38.7	65.8	71.8	244.5

Inspection and Maintenance

Under this program, the Company performs visual inspections on all overhead and underground sub-transmission assets once every five years. Each inspection identifies and categorizes all necessary repairs, or asset replacements, against a standard and in terms of criticality to maintain customer reliability in compliance with the Safety Order.[1]

In addition, the following types of inspections are conducted by the Company:

- Annual aerial assessments of sub-transmission lines, and
- Infrared inspections of sub-transmission lines on a three-year cycle.

The Company also performs annual elevated voltage testing per the Safety Order on all facilities capable of conducting electricity that are publicly accessible.

Drivers:
The Company implements the I&M program in accordance with the Safety Order and details its application in its Asset Condition Report.[2]

Customer Benefits:
This program is designed to ensure the Company fulfills its obligation to provide safe and reliable service through regular inspections of its facilities and timely repair of identified safety and reliability issues.

2025 to 2026 Variance:
Current investment forecasts are based on actual expenditures incurred under the I&M program, shown in the table below.

Table 3-7
Inspection and Maintenance Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.7	6.1	6.3	6.6	6.9	-	31.6
2026	-	6.1	6.3	6.6	6.9	7.1	33.0

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **I&M – NE/NC/NW Sub-T Line Work From Insp. (C026165, C026166, C026167) –** The I&M and Elevated Voltage Testing Program is funded annually to inspect and address overhead and underground distribution assets in need of repair or replacement. This program is mandated under case 04-M-0159 by the PSC.

[1] *Case 04-M-0159, Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems, Order Adopting Changes in the Electric Safety Standards (issued and effective Dec. 15, 2008, revised in March 2013) ("Safety Order").*
[2] *Report on the Condition of Physical Elements of Transmission and Distribution Systems, Case 20-E-0380, most recently filed on September 30, 2024.*

Asset Replacement

Various projects are in-place to refurbish or replace sub-transmission overhead assets to ensure the system continues to perform in a safe and reliable manner. This includes pole, tower, insulator, cross-arm, overhead ground wire, and conductor replacement.

Drivers:
Although spending is categorized by spending rationale, all drivers are considered in determining the optimal project solution. Reliability and asset condition are the main drivers for these projects. Historically, the number of reliability events that are initiated on the sub-transmission system is low; however, these events can result in a substantial number of customers being interrupted where the lines are radial.

Customer Benefits:
Refurbishment and replacement of sub-transmission system components can positively impact regional CAIDI/SAIFI and Customer Minutes Interrupted ("CMI").

2025 to 2026 Variance:
The projected investment is shown in the table below. Existing identified work under this program will continue. New projects are being identified on lines where work is required due to significant asset deterioration. The prioritization of these projects is continuously reviewed, and their schedules are updated accordingly.

Table 3-8
Asset Replacement Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.3	15.9	18.5	27.0	29.7	-	96.4
2026	-	14.5	16.7	18.0	25.8	27.1	102.1

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Coffeen Asset Replacement SubT Relo (C089520) –** Relocate the Dexter Coffeen 25 23kV circuit to support the larger Coffeen Sation Relocation Project C081787.
- **Gasport-Telegraph 312 34.5kV Refurb (C084019) –** An inspection performed on the Gasport-Telegraph 312 circuit identified numerous deteriorated assets that require attention. Addressing these deteriorated assets is necessary to ensure reliable power to National Grid's customers and to address safety concerns related to aging infrastructure. This project plans to replace 56 structures and cross-arms at one (1) location.
- **Theresa - S Philadelphia 21 Refurb (C094064) –** This project plans to refurbish the Theresa - S Philadelphia 21, 23kV circuit by replacing 78 wood pole structures in-kind, cross-arms at six (6) locations, change out insulators at one (1) location, and performing miscellaneous maintenance items.
- **Attica-Wethersfield 209 ACR (C081705) –** An inspection of the Attica-Wethersfield 209 circuit found several deteriorated assets. It is important to address these issues to provide reliable power for National Grid's customers and to address safety concerns related to aging infrastructure. This project plans to replace 73 structures, remove one (1) structure, and replace insulators at 29 locations.

- **Mallory - Constantia 31 34.5kV Refurb (C084194) –** This project plans to refurbish the Mallory-Constantia 31, 34.5kV circuit by replacing 54 wood pole structures in-kind (nine of these structures to be replaced with Chemonite poles), cross-arms at three (3) locations, change out insulators at eight (8) locations, and perform miscellaneous maintenance items.
- **McIntyre-Hammond 24 reloc/refurb (C075852) –** An inspection of the McIntyre - Hammond 24 circuit found numerous defects that required attention. Additionally, during the study, three (3) sections of the circuit were noted to have extremely poor access. These sections were noted between Str# 46 & 136 which is approximately five (5) miles, between Str# 185 & 258 which is approximately 0.5 miles, and between Str# 260 & 430 which is approximately nine (9) miles. The McIntyre - Hammond 24 circuit is a radial circuit in Northern New York near the St. Lawrence River. This area of the state is known for harsh winter weather which can further delay restoration times.
- **Teall 23 34.5kV Refurb (C084196) –** An inspection of the Teall 23 circuit was performed and found numerous defects that require refurbishment. This project plans to replace 78 structures.
- **Cortland 21 34.5 kV Refurbish (C081646) –** This project plans to refurbish the Cortland 21, 34.5kV circuit by replacing 63 wood pole structures in-kind, removing a pole structure at one (1) location, cross-arms at seven (7) locations, and change out insulators at two (2) locations.
- **Rensselaer Area Study: Sub-T (C091818) –** There are numerous aging assets surrounding the Rensselaer area needing replacement in the next five (5) years based on substation asset condition reports. Additionally, forecasts out to 2050 depict neighboring assets exceeding both Summer Normal (SN) and Winter Normal (WN) ratings by over 200%. These forecasts are reflective of an urban environment with significant potential for EV and electric heat pump adoption but minimal opportunity for large, distributed energy resources for load mitigation.
- **8, 27, 16, 12, 10, 2 H - Rep (Phase 1: C097769, Phase 2: C097773) –** This project is part of a continuous initiative to replace aged and deteriorating cables, specifically targeting six (6) Sawyer Terminal Station 23kV Cables that are currently Paper in Lead Cable (“PILC”). This undertaking represents the first phase of a two-phase plan aimed at replacing the old cables with Ethylene Propylene Rubber (“EPR”) cables, which offer more reliability and sized up to increase the ampacity. Cables 8H, 27H, 16H, 12H, 10H, & 2H have been prioritized based on several criteria, including the average number of outages per year, current loading, the location of future projects, and the rating of the cables.
- **SubT Line Ins. Repl Program (C078624 – East, C078518 - West) –** Vertical Post Insulators manufactured by AB Chance from 1977-1985, Lapp in the 1990s, and Fujian from 2013-2015 have been breaking at an even greater rate during the past years on 23 kV-46 kV circuits. Insulator conditions are often difficult to gauge in the field through visual inspections from the ground, resulting in unexpected failures that can cause outages and high safety risks. This program replaces problematic insulators as they are identified as well as aging insulators on high reliability impact circuits.
- **35E & 7E - Replacement (C097765 – Phase 1, C097782 – Phase 2) –** This project is part of a continuous initiative to replace aged and deteriorating cables, specifically targeting two 23kV Network Supply Cables that are currently PILC. This undertaking represents the first phase of a two-phase plan aimed at replacing the old cables with EPR cables, which offer more reliability and sized up to increase the ampacity. Cables 35E and 7E have been prioritized based on several criteria, including the average number of outages per year, current and anticipated loading, the location of future projects, and the rating of the cables.
- **Cortland 20 refurbish 34.5 kV (C081639) –** This project plans to refurbish the Cortland 20, 34.5kV circuit by replacing 53 wood pole structures in-kind.
- **Woodard-Ash27 Partial UG (C086593 – OH portion, C086594 – UG portion)** – An inspection of steel towers #113 - #116 found that they are at the end of their service life and

need to be retired. A Real Estate review of the adjacent wood pole structures # 117 - #120 found that they had insufficient land rights. This project plans to address both issues by relocating the circuit.

- **12S, 10S, 27S, 17S - Rep (C098917 – Phase 1, C098918 – Phase 2) -** This project is part of a continuous initiative to replace aged and deteriorating cables, specifically targeting four (4) Seneca Terminal 23kV Cables that are currently PILC. This undertaking represents the first phase of a two-phase plan aimed at replacing the old cables with EPR cables, which offer more reliability and sized up to increase the ampacity. Cables 12S, 10S, 27S, 17S have been prioritized based on several criteria, including the average number of outages per year, current loading, the location of future projects, and the rating of the cables.
- **8K & 4K – Cable Replacement (C098923 – Phase 1, C098924 – Phase 2) -** This project is part of a continuous initiative to replace aged and deteriorating cables, specifically targeting two (2) Kensington 23kV Cables that are currently PILC. This undertaking represents the first phase of a two-phase plan aimed at replacing the old cables with EPR cables, which offer more reliability and sized up to increase the ampacity. Cables 8K & 4K have been prioritized based on several criteria, including the average number of outages per year, current loading, the location of future projects, and the rating of the cables.
- **Cable 6E Replacement (C098926) -** This project is part of a continuous initiative to replace aged and deteriorating cables, specifically targeting 23kV Cables that are currently PILC. This undertaking represents the long-term plan aimed at replacing the old cables with EPR cables, which offer more reliability and sized up to increase the ampacity. Cable 6E has been prioritized based on several criteria, including the average number of outages per year, current loading, the location of future projects, and the rating of the cable.
- **Cables 1E & 2E Replacement (C098925) -** Cables 1E & 2E have been prioritized based on several criteria, including the average number of outages per year, current loading, the location of future projects, and the rating of the cables.
- **Telegraph-Medina 302 &303 34.5 kV (C081634) –** This project plans to replace around 55 single circuit wood poles and 11 cross-arms due to deterioration and reconductor around 5.91 circuit miles due to capacity concerns.
- **Ashley - Glens Falls 5 ACR (C094096) –** This project is in the initial stages to identify the amount of refurbishment needed to address any and all safety and reliability concerns due to deterioration of assets and outages. This project has not had a formal inspection. The circuit is located in the Northeast region. It is assumed five (5) to six (6) structures per mile will need replacement upon inspection. The circuit is approximately 11.5 miles long, including taps.
- **Cortland 23 34.5 kv Refurbish (C081647) –** This project plans to refurbish the Cortland 23, 34.5kV circuit by replacing 32 wood pole structures in-kind, cross-arms at 18 locations, change out insulators at one (1) location, and performing miscellaneous maintenance items. Additionally, this project plans to remove five (5) structures on the retired in place Cooper Tools Tap.
- **North Lakeville-Ridge 218 refurb (C084014) –** This project plans to replace around 189 deteriorated wood poles, reconductor around 4.33 circuit miles of small wire that has reduced tensile strength, and replace in-line surge arresters at 24 structure locations on the North Lakeville-Ridge 218 34.5kV circuit.
- **Ransomville-Phillips 402 refurb (C084189) – The** scope of this project includes the replacement of 12 structures, 40 crossarms, and 10 insulators at various locations along the Ransomville-Phillips 402 circuit.
- **Spier-Saratoga Tap #3 & #12 ACR (C084068) –** This project plans to replace 39 structures as well as cross-arms at 13 locations on the Spier - Brook Rd 3 and Spier - Saratoga 12 circuits between Str# 117 outside of Wilton Station and Str# 264.

- **Woodard 24 Refurb (C094066) – This** project is in the initial stages to identify the amount of refurbishment needed to address any and all safety and reliability concerns due to deterioration of assets and outage events. This project has not had a formal inspection. The circuit is located in the Central region. It is assumed five (5) to six (6) structures per mile will need replacement upon inspection. The circuit is approximately 12.3 miles long.

Overhead Line

Various projects are in-place to refurbish or replace sub-transmission overhead assets to ensure the system continues to perform in a safe and reliable manner. This includes pole, tower, insulator, cross-arm, overhead ground wire, and conductor replacement.

Drivers:
Although spending is categorized by spending rationale, all drivers are considered in determining the optimal project solution. Reliability and asset condition are the main drivers for these projects. Historically, the number of reliability events that are initiated on the sub-transmission system is low; however, these events can result in a substantial number of customers being interrupted where the lines are radial.

Customer Benefits:
Refurbishment and replacement of sub-transmission system components can positively impact regional CAIDI/SAIFI and CMI.

2025 to 2026 Variance:
The projected investment is shown in the table below. Existing identified work under this program will be continued. New projects are being identified on lines where work is required due to significant asset deterioration. The prioritization of these projects is continuously reviewed, and their schedules are updated accordingly.

Table 3-9
Overhead Line Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	4.1	11.3	11.3	13.8	27.6	-	68.1
2026	-	9.4	10.0	12.3	31.1	28.6	91.4

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Solvay/Woodard-Ash St 27&27&28- 34.5kV Refurbishment (C046439)** – An inspection performed on the Woodard - Ash 27 & Solvay - Ash 28 circuits identified numerous deteriorated assets that require attention. This project plans to replace 69 structures on the Woodard – Ash 27 & the Solvay – Ash 28 circuits.
- **Lighthouse Hill – Mallory 22, 34.5kV Refurbishment (C046441)** – An inspection performed on the Lighthouse Hill – Mallory 22 circuit identified numerous deteriorated assets that require attention. This project plans to replace 210 structures on the Lighthouse Hill – Mallory 22 circuit.
- **Tonawanda Lines 601-604, 23kV Refurbishment (C046451)** – An inspection performed on the Tonawanda 601, 602, 603 & 604 circuits identified numerous deteriorated assets that require attention. This project plans to replace insulators at six (6) structures, replace seven

(7) miles of Overhead Ground Wire ("OHGW") on both sets of towers (14 miles total) with one (1) of the OHGW replaced with OPGW, replace one (1) mile of double circuited aerial cable (two (2) miles total) with 500 MCM aerial cable, and replace 11 wood pole structures on the Tonawanda 601, 602, 603, & 604 circuits.

- **Woodard 29, 34.5kV Refurbishment (C046473)** – An inspection performed on the Woodard 29 identified numerous deteriorated assets that require attention. This project plans to replace deteriorated Sub-T assets, such as, but not limited to, poles and insulators on the Woodard 29 circuit
- **Shaleton-Ridge 610 Station 207 Tap (C046779)** – This project plans to replace nine (9) steel tower structures with 13 wood pole structures on the Shaleton-Ridge 610; Station 207 Tap.
- **Kenmore – Winspear 630 & 631 Refurbishment (C050318)** – This project plans to replace one (1) structure and reconductor 0.6 miles of aerial cable on the Kenmore – Winspear 630 & 631 circuits.
- **Union – Lake Clear 35, 46kV Refurbishment (C050324)** – This project plans to replace deteriorated Sub-T assets, such as, but not limited to, poles and insulators on the Union – Lake Clear 35 circuit
- **Barker – Lyndonville 301, 34.5kV Refurbishment (C052511)** – This project plans to replace 184 structures including 46 Chemonite treated poles to deter woodpecker damage on the Barker – Lyndonville section of the Phillips – Medina 301 circuit
- **Trenton – Whitesboro 25, 46kV Refurbishment (C058579)** – This project plans to replace deteriorated Sub-T assets, such as, but not limited to, poles and insulators on the Trenton – Whitesboro 25 circuit.
- **N.Lakeville-Richmond 226 Line Regs (C094354) –** This project entails replacing the existing 34.5 kV line regulators on Structure 539-3 of the N. Lakeville-Richmond 226. This replacement is essential to address concerns regarding the premature failure of the NYW Sub-T line regulators, thereby ensuring improved reliability and performance.
- **Woodard 24 Refurb N. I-90 (C060445) –** An inspection of the Woodard 24 circuit found numerous condition issues that require attention. This project plans to refurbish the portion of the Woodard 24 circuit north of I-90.
- **N.Lakeville-Hemlock 224 Line Regs (C094356) -** This project aims to replace the 34.5kV line regulators on Str# 111 in the Genesee area with three (3) new 34.5kV rated line regulator units. This replacement is necessary to address concerns regarding the premature failure of the NYW Sub-T line regulators, ensuring improved reliability and performance.
- **Maplewood-Menands 17/18 d/c-34.5kv (C046432)** - An inspection of the Maplewood - Menands 17 & 18, 34.5kV circuits was performed and numerous condition concerns were found. This project plans to replace a total of 21 structures, removing three (3) structures, and replacing the insulators, hardware, and jumper loops at 30 structures on the Maplewood - Menands 17 & 18, 34.5kV circuits.
- **Lowville - Boonville 22 ACR (C095402) –** This project is in the initial stages to identify the amount of refurbishment needed to address any and all safety and reliability concerns due to deterioration of assets and outage events. This project has not had a formal inspection. The circuit is located in the Lowville region. It is assumed five (5) to six (6) structures per mile will need replacement upon inspection. The circuit is approximately 25 miles long.
- **Townline - Piercefield 32 ACR (C095407) –** This project is in the initial stages to identify the amount of refurbishment needed to address any and all safety and reliability concerns due to deterioration of assets and outage events. This project has not had a formal inspection. The circuit is located in the Potsdam region. It is assumed five (5) to six (6) structures per mile will need replacement upon inspection. The circuit is approximately 23 miles long.
- **Homer Hill - Ceres 809 ACR (C094127) –** This project is in the initial stages to identify the amount of refurbishment needed to address any and all safety and reliability concerns due to

deterioration of assets and momentary outages. This project has not had a formal inspection. The circuit is located in the Southwest region. It is assumed 5 to 6 structures per mile will need replacement upon inspection. The circuit is approximately 18.1 miles long,

- **Homer Hill-Nile 811-34.5kV (C050326) –** This project plans to replace 94 wood pole structures, including 18 using Chemonite treatment. Additionally, re-conductor 4.77 miles of #1 Copper small wire conductor. Lastly, perform miscellaneous repairs at 86 structure locations.
- **Tonawanda 601-604, 23kV - T22&T23 (C067266) –** This project plans to replace four (4) square base double circuit towers (#22 & #23) on the Tonawanda 601/603 and Tonawanda 602/604, 23kV circuits located in N. Tonawanda off Twin City Memorial Hwy
- **Tonawanda Lines 622-624-23kv (C046452)** – This project plans to replace 10 wood pole structures, one (1) steel tower structure, 1.1 miles of aluminum sheathed aerial cable, one (1) mile of OHGW.
- **Youngstown - Mountain 401 ACR (C094088) –** This project is in the initial stages to identify the amount of refurbishment needed to address any and all safety and reliability concerns due to deterioration of assets and outages. This project has not had a formal inspection. The circuit is located in the Frontier/Niagara Falls region. The total number of structures for the circuits is approximately 328. It is assumed that 25% of the structures need to be replaced.

Underground Cable

The strategy for the asset management of Sub-Transmission underground cable is proactive replacement. Sub-transmission cable replacements will be completed through a series of specific projects targeting cables based on their past performance, history of failures, asset age, cable construction, design deficiencies, loading, and critical customers served.

City of Buffalo in Western, NY
The Sub-Transmission system in the City of Buffalo consists of 23kV cables that directly serve customer loads and supply the City's distribution system. Construction of the City's existing distribution system began in the 1920s and is supplied by four (4) terminal stations: Sawyer, Seneca, Kensington and Elm Street. The 23kV cable system represents approximately 433 miles of underground cables and supplies over forty 4.16kV distribution substations. Approximately 385 miles (about 620.8 km) of the original 1-3/C-350kcmil CU PILC installed in the late 1930s are still in service. These aging cables continue to experience mechanical stress due to annual loading cycles.

Eastern, NY and Central, NY
The underground Sub-Transmission systems in Eastern and Central, NY consist mainly of 34.5kV cables that directly serve customer loads and supply distribution systems that include 4 kV class substations that were prevalent prior to 115kV Transmission systems as well as 13.2kV class Distribution systems.

Drivers:
Though failures of individual underground sub-transmission cables typically do not impact customer reliability as they are generally networked, they can be difficult to locate and time-consuming to repair.

The sub-transmission underground cable asset replacement program replaces cables that are in poor condition, have a history of failure, or are of a type known to have performance issues.

Customer Benefits:
Cable replacement projects reduce the likelihood of in-service cable failures that increase exposure to extended outages.

2025 to 2026 Variance:
The projected program investment is shown in the table below. The variation year-on-year is due to the scope and timing of specific projects and needs in the area.

Table 3-10
Underground Cable Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	1.3	0.0	0.0	0.0	-	2.3
2026	-	1.7	0.0	0.0	0.2	6.9	8.9

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Buffalo 23kV UG Cable replacement (C092587)** - Buffalo 23kV underground electric system was primarily built around 1929. As new terminal stations were added some new sections were installed to tie into the existing system. Approximately 433 miles of PILC underground 23kV cables are in service. 385 miles are originally installed cables. (~1929) UG cable system in the city of Buffalo has entered a stage where their true performance capability is uncertain. Experiencing an increase in cable and splice failures cause unexpected outages. High yearly accumulated repairs cost: $500,000 expected per year. 150 miles of poor performing PILC cables presently in service and 83 of those miles are considered as high-risk cables.

3. E. Multi-Value Distribution (MVD)

MVD projects combine proactive asset replacements driven by poor condition with an expanded scope to increase system capacity where appropriate. Historically, Multi-Value Distribution projects were captured under the Asset Condition spending rationale. In 2023, National Grid recognized the importance of highlighting Multi-Value Distribution as its own mechanism with two core concepts: asset condition and increased system capacity. The projects detailed below have a primary driver to replace structures on the sub-transmission system due to poor condition with a secondary driver to replace small conductors with larger conductors to proactively increase system or hosting capacity.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans shown in the table below, as well as variances in the scope and timing of specific projects in this mechanism, are described below. Spend levels projected for the common years of the 2025 and 2026 CIP for this spending rationale are similar. Variation year-on-year is due to reprioritization of the scope and timing of individual projects. An increase in spending in this spending rationale is expected in FY31, as the recent introduction of this spending rationale has driven greater focus on the identification of multi-value project opportunities.

Table 3-11
Multi-Value Distribution ("MVD") Spending Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.8	8.3	4.0	8.8	11.2	-	38.1
2026	-	7.6	5.5	5.8	9.6	20.7	49.0

MVD System Capacity

The MVD system capacity strategy includes those projects where major line refurbishments have been identified coupled with reconductoring from small ampacity wire to higher ampacity wire. These projects encompass replacing structures identified to be in poor condition, reconductoring small wires, and potential relocation of back lot sections.

Drivers:
The investments in this strategy are driven by the need to address the Company's increasingly aging and obsolete infrastructure and meet the ever-increasing customer electrification and decarbonization demands to ensure safe and reliable network operation.

Customer Benefits:
The MVD System Capacity strategy can maximize the utilization of existing asset condition projects and planned system capacity needs while avoiding the cost of over-built or otherwise inefficient solutions which only address a single asset condition issue.

2025 to 2026 Variance:
The projected investment is shown in the table below and the variance drivers are the same as those described above for Table 3-11.

Table 3-12
Multi-Value Distribution ("MVD") System Capacity Spending Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	5.8	8.3	4.0	8.8	11.2	-	38.1
2026	-	7.6	5.5	5.8	9.6	20.7	49.0

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Ader Creek Substation – Sub-T (C093793) –** Rebuild Alder Creek with two (2) – 10MVA 46/13.2kV boutiques. Retire all distribution equipment apart from R230 & supporting equipment. G&W 72 kV recloser will be used as high side protection. Approximately 3.25 miles of conversion to three-phase & 6.5 miles reconductor from 4.8kV to 13.2kV.
- **Phillips-Barker 301-34.5kV (C046465) –** Replace 200 wood pole structures and re-conductor 7.08 circuit miles of conductor with 336.4 kcmil 18/1 ""Merlin"" conductor.
- **Phillips-Telegraph 304-34.5kV (C046466) –** This project will replace / repair all defects found during the 2019 Inspection Report, all the small #1 and #2 CU conductor, and all the undersized poles. This includes 217 structure replacements, six (6) lightning arrestors replacements, six (6) cross-arm replacements, 18 guy wire repairs, and 1.98 miles of reconductoring.

- **Lyndonville-Medina 301-34.5kV (C052512) -** Address all safety and reliability concerns arising from asset deterioration and outage events. It is estimated that around 62 structures will need replacement, and it is assumed that 50% matting will be required.
- **Sherman-Ashville 863 (C079096)** – Replace 168 structures and reconductor 3.6 miles of #2 Copper conductor.
- **Bristol Hill-Phoenix 23-34.5kV (C046474)** – Replace 103 structures and reconductor 0.13 miles of #8 Copper conductor.
- **Bagdad-Dake Hill 815-34.5kV Refurbishment (C050292)** – Replace 118 structures, changeout insulators at 3 locations, reconductor approximately eight (8) miles of #1 Copper conductor.
- **Warrensburg-Chestertown 6 Reconductor OH (C093770)** – Reconductor approximately one (1) mile of 4/0 AL overhead conductor due to forecasted load growth on 34.5kV system north of Warrensburg substation which is expected to overload the line by 2040.
- **Warrensburg-Chestertown 6 Reconductor UG (C093771)** – The Warrensburg - Chestertown #6 line is a 14 mile 34.5 kV subtransmission line, which is the primary feed for four (4) stations in the southern Adirondacks: Chestertown 042, Riparius 293, Pottersville 424, and Schroon Lake 429. This project aims to replace a section of underground cable that is currently forecasted to be a limiting element under normal loading conditions as well as contingency load conditions.
- **Rotterdam #34 #36 34.5kV Cable Repl (C077065) –** Upgrade the preexisting 350 MCM gas filled cable in the #34 & #36 lines to 750 MCM Cu, thereby increasing their summer normal ratings from 19.0MVA to 30.9MVA. The total replacement will consist of approximately 4,730 feet of cable, 1,800 feet of duct-line, and five (5) new manholes.
- **W. Milton Tap 34.5kV New Line (CD00898)** – Build a new 34.5kV circuit between Rock City Falls and West Milton and retire the Ballston – Randall Rd 9 circuit.
- **Station 34/35 Boutique – SubT (C099198)** – Install four (4) new 5 MVA 23/13.2 kV boutique substations adjacent and on existing substation s34 & 35 parcels. This funding project covers the Sub-Transmission work, including the installation of the pad-mounted transformer, along with the necessary cable and conduit connections to the new boutique substation.
- **Station 41 Boutique – SubT (C099199)** – Install two (2) new 5 MVA 34.5/13.2 kV boutique substations adjacent and on existing substation 41 parcel. This funding project covers the Sub-Transmission work, including the installation of the pad-mounted transformer, along with the necessary cable and conduit connections to the new boutique substation. This is associated and dependent on the Ohio Street Duct funding project C081704, in order to extend 34.5kV cable from the south near MITS station 2154.
- **Waterport tap 301-34.5kV (C052515) -** The scope of this project includes the replacement of 79 structures and 15 crossarms, one (1) location for insulator replacement, and approximately 3,000 feet of reconductoring along the Phillips-Medina 301; Waterport Tap.

3. F. Reliability

Reliability projects are required to ensure the electric network has sufficient operability to meet the demands of the system and National Grid's customers. Projects in this spending rationale are intended to improve performance of facilities where design standards have changed over time

and to provide appropriate degrees of system configuration flexibility to limit adverse reliability impacts of contingencies.

The Company has instituted planning criteria for Customers Interrupted ("CI") and Customer Hours Interrupted ("CHI") at Risk following an N-1 contingency that sets CI and CHI exposure thresholds for various supply and feeder contingencies for the purpose of setting a standard for minimum electrical system performance. These thresholds are applied in conjunction with other criteria—such as maintaining acceptable delivery voltage and observing equipment capacity ratings—to ensure the system operates in a reliable manner while managing risk of customer interruptions to an acceptable level.

Analysis of the interruptions under these criteria assumes that all practical means are used to return load to service, including use of mobile transformers and field switching via other area supply lines and/or area feeder ties. CHI analysis recognizes the approximate times required to install mobile/back-up equipment as well as stepped field switching, such as moving load from the adjoining in-service station with feeder ties, that will be used to pick-up customers experiencing an interruption, to a second adjoining station to increase the capability of the feeder ties.

The projected investment for sub-transmission work in the Reliability spending rationale over the Plan period is shown in the table below.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans are shown in the table below.

Table 3-13
Reliability Spending Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.2	2.6	4.5	5.6	5.8	-	20.8
2026	-	3.0	2.4	5.2	6.9	4.1	21.5

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Hawkeye Station Sub – SubT (C097562) –** Due to the proximity of the Union Falls substation to the Saranac River, the substation is located in the designated, high risk flood zone per FEMA thus placing the station equipment at risk. The Union Falls substation will be retired and a new station will be built.
- **Mumford 5053 Boutique Sub-T (C098158) -** This project is the Sub-T work associated with for the 12.5 MVA boutique substation to contribute to resolving the 3,258 CHI violation at Mumford Station 50. This includes 34.5 kV tap, poles, switches, high side recloser, and the underground cable, as well the 34.5/13.2 kV 12,500 kVA distribution transformer with necessary underground cable, poles, low side recloser, switches, and regulators.
- **Whitesboro-Schuyler 29 Sauq Reconfg (C098344) -** This project aims to reconfigure the Whitesboro-Schuyler 29 sub-transmission circuit to Yahnundasis station down an existing transmission ROW. This project is also planning the removal of the existing circuit between structures 1-131.

3. G. Resiliency

Resiliency projects are intended to ensure the electric power system has the ability to recover quickly following a large-scale interruption or, more generally, the ability of anticipating extraordinary and high-impact, low-probability events and rapidly recovering from these disruptive events.

System recovery refers to the use of tools and techniques to quickly restore service to as many affected customers as practical.

Survivability refers to enhanced system planning or use of innovative technologies to aid customers, communities, and institutions in continuing some level of normal function when encountering limited or reduced access to the grid. The main program within this rationale is Sub-Transmission Automation. Sub-Transmission Automation is a method of systematically installing devices upon the sub-transmission system which will reduce the total number of CI for an extended period from a disruptive event. A new program under Sub-Transmission is Climate Vulnerability. The projects under this program are a result of the CCVS and CCRP to prepare Sub-Transmission assets to adapt to projected increased intensity and frequency of climate hazards.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans are shown in the table below.

Table 3-14
Resiliency Spending Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	4.2	7.4	8.4	19.1	20.1	-	59.2
2026	-	5.3	9.9	22.3	23.5	23.3	84.3

Sub-Transmission Automation

The Sub-Transmission Automation Strategy includes advanced distribution automation methodologies as well as SCADA connectivity for reclosers, fault locators, and switches and the interface of distribution automation-enabled line devices with substation feeder breakers. It also encompasses the communication of these devices to a centralized control for FLISR capability, control center operations, and database warehouses.

Drivers:
The installation of modernized switching schemes and FLISR will provide increased reliability and resiliency to the sub-transmission system. The number of switches per circuit or installation will vary depending on the number of substations a circuit supplies, the desired segmentation of the line, and the configuration of the supply system. Many of the automation schemes are unique and are developed considering an analysis of expected costs and benefits.

Customer Benefits:
Distribution lines or substations not equipped with automated sectionalizing or throw over schemes may be subject to extended service interruptions as operations personnel must travel to the field locations to perform switching. This program provides an opportunity to continue to modernize the grid to the benefit of customers by reducing the number of customer interruptions

that result from a given contingency and the time required to reconfigure the system to restore service to as many customers as possible while a faulted section of the system is being repaired.

2025 to 20265 Variance:
The projected investment is shown in the table below. National Grid expects to continue statewide deployment of Sub-Transmission Automation (i.e., FLISR) on selected circuits after an acceleration effort in the areas of reliability and resiliency.

Table 3-15
Sub-T Automation Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	4.1	4.4	5.4	16.0	15.7	-	45.7
2026	-	4.4	5.4	16.0	15.7	16.5	58.1

The following programs are classified as Sub-Transmission Automation and have planned spending more than $1 million in any fiscal year:

- **Sub-Transmission Automation Program (C089150 - NYE, C090712 - NYC, C084935 - NYW)** – These projects cover deployment of automation schemes (such as FLISR) which will improve reliability and resiliency by reducing both customers impacted by contingencies and restoration times for unaffected customers via automated switching schemes.

Feeder Tie Enhancement

This program is intended to create new high-value feeder ties. New feeder ties are established to make substations/feeders more resilient and to remove the need for a mobile substation by bolstering feeder capability. In case of an outage, feeder ties are used to reconfigure the system for rapid customer restoration. During a station interruption, the installation of a mobile substation can often take multiple hours leaving customers out of service, as ample feeder tie capacity does not exist. Targeted feeder ties can eliminate the need to deploy a mobile substation by establishing adequate feeder capabilities to offload an entire interrupted station to adjacent stations via ties.

Drivers:
Feeder enhancements are used to improve resiliency in targeted areas by improving contingency response and recovery.

Customer Benefits:
National Grid anticipates improved restoration times for future outages in targeted areas.

2025 to 2026 Variance:
These projects were not in the 2025 Plan.

Table 3-16
Feeder Tie Enhancement Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	-	-	-	-	-	-	-
2026	-	1.0	1.4	3.1	4.7	3.7	13.9

- **Valley-Middleville 46kV Tie (C095738) –** This project plans to extend the 46kV ~6.5Miles along NY-28 to create a 46kV line tie between Middleville and Valley stations. This line experiences several outages a year on average where the addition of this 46kV tie would allow for fault isolation and switching to keep customers energized while the repairs are being made
- **Targeted feeder tie Cuyler-Delphi SubT (C094341)** - This project plans to convert ~2 miles of 4.16kV to 13.2kV, resolving thermal concerns in the load forecast. There is additional benefit from the creation of a parallel tie between Delphi 52 and Cuyler 25, restoring an additional 1,148 customers in the event of a station outage.

Climate Vulnerability

In early 2025 the Company filed an updated CCRP that identified investments needed to adapt to changes in climate. The updated plan incorporated direction from the PSC order from late 2024 based on the Company's CCVS and CCRP filings. The goal of this effort was to understand the impact future climate hazard projections would have on transmission and distribution assets and design standards and how to adapt to the impacts of climate change. The priority climate hazards identified for sub-transmission assets were wind and ice. These priority climate hazards were chosen based on wind and icing data that was provided by MIT. The projects below were identified in the CCRP to upgrade assets and to better withstand increased intensity and frequency extreme weather events.

Drivers:
As a result of the CCVS and CCRP, the below projects were recommended due to a projected increase in frequency and intensity of climate hazards across the sub-transmission system. From the Study and Plan, it was determined that sub-transmission assets should withstand more than the required NESC weather loading of 0.5 inches of icing and 40 mph wind gusts. This is based on the wind and radial icing data from a study that was completed with MIT.

Customer Benefits:
These projects will strengthen sub-transmission structures and assets to be able to withstand more intense weather events, such as wind and radial icing.

2025 to 2026 Variance:
The variance from FY25 to FY26 in the table below is due to changes to the Company's approved CCRP and deferrals to align with the rate case.

Table 3-17
Climate Vulnerability ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	3.0	3.0	3.1	3.1	-	12.2
2026	-	0.0	3.0	3.1	3.1	3.1	12.3

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

Sub-T CCRP Projects (C094135 - NYE, C094136 - NYC, C094134 - NYW) – To better maintain resilience during wind and icing events, future pole additions or replacements will use larger Class 1 poles for single circuit structures, Class H1 for double circuit structures, and Class H2 for double

circuit structures with distribution underbuilt or multiple third-party attachments. Approximately 900 sub-transmission structures will be affected by this design standard upgrade annually.

3. H. Communications / Control Systems

Table 3-18
Communications / Control Systems Spending Rationale Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.6	0.3	0.0	0.0	0.0	-	0.9
2026	-	0.3	0.0	0.0	0.0	0.0	0.3

There are no specific projects in this mechanism estimated to have a spending of more than $1 million in any fiscal year.

3. I. Policy Initiative

Policy Initiative projects are non-discretionary and are associated with a determination or directive from an external entity having authority. Examples are CLCPA or FERC1000 projects.

CLCPA Dependent and CLCPHA Phase 1 are addressed under this section. While these projects were planned prior to CLCPA for various system needs, their current priority is driven by their support of CLCPA Phase 1 projects and to address both National Grid system needs, and State transmission needs to integrate renewable generation and storage.

Drivers:
The New York State mandate to get 70% of energy from renewable sources by 2030 and achieve a 100% emission free grid by 2040 will require not only a large number of new renewable generators and storage, but also investment in the transmission and distribution systems. National Grid studies have shown that the transmission system in many of the areas of highest renewable generator interest is not capable of delivering power from the generators to the loads, both local and statewide. These projects are designed to address transmission system limitations and address the curtailment of renewable generation.

Customer Benefits:
These projects allow for additional renewable energy to reach the customers in support of the State's clean energy goals.

2025 to 2026 Variance:
This variance shown below is a consolidation of the CLCPA Ph1 and Dependent projects as this new spending rationale combines the two previous independent spending rationales.

Table 3-19
Policy Initiative ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	2.1	1.6	0.7	0.7	-	5.1
2026	-	0.1	0.2	1.2	0.0	0.0	1.4

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Sub T Line 213 tap to Golah Station (C095887) -** This project plans to relocate 3000' of 336.4 ACSR overhead Sub T Line 216 Tap to New Golah station. This is related to Golah sub rebuild funding project C051831 to address the transmission system limitations and address the curtailment of renewable generation.

3. J. Approved Proactive Planning

In August 2024, the PSC commenced the Proactive Planning Proceeding (Case 24-E-0364) to address grid infrastructure barriers to electrification from transportation and buildings (inclusive of economic development). Proactive Planning projects increase system capacity for granular hotspots of electric load growth driven by customer demands and policy requirements. For details regarding future Proactive Planning filings, please see chapter 4, section 4 L.

Drivers:
Increased load growth related to both transportation and building electrification have become a major driver for thermal constraints on both distribution and transmission circuits. In addition, “large load” interconnection requests have accelerated over the past several years, with particular concentration of requests in Upstate New York. To remove barriers and timeline requirements for new or upgraded electric interconnections, system capacity needs to be expanded in anticipation of certain load growth. These projects will look to address distribution system limitations and expand capacity for allowing new load growth to take place and interconnect.

Customer Benefits:
This provides shorter interconnection timelines for transportation and building electrification loads. In addition, this provides less exposure to service interruptions due to overloaded cables, sub-transmission lines, and transformers that are expected to be realized at a rapid pace. The projects from these studies are proactive and look to remove urgent constraints.

2025 to 2026 Variance:
Variance from Fiscal Year 2025 to 2026 is due to project rationales changing and adjustment of project scopes and schedules during project maturity.

Table 3-20
Approved Proactive Planning ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	3.4	4.5	0.7	1.0	0.3	-	9.9
2026	-	2.8	2.5	2.1	0.3	0.0	7.8

The following specific projects have forecasted spending that exceeds $1 million in any fiscal year:

- **Cables 35E & 9E (C095803) –** New customer connection on cables 35E and 9E that requires ~8MW for the entire project but the customer is building in phases. The first phase of the project requires 2.6MW delivered at a secondary voltage of 120/208V. The project includes ~2k feet, four (4) transformers and three (3) 38kV switchgear install on customer property.

- **Cortland OVS Truck Chargers (C097372) -** This project encompasses developing a direct tap to a 34.5kV sub-transmission line in the Cortland area to address the forecasted granular capacity to serve anticipated EV load at a I-81 rest stop in Cortland. This travel plaza has been identified in National Grid's Electric Highway Study as one of the highest forecasted charging capacity required sites on I-81. The location of the site about halfway between Pennsylvania and Syracuse makes it a great place for trucks and cars to stop and charge. The development of this site will be important in creating a viable charging network across New York State to facilitate the electrification of medium- and heavy-duty trucks as well as light-duty vehicles.
- **Wilton Sub-T Double Circuit (C099128) -** With New York State continuing to move towards electrification, including electric vehicles, improvements to National Grid's system will be required to serve this growing load, particularly in areas with fleet clusters. To serve the Wilton area electric vehicle load forecasted in 2030, approximately 2 miles of 34.5 kV will be needed.

3. K. Policy Initiative - CLCPA Phase 2

These projects are designed to address both National Grid system needs, and State transmission needs to integrate renewable generation and storage. These projects will be funded by National Grid customers as well as contributions from other Transmission and Distribution companies' customers throughout the State.

Drivers:
The New York State mandate to get 70% of energy from renewable sources by 2030 and achieve a 100% emission free grid by 2040 will require not only a large number of new renewable generators and storage, but also investment in the transmission and distribution systems. National Grid studies have shown that the transmission system in many of the areas of highest renewable generator interest is not capable of delivering power from the generators to the loads, both local and statewide. These projects are designed to address transmission system limitations and address the curtailment of renewable generation.

Customer Benefits:
These projects allow for additional renewable energy to reach the customers in support of the State's clean energy goals.

Table 3-21
CLCPA Phase 2 ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.2	0.3	0.1	0.1	0.1	-	0.8
2026	-	0.3	0.1	0.1	0.1	0.0	0.6

There are no specific projects in this mechanism estimated to have a spending of more than $1 million in any fiscal year.

Chapter 4: Distribution System

The Company's distribution system consists of lines and substations typically operating at 15kV and below. There are over 36,000 circuit miles of overhead primary wire and over 8,000 circuit miles of UG primary cable on the system supplying approximately 424,000 OH, padmount and underground distribution transformers. Additionally, there are 514 distribution substations providing service to the Company's over 1.67 million electric customers. To serve the needs of customers over the five-year period covered by this Plan, the Company expects to invest approximately $5438.7 million on the distribution system, as shown in Table 4-1 below.

Table 4-1
Distribution System Capital Expenditure by Spending Rationale ($ millions)

Spending Rationale / Funding Mechanism	FY27	FY28	FY29	FY30	FY31	Total
Customer Requests/Public Requirements	235.3	221.2	224.2	229.6	238.6	1148.9
Damage/Failure	132.1	132.1	137.7	142.3	146.0	690.1
System Capacity - NY	49.9	67.2	109.7	116.1	76.1	419.1
Asset Condition	80.5	109.2	113.7	108.5	115.2	527.2
Multi Value Distribution (MVD)	91.4	100.7	136.5	212.1	345.3	885.9
Reliability	37.1	32.4	39.6	32.9	24.5	166.6
Resiliency	51.9	62.3	72.9	102.0	92.2	381.3
Communications/Control Systems	41.0	46.6	46.0	50.4	51.8	235.8
Non-Infrastructure	4.8	4.9	5.1	5.2	5.4	25.4
Policy Initiative	6.3	2.9	0.7	0.0	0.0	9.9
Local Spending Total	**730.4**	**779.7**	**886.1**	**999.1**	**1095.0**	**4490.2**
Cost Share 2.0	19.7	22.0	24.1	25.8	27.2	118.9
Approved Proactive Planning Filing	23.0	26.7	3.7	0.1	0.0	53.5
Local Supplemental Total	**42.7**	**48.7**	**27.8**	**25.9**	**27.2**	**172.4**
Policy Initiative - CLCPA Ph2	4.4	1.8	0.0	0.0	0.0	6.2
EV MRP	8.7	10.8	11.5	15.9	20.2	67.1
Regional Total	13.1	12.6	11.6	15.9	20.2	73.3
Capex Total	**786.1**	**841.0**	**925.4**	**1040.9**	**1142.4**	**4735.9**
Indirect - COR	6.5	7.6	5.3	5.0	7.4	31.8
Indirect - Capex	52.5	58.0	59.8	69.7	113.5	353.5
Cost of Removal	46.5	62.9	64.8	71.2	72.0	317.5
Grand Total	**891.7**	**969.5**	**1055.3**	**1186.9**	**1335.3**	**5438.7**

4. A. Customer Requests / Public Requirements

Distribution Customer Requests and Public Requirements projects involve capital expenditures for new residential development, new commercial development, outdoor lighting, third-party attachments, and other related items. Customer Requests/Public Requirements investment levels are based primarily on review of historical blanket spending and forecasted spending on known specific work. These estimates reflect consideration of inflation, estimates of materials, labor, indirect cost, market sector analysis, overall economic conditions, and historical activity. In addition, the EV MRP and the AMI program investments (described below) are reflected in this year's Plan. The projected investment is shown in the table below.

Table 4-2
Customer Requests / Public Requirements Spending Rationale Variance Summary ($ millions)

	CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
Blankets	2025	172.3	183.3	193.8	205.0	213.0	-	967.5
	2026	-	183.3	193.8	205.0	213.0	221.4	1016.5
Specific Projects	2025	150.4	45.2	27.4	26.0	16.5	-	265.4
	2026	-	52.0	27.5	19.1	16.6	17.2	132.4
Total	**2025**	**322.7**	**228.5**	**221.1**	**231.0**	**229.6**	**-**	**1232.9**
	2026	**-**	**235.3**	**221.2**	**224.2**	**229.6**	**238.6**	**1148.9**

Blankets

The distribution Customer Requests / Public Requirements blankets include items such as Transformer Purchase and Installation, New Business Residential, New Business Commercial, Outdoor Street Lighting, Public Requirements, Meter Purchase and Installation, Third Party Attachments, and Land Rights. Exhibit 3 shows the detailed investment for all blankets in this rationale. Blankets are described in more detail below.

Transformer Purchase:
Transformers are purchased and shipped to Company locations where they are put into inventory stores. These investments are broken out below to specifically show the inflationary pressure and supply chain constraints for distribution service transformer assets.

Only by leveraging structured procurement contracts is the Company able to reliably secure assets for respective storerooms within the confines of their forecasted demand schedules.

Table 4-3
Transformer Purchase Investment Plan ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	84.5	87.0	89.6	92.3	95.1	-	448.4
2026	-	87.0	89.6	92.3	95.1	97.9	461.9

New Business Residential:
The New Business Residential category includes installation of new overhead or underground services to residential customers, reconnections, and miscellaneous equipment related to providing or upgrading services based on customer requests. Project spending can also include costs for the extension of distribution feeders directly related to providing service to a new residential customer or development. Actual spending is net of any Contribution in Aid of Construction ("CIAC").

New Business Commercial:
New Business Commercial includes installation of new services to commercial customers, reconnections, and miscellaneous equipment related to providing or upgrading services based on customer requests. Project spending can also include costs for the extension of distribution feeders directly related to providing service to a new commercial or industrial customer or development. Actual spending is net of any CIAC.

Meter Purchase:
Meters are purchased and shipped to Company locations where they are put into stores.

Meter Installation:
Meters are installed or replaced at customer metering points to maintain equipment compatibility and readout accuracy.

Outdoor Street Lighting:
Street lighting or private area lighting ("PAL") and related equipment installed or replaced.

Public Requirements:
Public Requirements include overhead and underground facility relocations resulting from bridge or roadway rebuilding, expansions, relocations, municipal requests to relocate overhead facilities underground, and other public authorities' requests or work that requires equipment or facilities to be relocated.

Drivers:
At times the Company's assets must be relocated or adjusted to facilitate work by other parties in the public interest. These projects are designed to be an efficient renovation of Company infrastructure that accommodates new construction, standards, or implementations by the city or local governing body.

Customer Benefits:
The primary customer benefit of these projects is maintaining or improving National Grid's quality of service while facilitating the desired improvement by the city or local governing body. Some examples of these improvements include city beautification, thruway expansions, safety concerns, or civil infrastructure improvements. The relocation of National Grid assets is also an opportunity to improve customer reliability through implementing updated engineering methods or new equipment to optimize the system.

2025 to 2026 Variance:
The variance between the 2025 and 2026 CIP in Public Requirement is due to the sudden or urgent nature of these projects. As city or local governing body projects develop and are communicated with National Grid, the responding solution must meet external timelines to prevent

any delays to the public projects. The variance table below reflects these sudden needs to accommodate the public projects.

Table 4-4
Public Requirements Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	-	-	-	-	-	-	-
2026	-	7.8	6.8	0.0	0.0	0.0	14.6

- **PIN#3501.60 I-81 (C099135 – Contract 6, C099136 – Contract 6A, C099137 – Contract 7, C091451 – Contract 8)** - The State is tearing down a section of I-81 in Syracuse and rerouting highway traffic onto nearby Interstate 481. The plan also calls for rebuilding a portion of Interstate 690 near the current intersection with I-81. This work requires relocation of over 12,000 feet of duct line, forty-two manhole structures, and 50,000 circuit-feet. of distribution and sub-transmission cables, along with minor overhead distribution facilities.

Third Party Attachments:
Third Party Attachments includes rework or installation of facilities on poles to fit new or 3rd party attachments or cable company requests.

Drivers:
The rise in demand for high-speed internet and advanced telecommunications services has led to a significant increase in requests from third-party companies to attach their equipment to National Grid's poles. This necessitates modifications to existing infrastructure to accommodate these attachments, ensuring that the distribution system can support both current and future technological needs.

Compliance with federal and state regulations regarding utility infrastructure is a critical driver. National Grid must ensure that all third-party attachments meet safety and operational standards set forth by regulatory bodies. This includes adhering to guidelines for installation practices, maintenance, and safety protocols to protect both the infrastructure and the public.

The rapid evolution of technology, particularly in the fields of telecommunications and energy management, requires National Grid to adapt its infrastructure. This includes accommodating new technologies such as fiber optic cables, smart meters, and energy storage systems, which often necessitate rework or installation of additional facilities on existing poles.

Customer Benefits:
One benefit is maintaining service reliability**.** By upgrading poles and facilities to accommodate third-party attachments, National Grid contributes to the reliability of its services.

Then with the enhanced communication services**,** the installation of third-party attachments, such as fiber optic cables, provides customers with access to faster and more reliable internet and communication services. This is particularly important in underserved areas where access to high-speed internet is limited, thereby improving connectivity for residential and business customers alike.

2025 to 2026 Variance:
Previously, there were no planned expenditures for third-party attachments in the last CIP. The current plan introduces a new project focused on the rework and installation of facilities on poles to accommodate third-party attachments. As a result, the variance reflects the total cost associated with this new project, marking a significant shift in investment strategy for this section. This change highlights National Grid's commitment to enhancing infrastructure and supporting the integration of third-party services.

Table 4-5
3rd Party Attachments Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	-	-	-	-	-	-	-
2026	-	8.2	1.5	0.0	0.0	0.0	9.7

- **Distribution Middle Mile Make Ready (C093888 - NYE, C093886 – NYC)** - This project will extend middle-mile fiber optic infrastructure to bring broadband access to under- and unserved communities in Upstate New York. It will also connect key emergency and health services, internet service providers (“ISPs”), and community anchor institutions.
- **NYS Broadband Expansion (C075964)** - The driver for this project is a regulatory requirement. The infrastructure work is required for the broadband providers to reach the customers that the New York State Broadband Program Office (the BPO) identifies in their resolution.

Land and Land Rights:
This funding supports the purchase of land and land rights.

Specific Projects

Below are the forecasted specific projects with planned spending in excess of $1 million in any fiscal year.

LED Investment Plan:
The following programs for converting streetlights to light-emitting diode (“LED”) technology are classified as New Business Commercial.

Table 4-6
LED Investment Plan ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.0	0.8	0.9	2.6	0.0	-	6.4
2026	-	1.4	1.4	3.4	0.8	0.8	7.8

There are no specific projects that exceed one million dollar spending.

Advanced Metering Infrastructure:
The PSC approved the Company's AMI proposal on November 20, 2020, with modifications that included adjusting the BCA to reflect "opt-in" TVP assumptions, enhanced data latency, and a cap on capital investments at $475.2M the first six years.[1]

Drivers:
AMI implementation will position the Company to develop and deploy solutions aimed at achieving the State's clean energy policy goals. Among other benefits, AMI will support grid modernization and DSP planning functions, including demand modeling, load forecasting, hosting capacity analysis, and capital investment planning. AMI will also enable future TVP rate designs necessary to support DER valuation, new innovative services, and distribution system efficiency. The Company's customers expect, and the Company is committed to delivering, continuously expanding services and benefits that AMI can unlock.

When AMI meters are deployed, and the associated back-office infrastructure is in place, customers will have access to more granular usage data in near real-time. The frequency of the readings, combined with the granularity of data, will enable customers to control their energy usage and costs through energy efficiency, conservation, demand response ("DR"), and new pricing programs.

Customer Benefits:
In addition to the foregoing, AMI implementation can also support the following advances:

Innovative Rate Design Options:
AMI lays the foundation for future, innovative rate design structures that, when approved and implemented, can reward customers for optimizing their energy usage (*e.g.*, time-of-use rates, critical peak pricing programs, and "Smart Home" rates). AMI meters, unlike the current Automated Meter Reading ("AMR") meters, can also be programmed over the air, avoiding the costly manual rate programming that could be required with AMR technologies.

Outage Management:
AMI can enhance the Company's outage notification process through automated alerts. AMI remote functionality allows the Company to send a signal to AMI meters to identify areas that still require restoration and confirm when an outage has been restored. This functionality will improve situational awareness contributing to reduced overall restoration costs and improved outage response.

Customer Service Enhancements:
AMI data can be used by call center, among other company representatives, to enhance customer interactions. For example, AMI will:

- Allow call center or authorize other company representatives to send a signal to the meter to determine power status.
- Allow for real-time reconnection of electric meters.
- Provide historical information about prior outages.
- Enable future implementation of new rate plans and options for customers seeking flexibility for their energy management needs.

[1] *Case 17-E-0238, Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service, Order Authorizing Implementation of AMI with Modifications (issued and effective Nov. 20, 2020).*

Enablement of Smart Home Devices:
In coordination with other customer-facing programs, AMI unlocks the future capability for customers to manage their energy consumption through the use of smart home devices such as thermostats, water heaters, and other appliances that can be integrated with an AMI meter to automatically adjust energy consumption in response to pricing signals and calls for curtailment. By leveraging AMI, home energy management systems will have the potential to send and receive secure communications from the Company or third-party market entities.

AMI Field Area Networks ("FANs"):
FAN communications equipment is an integral component of the entire AMI solution. The FAN collects and backhauls AMI meter data to the Company's billing system. The FAN is comprised of a series of communication equipment such as collectors and routers, RF Mesh network, and field networking equipment to collect and transmit meter data every 15 minutes as opposed to National Grid's current monthly AMR meter reads.

Drivers:
As the electric distribution system evolves with increased levels of DERs and loading, additional monitoring along distribution feeders will allow the Company to model the system more accurately. Increased power flow data can improve the accuracy of engineering studies to reduce inefficiencies and eliminate the need for modeling assumptions.

The AMI FAN will utilize an RF Mesh network designed to enable two-way communication with the AMI meters. The communication network is necessary to enable AMI functionality. The intervals and frequency of the meter data, combined with grid edge data, will enable near real-time response and enhanced control of energy management through energy efficiency, conservation, DR, and new pricing programs.

2025 to 2026 Variance:
The projected investment for the AMI project is shown in the table below. Utilizing an agile project management framework and launching a small initial program for equipment testing and end-to-end creation of a customer's bill, a detailed design and back-office systems installation is scheduled to begin in FY22. The two years of back-office work will be followed by a multi-year electric AMI meter, gas module, and communication network deployment. FAN deployment started in February 2023, with a soft launch in April 2023 and full deployment in August 2023. Project costs include the cost of the electric meters, FAN installation, and project management.

The projected variance from 2025 to 2026 CIP is due to unexpected incremental tariff expenses on imported materials due to the ongoing global trade policy and identified incremental deployment expenses throughout the remainder of the program implementation. The program is currently evaluating cost mitigation options and is not anticipating delays in the program timeline.

Table 4-7
AMI program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	113.6	22.2	4.0	0.4	0.4	-	140.5
2026	-	22.2	4.0	0.4	0.4	0.4	27.3

The following programs are expected to exceed $1 million in any fiscal year:

- **AMI – NY Electric (C083340 - NYE, C087167 - NYC, C087168 - NYW)** – These projects are to install advanced meters across the Upstate New York service territory.

Spend profile is located in Exhibit 3.

4. B. Damage / Failure

Damage / Failure projects are required to replace equipment and restore the electric system to its original configuration and capability following a damage or failure incident.

Damage may be caused by storms, vehicle accidents, vandalism, or other unplanned events. Damage / Failure spending is typically mandatory work that is non-discretionary in terms of scope and timing.

The Damage / Failure investment level for the distribution system is primarily based on historical actual costs for such work. Where conditions render an asset unable to perform its intended electrical or mechanical function on the delivery system, the Company initiates the timely replacement of such asset under the Damage/Failure spending rationale.

2025 to 2026 Variance:
Comparison of the distribution Damage / Failure investment levels from the 2025 and 2026 Plans are set forth below.

Table 4-8
Damage / Failure Spending Rationale
Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	128.9	132.6	131.7	137.3	143.3	-	673.8
2026	-	132.1	132.1	137.7	142.3	146.0	690.1

The following specific projects are classified as Damage / Failure and have planned spending in excess of $1 million in any fiscal year. Details on the planned spending profiles for these projects are included in Exhibit 3.

- **DF-Station 205 - TRF3 Failure (C091523)** - This project replaces TRF3 at Station 205. TB3 is a 23.5/13.8kV (3.75/4.68MVA) transformer and this project is a one for one replacement.
- **DF- Riverside Sta 288 - TRF4 Failed (C091468)** - This project replaces TRF4 at Riverside Substation 288. TRF4 is a 115/34.5kV (75MVA) transformer and this project is a one for one replacement.
- **Hague Rd 53 - Submarine Cable (C050522) – T**his project proposes to replace the existing 3,200 foot long, failed submarine cable in Lake George which connects the Hague Road 52 and 53 feeders from Friends Point on the west shore to Glenburnie on the east shore.
- **NY Mobile 2E - Replacement (C086808)** - This purchases a new 110/67/33.5/23 - 13.8/4.36 mobile substation to replace the damaged 2E mobile substation.

4. C. System Capacity

System Capacity projects are required to ensure the electric network has sufficient capacity, resiliency, or operability to meet the growing and/or shifting demands of the system and National Grid's customers. Projects in this spending rationale are intended to reduce degradation of equipment service lives due to thermal stress and to improve facility performance where design standards have changed over time. In addition to accommodating load growth, the expenditures in this rationale support the installation of new equipment such as capacitor banks to maintain the requisite power quality required by customers. The projected distribution investment in the System Capacity spending rationale over the Plan period is shown in the table below.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans are shown below. The table below reflects variation in the scope and timing of specific projects in this mechanism. Variance in totals between the 2025 and 2026 CIP reflect a continued ramp-up of system capacity investments reflecting forecasted load growth throughout the state.

Table 4-9
System Capacity Spending Rationale
Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	30.2	47.2	64.1	101.8	112.5	-	355.7
2026	-	49.9	67.2	109.7	116.1	76.1	419.1

Load Relief

Drivers:
Reviews of the distribution system, including substation and feeder loading, are performed annually to assess equipment utilization. The reviews consider normal equipment loading to identify predicted violations. Forecasted load additions are applied to historical data, and the system is analyzed to determine where and when constraints are expected to develop. Recommendations for system reconfiguration or system infrastructure development are created as part of these annual reviews to ensure load can be served during peak demand periods and are documented in the Annual Capacity Plan.

The normal loading assessment identifies load relief plans for facilities that are projected to exceed normal capability (i.e., maximum peak loading allowed, assuming no system contingencies). Projects created as a result of the review are intended to be in-service during the year the violation is identified. Over the next ten years, peak load growth is expected to increase on an average 0.9% per year after weather normalization to the 90/10 forecast[2]. The forecast incorporates anticipated effects on demand due to solar, BESSs, electric vehicles, electric heat pumps, and energy efficiency investments. Incremental funding, particularly in the latter part of the plan, is driven by capacity needs of electrification (i.e., EVs and electric heat pumps).

[2] *Stated within the Company's 2025 Electric Load Forecasting document, page 7, on the system portal here: https://systemdataportal.nationalgrid.com/NY/documents/Peak_Load_Forecast.pdf*

The Annual Capacity Plan reviews loading on over 2,000 feeders and more than 500 substations, resulting in numerous upgrade projects that range in scope from switching load between feeders and/or substations to new lines or substations.

Customer Benefits:
The benefit to customers of completing the work identified in capacity planning studies includes less exposure to service interruptions due to overloaded cables and transformers. The projects resulting from these studies are typically classified as Load Relief. Other program classifications are possible as a program could have multiple drivers.

2025 to 2026 Variance:
The projected investment is shown in the table below and variation year-on-year is due to the scope and timing of specific projects. Additionally, this year's inclusion of the Distribution Transformer Replacement Program increased this variance.

Table 4-10
Load Relief and Distribution Transformer Replacement Program Variance ($ millions)

	CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
Specific Projects	2025	28.5	45.4	62.3	99.9	110.6	-	346.7
	2026	-	48.2	65.4	107.9	114.3	74.2	409.9
Load Relief Blankets	2025	1.7	1.7	1.8	1.8	1.9	-	9.0
	2026	-	1.7	1.8	1.8	1.9	1.9	9.2
Total	**2025**	**30.2**	**47.2**	**64.1**	**101.8**	**112.5**	**-**	**355.7**
	2026	**-**	**49.9**	**67.2**	**109.7**	**116.1**	**76.1**	**419.1**

The following specific projects are classified as Load Relief and have planned spending more than $1 million in any fiscal year. Load Relief is the primary driver; however, each project can have additional drivers such as asset condition, reliability, resiliency, etc. Details on the planned spending profiles for these projects are included in Exhibit 3.

East:

- **Elsmere Substation Rebuild (C083916)** - This project provides for a station rebuild, a new station transformer, and new feeder getaways at Elsmere substation. In addition, this project will resolve loading issues and planning criteria violations in the area.
- **Sodeman Rd 51 Feeder Construction (C076785)** - This project resolves a planning criteria contingency violation at Ballston Station for the loss of TB3. This allows for the retirement of the Rock City Falls station which is a 34.5kV supplied 4kV station. This project will also add much needed capacity to the area, which has the potential for increased demand due to the building of the Luther Forest Plant.
- **Commerce Station (C091533)** - The project will increase the size of the transformer at Commerce Ave Station, in order to retire Russell Road substation. C088755 DF will replace the existing Transformer Bank at Commerce Ave Station 235 with a new larger 20 MVA transformer due to failure that occurred on 2/25/2021.
- **New Krumkill/Ave A Line (C091773)**, **New Krumkill Station (C091748), New Krumkill - Feeder Getaways (C083927)** - These projects and associated projects will provide for a new substation transformer, feeder getaways, express feeds, and the conversion and replacement of two existing 4.16 kV feeders at New Krumkill substation with four new 13.2

kV distribution feeders. In addition, these projects will resolve loading issues and outage exposure criteria violations in the area.

- **Liberty St D-Line Overhead Rebuild (C083844)** - This project encompasses the rebuild and conversion to 13.2kV of overhead feeders from the Liberty St substation in downtown Troy, NY.
- **Delmar Feeders Rebuild and Convert (C083926)** - This project will convert and replace the 4.8kV feeders tied to the Delmar and Elsmere stations. This will increase reliability and allow for future system capacity growth within the Delmar and Bethlehem areas.
- **Union St 52 - County Hwy 59 (C056632)** – This project will rebuild and convert about two miles of County Highway 59 to 13.2 kV to address an overloaded ratio transformer.
- **Hague Rd 52 - Convert Route 22 (C050717)** - The Town of Putnam on the Eastern Shore of Lake George has experienced low voltage issues during the summer peak load. This project will rebuild and convert about three miles of 4.8kV distribution to 13.2kV. This will alleviate the overload of the ratio transformer, which is currently causing difficulty to maintain adequate voltage, address load imbalance on a section of the feeder, and relocate some inaccessible rear-lot distribution to the road.
- **IE - NE Distribution Transformer Upgrades - NYE (C015828)** - Distribution Transformer Upgrades in the Eastern, Central, and Western Divisions. Replace overloaded transformers as an asset strategy.
- **Gloversville 53 D-Line (C096331)** – This project aims to rebuild portions of the Gloversville 53 feeder to increase capacity needed to serve load in Caroga Lake. This project is one piece of the Ephratah-Caroga suite of projects to address various concerns in Ephratah, Caroga Lake and Gloversville and allow for the retirement of the Ephratah-Caroga #2, 23 kV sub-transmission line.
- **Warrensburg 52 – Glen Athol Road (C081457) -** Glen Athol Road in Warrensburg is the beginning of a 30+ mile single phase 4.8 kV delta tap. In past years, the single-phase ratio transformer serving this area has become progressively more overloaded, and this project looks to begin the process of extending three-phase 13.2 kV up Glen Athol Road in order to offload the ratio transformer.
- **RR-Menands 10157-Getaway Replacement (C053966)** – Due the numerous failures and overloads being seen on the Menands 10157, there needs to be a replacement of about 3000 ft of 4/0 copper under the I-378 including replacement of other thermally limiting devices to allow for continued load growth in Menands and Colonie NY.
- **33452 NY-43 Conversion (C081968) -** The 2,500 kVA, pad-mounted, step-down ratio transformer on NY-43 in Rensselaer is overloaded to over 150% and is at risk of failure. There have also been numerous low-voltage complaints downstream of this transformer due in part to the overload as well as the significant amount of #6 copper conductor.
- **Commerce D-Line (C091528) –** This project aims to address Asset Condition issues by creating new ties with Everett Road feeders allowing for Commerce Substation to be placed on Everett Road during Commerce Substation construction. This also addresses future System Capacity concerns on the Partridge substation based on the company's forecasted load projections and most recently available asset condition data.
- **Caroga D-Line (C093737) -** This project will convert the existing 4.8 kV distribution out of Caroga Substation to 13.2 kV. This work is outlined in the Ephratah - Caroga Lake Study.
- **EJ West 51 - Convert South Shore Rd (C098361)** – During the summer 2024 peak season, low voltage was recorded on Horse Hill Road, which is served at the tail end of the Vail Mills 39253 feeder, approximately 22.53 circuit miles from the Vail Mills substation. Currently, Horse Hill Road and the surrounding customers operate as a 4.8 kV island, with a 500 kVA 13.2/4.8 kV transformer on the Vail Mills 39253 feeder, another 500 kVA 13.2/4.8 kV transformer on the EJ West 03851 feeder, and an open 4.8 kV tie between

the two feeders. In the subsequent investigation of the low voltage issue, it was observed that, in its normal configuration where Horse Hill Road is served from Vail Mills, the 500 kVA transformer was overloaded. A potential solution was to transfer Horse Hill Road to the EJ West 03851 feeder. However, this load transfer resulted in the 500 kVA transformer on the EJ West 03851 feeder also becoming overloaded, leading to the same low voltage issue on Horse Hill Road. Based on loading data from the summer 2024 peaks, the combined load on both 500 kVA transformers totals 1 MW. Therefore, if one transformer were to fail, the tie could not be used to support the out-of-service customers without overloading the remaining transformer to 200%. In the interim, a voltage regulator will be installed on Horse Hill Road to maintain normal system voltage; however, a permanent solution is required.

- **Firehouse Rd Station – New Feeder (C050081)** - This project involves the utilization of a spare breaker at the Firehouse 449 substation. The company will install ~2,400' of UG duct bank with 1000 MCM CU from that spare breaker alongside National Grid's existing Firehouse 44952 underground getaway. A reconductoring and conversion of ~1,950' of existing overhead distribution on Woodin Road will also be completed. Doing this project will create a new open tie between the Firehouse 44952 and the Firehouse 44951 on Woodin Road.
- **Greenbush 07857 (C091131) -** Forecasts out to 2050 depict neighboring assets exceeding their Summer Normal (SN) ratings by over 200%. The commissioning of a new 13.2 kV feeder will provide significant, necessary load relief. This load relief is amplified further given the urban environment wherein EV adoption is forecasted to be high with minimal opportunity for large, distributed energy resources for load mitigation.
- **Greenbush Getaways (C097545) -** Forecasts out to 2050 depict neighboring assets exceeding their Summer Normal (SN) ratings by over 200%. Reconductoring to 1000 CU will provide significant, necessary load relief. This load relief is amplified further given the urban environment wherein EV adoption is forecasted to be high with minimal opportunity for large, distributed energy resources for load mitigation.
- **South Street Rebuild (C093745) -** Transformer TB1 at South Street substation is forecasted to reach 100% of its Summer Normal rating by 2023. This project upgrades TB1 to a 20 MVA.
- **Delanson TB1 40 MVA Rebuild (C092947) –** Delanson TB1 is forecasted to overload by 2039. This project is a placeholder to address capacity concerns at Delanson. Further study is required to determine the most effective mitigation.
- **New Krumkill 52 Feeders (C083928) –** This is a sister project to C091181 at the conclusion of which there will be two 13.2 kV distribution feeders from the New Krumkill substation to serve proposed new industrial load within New Krumkill area.
- **Otten 3 Phase Extension (C093754) –** Huletts Landing is experiencing low voltage issues due to being served by a single-phase 4.8 kV tap from the Otten substation, which is 4.8 kV delta and over 6 miles away. In July 2024, voltage dropped to 85V, 71% of nominal, exacerbated by a 10% load increase at the substation. While emergency regulators have provided temporary relief, the long-term solution involves extending three-phase service to the village, which will balance the load and improve voltage. The planned conversion of the Otten substation to a 115/13.2 kV transformer will facilitate this extension, requiring only the conversion of the existing three-phase 4.8 kV line on NY-22.
- **Boyntonville Rebuild: D-Line (C093661) -** Transformer TB1 at Boyntonville substation is forecasted to reach 100% of its Summer Normal rating by 2038. Additionally, the single feeder out of the Boyntonville substation, 33351, appears on the worst-performing list every year due to its circuit length of over 150 miles. Splitting the 33351 into four feeders, by installing three new feeders, will assist in minimizing the number of CI and CHI.

- **Boyntonville Rebuild: Substation (C093660) -** Transformer TB1 at Boyntonville substation is forecasted to reach 100% of its Summer Normal rating by 2038. This project increases TB1 from 5 MVA to 40 MVA and installs three additional breakers. Additionally, having been constructed in the 1960's, this substation has numerous aging assets needing replacement.
- **Unionville D-Line Work (C093713) -** The transformer at Unionville station is forecasted to reach 100% of its summer normal rating by 2042.

Central:

- **Cicero Substation & D-Line (C091713, C091779)** – The drivers for the new Cicero Substation are load relief and projected future load growth in the area. National Grid's North Syracuse distribution study area is in the Northern suburb of the City of Syracuse. It has received the majority of the new housing developments in the Syracuse metropolitan area. In the North Syracuse area, there are significant capacity and outage exposure issues that need to be resolved. The two major substations that need to be relieved are the Pine Grove Substation and the Bartell Rd Substation. The recommended solution to these concerns is to add distribution capacity to the area by constructing the Cicero Substation in the Town of Cicero, New York near the intersection of U.S. Route 11 and NYS Route 31. These projects are related to transmission project C093003.
- **Cortland LVAC Disassemble (C087469)** - This project will disassemble the City of Cortland LVAC Network into five individual secondary systems. The primary underground cable configuration will remain the same and the network transformers will be replaced once the system is converted from 4.8kV to 13.2kV.
- **Malone 2nd Bank Feeders (D-Line) (C082332)** - This project includes the distribution line components of the associated station project. The overall Malone station project will provide a new second transformer bank at Malone substation to eliminate all existing Megawatt-hour ("MWh") violations.
- **Gilbert Mills Substation Transformer Upgrade (C046563)** - This project provides for the upgrade of transformer bank #1 to a 15/20/25MVA transformer and includes the installation of EMS at the station. This project supports CLCPA per PSC Case 20-E-0197.
- **West Adams New Feeders TB2 (C084110)** - This project provides for a new second transformer at West Adams substation to eliminate MWh violations and provide additional capacity.
- **Salisbury Station & D-Line (C093794, C093800)** - Salisbury substation is to be rebuilt with dual 40MVA transformers and additional feeders to alleviate system capacity constraints and boost hosting capacity. Rebuild to include additional feeders to distribute feeder level loading and improve switching capabilities in the area. This project also includes six getaways and risers out of the new station, four to be tied to existing feeders. Approximately three miles of feeder buildout to split large feeders into smaller portions and enhance feeder.
- **Constantia D-Line Sub (C093653)** - To address asset condition issues and system capacity due to forecasted loading, this project will install a 34.5:13.2 kV 10 MVA pad to replace the existing substation. Additionally, convert approximately 16,000 circuit feet of 3-phase 4.16 kV to 13.2 kV, convert 9000 circuit feet of single phase 2.4 kV to 7.62 kV, install ratio transformers in three locations.
- **Rome 55 Delta Conversion Phase 1 (C094210)** - Convert three Miles of three-phase delta to three-phase 13.2kV At Pole A in ROW Near Public Works.
- **Rome 55 Delta Conversion Phase 2 (C094211) -** This project is related to converting 2.5 miles of 3 Phase Delta to 3 Phase 13.2kV, thus increasing system capacity in the converted portions.

- **IE - NC Distribution Transformer Upgrades – NYC (C014846)** - Distribution Transformer Upgrades in the Eastern, Central, and Western Divisions. Replace overloaded transformers as an asset strategy.
- **Coffeen 56 Delta Conversion (C094206) -** This project is related to converting delta portions of Coffeen 56 Feeder from 4.8 kV to 13.2 kV which will increase the capacity of the converted portions.
- **Cicero Sub Control House (C097043) –** Install Control House for new Cicero Substation (Project C091713)
- **Lowville 54 Conversion (C094215) –** This project is related to converting 3 Phase Delta to 3 Phase 13.2kV which will increase the capacity of the converted portions.
- **Debalso Expansion – Sub (C091746) –** Expand Debalso substation and add a second 115/13.2kV bank (40MVA) built out with open air bus work to facilitate 4 new feeder positions.
- **Peat St rebuild, Sub (C095378) –** There are potential asset issues at Peat St. It was also projected to be at 95% of SN in 20236. The address these issues, Peat St will need to be rebuilt and a second transformer installed.
- **West Cleveland D-line (C097940) –** Convert 5 kV voltages along circuit tie paths with neighboring feeders to 13.2 kV to address resiliency issues in the area. 4500 circuit ft reconductoring to 336 Aluminum conductor and replace service transformers, convert 13,000 circuit ft existing 3-336 Aluminum to 13.2 kV and convert 6000 feet of single phase laterals to 7.62 kV. Install ratio transformers at two locations and remove ratio transformers from one location.

West:

- **W. Chautauqua Distribution Line Work (C055265)** - This project is for the feeder upgrades associated with the new West Chautauqua 34.5-4.8kV padmounted transformer mini substation which will be used to relieve and to provide resiliency to Chautauqua and Stow substations.
- **South Eden Greenfield Substation (C046538, C048015)** - This project and associated projects provide for the installation of a new 34.5-13.2kV substation between North Collins and Eden Center stations in addition to convert portions of North Eden, Eden Center, and North Collins feeders.
- **IE - NW Distribution Transformer Upgrades - NYW (C010967)** - Distribution Transformer Upgrades in the Eastern, Central, and Western Divisions. Replace overloaded transformers as an asset strategy.
- **Baker St 56 Delta Conversion Phase 1 (C093874)** – This project involves converting three miles of three-phase delta portions of Baker St Feeder 15056 from 4.8kV to three-phase 13.2kV.
- **Baker St 56 Delta Conversion Phase 2 (C093875) -** This project involves converting three additional miles of three-phase delta on portions of Baker St Feeder 15056 from 4.8kV to three-phase 13.2kV to enhance feeder ties and reliability.
- **East Batavia 55 Delta Conversion (C093854) –** This project will convert existing 3-phase 4.8 kV distribution on East Batavia Feeder 2855 to 13.2 kV. Approximately 3 miles of distribution conversion work in total, and includes sections on Prole Road, Morganville Road, and Clipnock Road.
- **East Golah 52 Delta Conversion (C093853) –** This project will convert existing 3-phase 4.8 kV distribution on East Golah Feeder 5152 to 13.2 kV. Approximately 3 miles of distribution conversion work in total includes sections on Rush-Lima Road and State Highway 65.

- **East Golah 55 Delta Conversion (C093852) –** This project will convert existing 3-phase 4.8 kV distribution on East Golah Feeder 5155 to 13.2 kV. Approximately 3 miles of distribution conversion work in total, and includes sections on Chapman Road, Middle Road, and Rush Mendon Road.
- **N Leroy 56 Delta Conversion Phase 1 (C093880) -** This project is related to converting delta portions of North Leroy Feeder 0456 from 4.8 kV to 13.2 kV, which will increase the capacity of the converted portions.
- **N Leroy 56 Delta Conversion Phase 2 (C093882) -** This project is related to converting delta portions of North Leroy Feeder 0456 from 4.8 kV to 13.2 kV, which will increase the capacity of the converted portions.
- **New Machias Station (Land Purchase) (C093642) -** This Project is for the Purchase of the Land for a New 115/13.2kV Distribution Substation. This Funding Project ("FP") will have an associated Station FP Number, D-Line FP Number, and T-Line Funding Project Number.
- **W. Wellsville Boutique sub - D-Line (C093790) –** This funding project is related to the rebuild and conversion of approximately two (2) miles of distribution line in relation to the new boutique substation that will be installed in the greater West Wellsville area.
- **New Machias Substation (Station Work) (C093639) –** This Funding Project is for a New Distribution Substation 115/13.2kV to relieve load off of Farmersville Station and Franklinville Station. Farmersville is forecasted to exceed 95% SN rated in 2023. Franklinville Station is forecasted to exceed 95% SN rating in 2032. Based on the asset condition of 58 years old at Farmersville it is likely that Farmersville Station will be retired.
- This Funding Project Number is the Station Portion of a New Distribution Substation 115/13.2kV due to System Capacity issues on Machias Substation and Delavan Station located in the Southern Tier Area. Delavan Substation is forecasted to exceed 95% SN in 2024 and Machias Station is forecasted to exceed 95% SN in 2030. Associated Land FP Number, D-Line, T-Line
- **Upgrade and Convert STA 74 SUB (C093600) –** This project is related to rebuild of Station 74 (Military Rd) in the City of Buffalo to increase capacity, convert from 4.16 kV to 13.2 kV, and address asset condition concerns at the station.
- **Wellsville Boutique sub - D-Line (C093741)** – This funding project is related to the rebuild and conversion of approximately two (2) miles of distribution line in relation to the new boutique substation that will be installed in the greater Wellsville area.

Volt-Var Optimization ("VVO") / Conservation Voltage Reduction ("CVR")

VVO/CVR is a practice where voltage control devices, such as capacitors, LTC Transformers, and voltage regulators, are intelligently controlled in a coordinated manner to optimize the performance of the distribution system. This program is designed to reduce customer and grid energy consumption.

VVO refers to a process whereby the voltage and reactive power flow of the distribution system are optimized to improve the voltage management and power factor on a distribution feeder and potentially increase hosting capacity for DER. CVR refers to a process whereby voltage regulating devices are controlled to operate the feeder at the lowest possible voltage range, within allowable standards.

In FY22, an initial selection of 13 substations had their existing LTC controllers (LTC Controller Program) updated to newer, modern controls that can integrate with the Company's current DSCADA platform and the planned ADMS. The Company plans to begin using an application in

ADMS to control voltage at the LTC, while monitoring customer voltage readings at their meters through a new AMI feedback loop. This will allow the LTC and its associated feeders to operate at the lowest possible voltage (within the limits of ANSI C84.1) to increase efficiency, reduce energy demand, and reduce energy consumption through LTC-only CVR. In addition, these newly updated LTC controls will enable real-time control capability and status monitoring for control center operators and support engineering studies. This will provide benefits that come with CVR to feeders that may not otherwise have a full VVO/CVR scheme deployed. Currently, the Company has begun doing future design and engineering work to restart LTC Controller Program with intent on starting construction activities in FY27.

In FY25, a successful pilot of the Switched Source PhaseEQ was performed as part of NYSERDA's Program Opportunity Notice ("PON") 4393 on one circuit in the Eastern Division of NY. The PhaseEQ is a shunt-connected, power electronics device designed to mitigate imbalances in three-phase, wye-grounded medium voltage distribution circuits by dynamically transferring power between phases. This technology reduces zero sequence current and improves power quality across the distribution network. Now the Company is in the process of engineering and designing the work associated with deployment of Switched Source PhaseEQ devices at various sites across the NY service territory where engineering identifies a location that features an imbalance or high neutral current.

Drivers:
The Company has historically managed voltage primarily with the use of autonomously controlled LTCs, line regulators, and capacitors. When installed, regulators and LTCs are typically programmed to maintain a specific voltage at their locations as specified by a distribution planning engineer. Capacitors, when installed, are typically switched per setting programmed by a distribution planning engineer. Historically capacitors were fixed and manually switched on-and-off the circuit seasonally or as needed.

The primary driver of this project is to provide more efficient and higher quality power by monitoring the voltage performance across the system in real-time and automating the control of the various voltage regulating devices through an integrated control scheme. The VVO/CVR practices add a layer of coordination, via communication and control, to optimize the use of regulators, capacitors, and line voltage monitors to respond to system dynamics in real-time. Over time, smart inverters are likely to also form part of the VVO/CVR techniques as more DER is integrated into the system and will continue to be evaluated through a NYSERDA PON 4128 project that started in December 2020. The addition of new technology, such as Switched Source's PhaseEQ, will play a role in enabling further autonomous VVO control of the Company's distribution system.

Customer Benefits:
There are several anticipated benefits of a VVO/CVR deployment:

- Improved feeder power factor, flatter and lower voltage profiles, reduced feeder losses, reduced peak demand, and reduced energy consumption by customers which will vary based on the individual feeder characteristics.
- The increased near real-time operational data made available to the regional control centers, via data collected from automated capacitors and regulators, as well as line voltage monitors, will support the improved management of the distribution system and assist in the integration of future DERs.
- Potentially increased hosting capacity which would allow for greater levels of DER.

- Delivering voltages at the optimal levels will reduce energy consumption, improve service quality, and lower costs.

2025 to 2026 Variance:
The projected capital investment is shown in the table below. National Grid expects to continue statewide deployment of VVO equipment through area studies while implementing new techniques and equipment, such as the PhaseEQ.

Table 4-11
Volt-Var Optimization / Conservation Voltage Reduction ("VVO/CVR") Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.1	3.4	4.5	7.9	2.0	-	18.9
2026	-	3.4	4.5	7.9	2.0	2.1	19.8

The following specific projects are classified as VVO/CVR and have planned spending in excess of $1 million in any fiscal year.

- **NY LTC Controller – Distribution Substation (C085942)** - This program covers the installation of new LTC controllers at distribution and transmission substations for the integration of new controllers at substations across NY state will enable advanced functionality through remote operation capabilities (i.e., ADMS applications or control center operator control). This project supports CLCPA per PSC Case 20-E-0197.
- **Switched Source Program (C094897 - NYE, C094898 - NYC, C094899 - NYW)** - This program covers the installation of new PhaseEQ devices on distribution circuits across NY state that enable advanced functionality through automated phase balancing.

4. D. Asset Condition

Planned asset condition investment levels for the distribution system, and the comparison to investment levels from last year's Plan, are shown below.

2025 to 2026 Variance:
The variance between the 2025 and 2026 Plans is based on the scope and timing of the specific projects in this mechanism, as well as the re-categorization of asset condition projects with secondary drivers such as increasing system capacity, hosting capacity, and maintaining reliability under the new spending rationale, Multi-Value Distribution.

Table 4-12
Asset Condition Spending Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	65.1	80.1	104.5	118.0	106.3	-	474.0
2026	-	80.5	109.2	113.7	108.5	115.2	527.2

Funding levels for the programs and projects included in the Asset Condition rationale are presented below.

Inspection and Maintenance

The Company performs visual inspections on all overhead and underground distribution line assets once every five years. Each inspection identifies and categorizes all necessary repairs, or asset replacements, against a standard and in terms of criticality to maintain customer safety and reliability in compliance with the Commission's Safety Order in Case 04-M-0159.[3] The Company also performs annual contact voltage testing per the Commission's Safety Order on all facilities that are capable of conducting electricity and are publicly accessible, such as streetlights.

2025 to 2026 Variance:
Current investment forecasts are based on actual expenditures being incurred with the on-going I&M program. The change in future variance in this year's Plan compared to previous years relates primarily to an expected change in the amount of work identified.

Table 4-13
Inspection and Maintenance Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	25.5	26.0	27.0	28.8	29.3	-	136.5
2026	-	26.0	27.0	28.8	29.3	30.4	141.5

The following specific projects are classified as Inspection and Maintenance and have planned spending in excess of $1 million in any fiscal year:

- **I&M – NW, NC, NE D-Line OH Work From Insp. (C026161, C026160, C026159) –** The Inspection and Maintenance Program receives annual funding to address assets requiring repair and replacement, as identified through inspections of New York's OH and UG distribution lines. This program employs ground-based visual inspections conducted on a five-year cycle to identify deficiencies that must be repaired within the timeframes established by the Commission Order Adopting Changes to Electric Safety Standards in Case 04-M-0159.

Asset Replacement

Various projects are in place to refurbish or replace distribution and sub-transmission assets to ensure the system continues to perform in a safe and reliable manner. This includes overhead lines, device replacements and more.

Drivers:
Although spending is categorized by spending rationale, all drivers are considered in determining the optimal project solution. Reliability and asset condition are the main drivers for these projects. Historically, the number of reliability events that are initiated on the distribution system is low; however, these events can result in a substantial number of customers being interrupted where the lines are radial.

Customer Benefits:
Refurbishment and replacement of distribution and sub-transmission system components can positively impact regional CAIDI/SAIFI and CMI.

[3] *Case 04-M-0159, Proceeding on Motion of the Commission to Examine the Safety of Electric Transmission and Distribution Systems, Order Adopting Changes in the Electric Safety Standards (issued and effective Dec. 15, 2008, revised in March 2013) ("Safety Order").*

2025 to 2026 Variance:
The projected investment is shown in the table below. Existing identified work under this program will be continued. New projects are being identified on lines where work is required due to significant asset deterioration. The prioritization of these projects is continuously reviewed, and their schedules are updated accordingly.

Table 4-14
Asset Replacement Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.9	9.3	17.7	17.2	22.8	-	69.9
2026	-	7.3	17.1	10.9	17.7	24.1	77.1

The following programs are forecasted to exceed $1 million dollars in any given fiscal year:

- **Summit Station 347 Rebuild (C095623)** – Summit Station 347 has multiple station equipment assets with asset condition issue, and this project is to provide funding for an entire substation rebuild.
- **Station Regulator Replacement Program (C094117)** -This Program is to provide funding for the replacement of Substation Regulators that have been identified with asset condition issues.
- **Schuylerville Retirement (C084726) -** This project is to facilitate the distribution scope associated with the Schuylerville substation retirement project. It encompasses distribution scope for new Battenkill 55, and existing Weibel 55/56, Wilton 51, and Schuylerville 11/12. See C083967 for substation scope.
- **Underground Residential Distribution/ Underground Commercial Distribution ("URD/UCD") Cable Replacement (C094137 - NYC, C094139 - NYW)** – The Company is targeting the replacement of cables based on past performance that feed URDs and UCDs to maintain reliability on the system.
- **Station 61 Distribution Relocation (C084919) -** This project is for the rerouting and conversion of the distribution feeders at Station 61 to facilitate the station rebuild project C051707.
- **Avenue A Getaways (C092920) -** Construct a new duct bank/manhole system as necessary to construct new feeder getaways out of the Avenue A substation from the three new 13.2 kV distribution breakers to their respective riser poles. Pull 1000 MCM CU cables for three new distribution feeders.
- **Terminal Station Relocation DLine (C059671) -** This project is a distribution line portion of the Terminal station relocation due to environmental and asset condition issues at the station. This project encompasses the distribution underground work to connect the existing feeder getaways to the new station breakers at the new site.
- **Yahnundasis Rebuild, D-line (C093627) -** This project includes the 13.2kV distribution line work needed as part of the Yahnundasis Station Asset Replacement job. The required work includes the UG ducts, manholes, cable and risers to tie into the 5 existing overhead feeders infrastructure.
- **Station 121 Clinton – Rebuild (C097014)** – This project is for the retirement of the station assets and replace the location with a D-Line Padmount Style station. This project will have an associated Sub-T Line and D-Line Project.
- **Avenue A 13.2 kV Distribution (C092747) –** This project will rebuild the 4.16 kV distribution feeders out of the Avenue A substation as necessary to convert them to 13.2 kV while also

rebuilding and converting a portion of the Partridge Street 4.16 kV distribution as proposed within the Albany Area Study.

- **Circuit Switcher Program - Central (C093851) –** This is a program for the replacement of CSs based on asset condition and family class issues.
- **DLINE Transformer for Woodard-Ash 27/28 (C084566) –** Due to refurbishment projects on the Solvay/Woodard-Ash 27 &28 lines, this project plans to handle the necessary distribution transfers required to perform said jobs.
- **Station 79 D-Line Relocation (C084921) –** This project is in support for the Station 79 Rebuild (C082713). The scope for this project is for the relocation of the distribution feeders at Station 79 to new property for the new Station 79 Rebuild.

Primary and Secondary Underground Cable

A strategy has been implemented for the proactive replacement of underground cable on the Sub-Transmission, Distribution Primary, and Distribution Secondary systems in all three divisions of the upstate New York service territory. Sub-transmission and Distribution cable replacements will be completed through a series of specific projects targeting cables based on their past performance, history of failures, asset age, cable construction, design deficiencies, loading, and critical customers served. Two individual program funding numbers for the Eastern, and Western divisions will be used for secondary cable replacements. Additionally, cable replacements in support of new customer development and public works projects are also anticipated.

Drivers:
The proactive replacement of electric utility assets such as aged underground cable is expected to reduce the risk of failures or unplanned events and enhance the reliability and capacity of the overall system.

Customer Benefits:
Cable systems are often designed with greater redundancy than overhead systems, and cable failure often has a limited impact on customer reliability statistics. However, if cable performance deteriorates significantly, the likelihood of concurrent failures increases. Cable failures can result in increased operation and loading on parallel equipment, further increasing the risk of failure on the rest of the system. The consequences of multiple secondary network failures or multiple primary cable failures can be significant. Proactive replacement of aged cable in these systems is expected to reduce the risk of concurrent failures and the potential for large scale customer outages in urban areas, including critical loads such as police, fire departments, and hospitals.

2025 to 2026 Variance:
The projected program investment is shown in the table below. The variation year-on-year is due to the scope and timing of specific projects. Also, since secondary underground cable systems are typically in dense urban areas, costs associated with these replacements can vary due to congestion and accessibility.

Table 4-15
Primary and Secondary Underground Cable Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	4.4	5.5	5.3	7.0	7.4	-	29.6
2026	-	6.4	5.3	7.0	7.4	7.7	33.8

The following specific projects are classified under the Primary and Secondary Underground Cable program and have planned spending in excess of $1 million in any fiscal year. Details on the planned spending profiles for these projects are included in Exhibit 3.

- **Cable Replacement – Network (C078270 - NYE, C077338 – NYW, C091744 - NYC)** - This program targets the replacement of network secondary cables based on past performance, deteriorated/lead cable removal, and support of new customer development/public works projects.
- **MV-Camp KillKare/Lake Kora-Cable (C088822)** - Replace Three "transformer houses" along the Kamp Kill Kare spur with one padmounted switchgear and four three-phase padmount transformers. "Transformer Houses" (a.k.a. "dog houses") are wooden shed-like structures with overhead fuses/overhead transformers installed within. Rework the four existing “dog house” services with three-phase padmount transformer services and change the customer's service voltage from the non-standard 240V two-phase open delta five-wire service with 120V for the lights to the company standard service voltage 120/208V three-phase four wire wye grounded system.
- **5kV UG System Elimination in Utica NY (C090618) –** This project supports eliminating the 5kV underground system in the City of Utica, NY by converting/transferring the remaining customers/loads onto the 15kV system.

Buffalo St Light Cable Replacement

This program promotes safe and reliable underground-fed streetlight services by replacing faulty cables and conduits.

Drivers:
This program systematically replaces deteriorated streetlight cables in the City of Buffalo area to address repetitive incidents of elevated voltage as determined through periodic testing under electric operating procedure NG-EOP G016.The underground street light cable system in the City of Buffalo metropolitan area is comprised of a variety of electrical cable types and wiring configurations that have been in service for more than 50 years. In areas with aging streetlight cable, elevated voltage testing continues to identify elevated voltage incident rates that are from 2-20 times the rates measured in other areas throughout Company’s service territory. Areas that have had the streetlight cable replaced through this program are not experiencing elevated voltage incidents.

The primary driver for elevated voltage in this area is the deteriorated physical condition of the streetlight cable, and installation of new circuitry has resulted in a dramatic reduction of elevated voltage incidents associated with that streetlight infrastructure.[4]

Customer Benefits:
This work will provide more reliable streetlight service and reduce the cases of elevated voltages in the Buffalo area.

2025 to 2026 Variance:
The Company expects to spend more under this program due to the escalation of projects as seen with the increase. The projected investment is shown in the table below.

[4] *Electrical connections associated with unauthorized 3rd party attachments to the street lighting electrical system recently have been determined to be the source of an increasing number of elevated voltage incidents in Buffalo.*

Table 4-16
Buffalo St Light Cable replacement Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.5	2.5	2.6	2.7	2.8	-	13.1
2026	-	2.5	2.6	2.7	2.8	2.9	13.5

The following specific projects and programs are expected to exceed $1 million in any fiscal year:

- **Buffalo Street Light Cable Replacement (CD00851)** – This project will install new cables and/or conduit and replace existing UG streetlight cables while removing any temporary OH streetlight cable.

Substation Asset Condition Programs

Substation Asset Replacement Programs are essential for maintaining station reliability and service continuity. These programs focus on overall substation health by addressing the condition of individual assets.

Asset Programs are typically one-for-one replacements and less complex, driven by asset conditions, known equipment family issues, or shorter life cycles such as batteries, chargers, and relays. As part of the planning process, station capacity is confirmed for the next 15–20 years, and the overall substation condition is reviewed to ensure no critical issues are unaddressed.

Replacement or refurbishment of substation assets frequently has long lead times and requires significant projects in terms of cost, complexity, and project duration. Consequently, it is often more efficient, as well as cost-effective, to review the asset condition of the entire substation. Further, where there are asset condition issues that indicate replacement as an option, the Company reviews planning and capacity requirements to ensure alternative solutions are evaluated, such as system reconfiguration to retire a substation.

Substation Power Transformers

Power transformers are critical, high-value assets that play a central role in system reliability and capacity. Their long procurement lead times and significant operational impact make proactive management essential to maintaining system performance.

National Grid assessment employs a structured, condition-based approach to identify and prioritize transformer replacements. Units exhibiting indicators of potential failure are placed on a watch list for enhanced monitoring and further testing. The Watch List is developed using comprehensive condition assessment data, risk analysis, and input from operations personnel.

By integrating technical evaluations with operational insights, this process ensures timely decision-making, minimizes reliability risks, and optimizes capital planning.

Power transformers are large capital assets with long lead times. Their performance can have a significant impact on reliability and system capacity. Condition data and condition assessment are the key drivers for identifying replacement candidates. Replacements are prioritized through a risk analysis which includes feedback from operations personnel. This program covers

transformers which are identified as replacement candidates through the test and assessment procedure. A Watch List of candidate transformers has been identified based on their condition and recorded in the Asset Condition Report.[5]

Drivers:
Power transformers are evaluated through visual inspections and routine testing under the Company's maintenance standards. Each unit receives an asset condition code based on test results, design and manufacturer data, and operating history. Higher codes indicate potential anomalies, triggering increased monitoring and assessment.

Units with elevated codes are placed on the Watch List as priority candidates for replacement. Investing in these replacements is critical to prevent catastrophic failures, avoid costly emergency repairs, and reduce the risk of prolonged outages that impact customers and revenue. Proactive investment ensures system reliability, protects against financial and operational risk, and delivers long-term value compared to the high cost and disruption of unplanned failures. Power transformers are evaluated based on visual inspections and routine testing performed by the Company's electric operating and maintenance procedures. Each unit is given an asset condition code based on individual transformer test and assessment data, manufacture/design, and available operating history. Higher codes relate to transformers which may have anomalous condition. Units with a higher code are subject to more frequent monitoring and assessment and are candidates for replacement on the Watch List. Units with elevated codes are placed on the Watch List as priority candidates for replacement. Investing in these replacements is critical to prevent catastrophic failures, avoid costly emergency repairs, and reduce the risk of prolonged outages that impact customers and revenue. Proactive investment ensures system reliability, protects against financial and operational risk, and delivers long-term value compared to the high cost and disruption of unplanned failures.

Customer Benefits:
The impact of power transformer failure events on customers is historically substantial. By proactively replacing units in poor condition, there will be direct benefits to customers in reducing the likelihood of an in-service failure.

2025 to 2026 Variance:
The program investment is shown in the table below. Through on-going review of the distribution substation transformer fleet, new problems are identified as they arise. Replacement costs and related annual investment will vary based upon the size of the transformer to be replaced. In addition, re-phasing of projects and their timelines has contributed to the variance.

Table 4-17
Substation Power Transformers Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.2	3.0	6.8	13.3	11.5	-	36.8
2026	-	4.7	10.8	26.8	13.3	3.2	58.8

The CIP in Exhibit 3 shows the current list of transformers expected to be replaced within the next five years. The following specific projects and programs are expected to exceed $1 million in any fiscal year:

[5] *Report on the Condition of Physical Elements of Transmission and Distribution Systems, Case 20-E-0380, filed most recently September 30, 2024.*

- **Trinity TB4 and TB6 Transformers and Bus (C086717)** - This project provides for the replacement of TB4 power transformer at 115/13.2kV (33/44/55MVA) and TB6 power transformer at 115/13.2kV (33/44/55MVA).
- **NY ARP Spare Substation Transformer (C026055)** - Program for Spare Power Transformers for NY distribution substations.
- **NY ARP Transformers (C097733)** - This program is to provide funding for substation location transformers that have been identified to be replaced under asset condition issues.

Indoor Substations

The purpose of this strategy is to replace, retrofit, or retire the 16 remaining indoor distribution substations. Indoor substations were built between the 1920s and 1950s, and pose inherent safety risks due to their cramped, small footprint design and poor equipment condition. There is a lack of spare equipment (transformers, oil switches, relays, etc.), as these vintage parts are no longer being produced and are obsolete. Details of the asset condition issues, and key drivers are outlined in the Asset Condition Report.

Drivers:
These indoor substations are obsolete. Their outdated design does not meet current accepted safety criteria. Equipment and protection schemes are becoming unreliable in their function of interrupting faults and show signs of general deterioration.

Customer Benefits:
Under normal conditions, failure of obsolete indoor substation equipment could result in sustained customer interruptions until an acceptable replacement is installed. Equipment outages can also result in increased operation and loading on parallel equipment. Indoor substations typically supply urban environments, including critical loads such as police, fire departments, and hospitals. This program mitigates the risk for a long-term, sustained, customer interruption.

2025 to 2026 Variance:
The projected program investment is shown in the table below.

Table 4-18
Indoor Substations Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	2.1	1.5	1.5	1.6	-	6.7
2026	-	1.0	1.5	1.5	1.6	1.6	7.2

The following specific projects and programs are expected to exceed $1 million in any fiscal year:

- **Substation Roof Program (C093850 - NYW)** – This program aims to address National Grid's NY indoor substation roofs with asset condition issues. This program will establish a plan to replace the roofs as they begin to exhibit deterioration. This program would cover the roofing, flashing and any brickwork replacement.

Metal-Clad Switchgear

Deteriorated metal-clad switchgear can be prone to water and animal ingress, which can lead to failure. Visual surveys will detect such degradation but cannot identify surface tracking hidden behind metal enclosures. Identification of these concerns is more likely with electro-acoustic detection techniques which utilize sensors to detect anomalous equipment condition concerns before failure. An initial review of the service territory using this technique identified several locations for further action as part of this strategy. This program work is coordinated with other asset replacement programs, where appropriate.

Each substation will undergo an evaluation to determine whether replacing the metal-clad switchgear directly is the best option or if alternative methods of supplying the load are feasible. Due to the complexity of these projects, switchgear replacements often escalate into full station rebuilds or even station retirements.

Drivers:
Aging metal-clad switchgear is typically replaced to improve safety, reliability, and compliance. Over time, insulation and mechanical components degrade, increasing the risk of arc flash and equipment failure. Older gear often lacks modern safety features, cannot meet current standards, and suffers from frequent outages and high maintenance costs. Spare parts become scarce, and legacy designs limit integration with advanced protection, monitoring, and automation systems. Upgrading ensures regulatory compliance, reduces downtime, supports growing load demands, and lowers long-term operational risks and expenses.

Metal-clad switchgear installed prior to 1970 has several factors that can lead to component failure. Electrical insulation voids were more prevalent in earlier vintage switchgear. Higher temperatures due to poor ventilation systems can also degrade lubricants in moving parts such as breaker mechanisms. Gaskets and caulking also deteriorate over time leading to ingress of moisture.

Customer Benefits:
The impact of each metal-clad switchgear event on local customers is usually substantial, with nearly 2,000 CI for over three hours per event. This program would reduce the risk of such events and provide significant benefits to the affected customers.

2025 to 2026 Variance:
The projected program investment is shown in the table below. The capital forecast reflects new condition assessment data and analyses that helped identify and prioritize replacement and refurbishment candidates. Multiple stations are in progress with a program underway to prioritize additional stations.

Table 4-19
Metal-Clad Switchgear Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	8.1	15.0	15.1	9.5	7.4	-	55.1
2026	-	15.9	19.1	11.0	16.1	20.9	83.1

The following specific projects and programs are expected to exceed $1 million in any fiscal year:

East:

- **Blue Stores Substation (C081611)** - This project replaces the metal-clad switchgear, CS, and transformer with new equipment due to asset condition.
- **Sycaway – Metal-clad Replacement (C081630)** - Sycaway Station is a 115/13.2kV (22.4 MVA) two bank substation. Each transformer is supplied with eight feeders with two metal-clad switchgear units. This location has forecasted load that will require a station rebuild by 2035, so during this metal-clad replacement, this scope will have new metal-clad rated for 3000Amps.
- **Riverside IMCS A and B ACR Replace (C098097) -** This funding project is to provide funding for the replacement of 3 metal-clad switchgears that have been identified with asset condition issues.

Central:

- **Tuller Hill Station 246 (C056611)** - This project replaces the existing metal-clad substation with new equipment, including a new transformer.
- **Pine Grove Metal-clad Switchgear (C056614)** - This project replaces the existing metal-clad switchgear with new equipment.

West:

- **Metal-clad Replacement Program (C084936)** – This statewide program is to replace metal-clad switchgear that is in poor condition. Individual units will be evaluated through various inspection or testing methods and prioritized based on condition.
- **Station 61– Substation Rebuild (C051707)** – This project was initiated under the metal-clad replacement program; however, due to multiple asset conditions at this station location it was determined to rebuild the substation from 4.16kV to 13.2kV and increase the capacity to (2) 40MVA banks.

Substation Circuit Breakers and Reclosers

Certain types, or families, of substation circuit breakers have been specifically identified for replacement in the next ten years. Breaker families are typically older, obsolete units that are less safe or less reliable. Certain breaker families that are targeted for replacement contain parts that must be custom-machined or units that contain asbestos in the interrupting systems and require extra precautions during maintenance, refurbishment, and overhaul.

Drivers:
Circuit Breaker Projects are to improve system reliability and safety by proactively replacing obsolete breaker families that pose operational risks due to poor asset condition, limited parts availability, and hazardous materials such as asbestos.

These projects ensure that aging, less reliable equipment is prioritized for replacement before failures occur, reducing maintenance challenges and enhancing overall grid reliability.

Customer Benefits:
The Circuit Breaker Replacement Projects improve reliability and reduce risks by eliminating obsolete equipment and mitigating safety and environmental hazards such as oil, asbestos, and SF_6 gas, while ensuring compliance with NYS DEC requirements.

In addition to providing reliability benefits, several of the targeted breaker families present opportunities to reduce hazards associated with safety and the environment (*i.e.*, oil and asbestos).

2025 to 2026 Variance:
The projected program investment is shown in the table below. The overall spend has been modified based on lessons learned regarding scheduling, availability of resources, and a more accurate identification of breakers per station location.

Table 4-20
Circuit Breakers and Reclosers Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	2.5	0.7	6.6	7.6	6.4	-	23.7
2026	-	1.1	6.3	5.2	5.7	5.4	23.7

The following specific projects and programs are expected to exceed $1 million in any fiscal year:

- **NW ARP Breakers & Reclosers (C032261)** – This Funding Project Number is for the Breaker Program in the Western Division to replace identified asset condition and family class issue breakers.
- **NYE ARP Breakers & Reclosers (C032252)** - This Funding Project Number is for the Breaker Program in the Eastern Division to replace identified asset condition and family class issue breaker.
- **NYC ARP Breakers & Reclosers (C032253)** - This Funding Project Number is for the Breaker Program in the Central Division to replace identified asset condition and family class issue breaker.

Substation Batteries and Related

This program mirrors the Transmission Substation Batteries and Chargers program. Battery and charger systems are needed to ensure substation operational capability during both normal and abnormal system conditions. The intent of this program is to replace battery and charger systems that are 20 years old. The 20-year limit is based on industry best practice and experience in managing battery systems. This program work is coordinated with other asset replacement programs, where appropriate.

Currently, there are over 368 substation battery banks in service across all distribution substations. To bring all battery systems to less than 20 years old within ten years would require a replacement rate of approximately 13 battery banks per year.

Individual battery problems may be identified at any time during Visual and Operational inspections or periodic testing. Problems identified through these methods are addressed under the Damage/Failure spending rationale.

Drivers:
Failure of batteries and charger systems may result in substation protective relays and/or circuit breakers not operating as designed.

Customer Benefits:
Battery and charger system failures can result in additional customers being interrupted as back-up relay schemes at remote substations will have to isolate a fault. It may also result in equipment damage if a fault is not cleared in a timely fashion. Interruptions related to battery incidents are uncommon at this time, as the replacement program is progressing as desired.

2025 to 2026 Variance:
The projected program investment is shown in the table below. The budget has been adjusted to reflect the population of batteries approaching industry best practice replacement age over the next several years.

Table 4-21
Substation Battery and Related Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	1.0	0.9	0.9	0.9	0.6	-	4.3
2026	-	1.4	0.9	0.9	0.6	0.6	4.4

There is no specific project in this category forecasted with planned spending in excess of $1 million in any fiscal year.

Mobile Substation

Mobile substations are transportable units that provide temporary power transformation and switching capabilities. Mobile substations are designed to be rapidly deployed during planned outages, emergency events, or equipment failures, ensuring continuity of service without lengthy construction timelines. Mobile substations are essential for ensuring continued reliability.

Mobile substations are key elements for ensuring continued reliability and supporting the system during serious incidents.

Drivers:
To improve the management of the mobile substation fleet and reduce operational risk, the Company reviewed substation usage, system requirements, and unit uniqueness to assess condition and availability. Highly utilized or uniquely configured mobile substation units pose reliability risks if unavailable during emergencies. Based on this review, protection upgrades, and replacements were recommended to ensure readiness and resilience.

To improve the management of the mobile substation fleet, the Company conducted a review which considered system requirements, the amount of mobile usage, and the uniqueness of individual units to better understand the condition of all members of the fleet and their associated risks. Highly utilized units may present a risk if they are not properly maintained or refurbished.

Further, uniquely configured units or very highly utilized units in which there is only one available unit on the system, present some risk since they may not be available for an emergency due to utilization elsewhere. Based on the review, mobile substation protection upgrades, rewinds, and replacement units were recommended.

Customer Benefits:
A mobile substation or transformer is the quickest method for restoring service to customers when an outage occurs in a substation, which is typically within 16-24 hours. By refurbishing, upgrading, replacing, and purchasing new mobile substations, as necessary, via system reviews and condition assessments, the risk of extended customer outages will be significantly reduced. In addition, properly addressing the needs of the mobile fleet will allow us to schedule maintenance for substation transformers in a timely manner. Lastly, having an adequate number of mobile substations on-hand will promote the completion of new construction projects on-time and on-budget.

2025 to 2026 Variance:
The projected investment is shown in the table below. Projects have been redistributed based upon changes in asset condition and the availability of the units so that upgrade work can be performed.

Table 4-22
Mobile Substation Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	3.0	3.0	3.0	-	8.9
2026	-	3.0	6.4	5.0	3.0	3.0	20.4

The following specific projects are expected to exceed $1 million in any fiscal year:

- **NY Mobile Substation Program (C051744)** - This program is for identifying mobile substations that are in need of replacement.
- **Mobile 4C – Mobile Substation Replacement (C089181)** -This Funding Project Number is for the funding to replace Mobile Substation 4C.
- **Mobile 9C – Mobile Substation Replacement (C089184)** - This Funding Project Number is for the funding to replace Mobile substation 9C.

4. E. Multi-Value Distribution (MVD)

MVD projects combine proactive asset replacements driven by poor condition with an expanded scope to increase system capacity where appropriate. MVD Projects provide benefits to system capacity. Historically, Multi-Value Distribution projects were captured under the Asset Condition spending Rationale. In 2023, National Grid recognized the importance of highlighting Multi-Value Distribution as its own mechanism with two core concepts: Asset Condition and System Capacity. The projects detailed below have a primary driver to replace or retire distribution assets in poor condition with a secondary driver to also proactively upgrade assets to increase system capacity.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans are shown in the table below, and variances in the scope and timing of specific projects in this mechanism are described below. The increase in spend in this mechanism over time reflects the criticality of this spending rationale moving forward, as it addresses both the increasing age of the Company's assets, and the increasing distribution capacity needs within the state, due to electrification and DER adoption. Variance between individual fiscal year's reflects re-prioritization of projects or shifts of projects into MVD spending rationale from other spending rationale, based on the recognition as the project evolves that its scope addresses both capacity and load relief.

Table 4-23
Multi-Value Distribution Spending
Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	66.0	88.3	110.7	126.8	199.7	-	591.4
2026	-	91.4	100.7	136.5	212.1	345.3	885.9

MVD System Capacity

The MVD system capacity strategy includes those projects where major asset refurbishments have been identified coupled with increasing capacity. These projects encompass proactively replacing assets identified to be in poor condition with higher rated equipment and other associated asset replacements or installations as needed to support the system capacity increases.

Drivers:
The investments in this strategy are driven by the need to address the Company's increasingly aging and obsolete infrastructure and meet the ever-increasing customer electrification and decarbonization demands to ensure safe and reliable network operation.

Customer Benefits:
The MVD System Capacity strategy can maximize the utilization of existing asset condition projects and planned system capacity needs while avoiding the cost of under-built or otherwise inefficient solutions which only address a single asset condition issue.

2025 to 2026 Variance:
The projected program investment is shown in the table below. The variation year-on-year is due to scope and timing of specific projects in this category. Similarly, to the overarching category, the variance between individual fiscal year's reflects re-prioritization of projects or shifts of projects into MVD spending rationale from other spending rationale, based on the recognition as the project evolves that its scope addresses both capacity and load relief. The increase in spend in this category over time reflects the criticality of this spending rationale moving forward, as it addresses both the increasing age of the Company's assets, and the increasing distribution capacity needs within the state.

Table 4-24
Multi-Value Distribution Asset Condition - System Capacity ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	65.8	85.7	108.2	122.5	193.0	-	575.2
2026	-	91.4	100.7	136.5	212.0	345.3	885.9

The following specific projects and programs are expected to exceed $1 million in any fiscal year:

East:
- **Swaggertown 54 and Scotia Conversion (C091774)** - This project will fund the construction of the new three-phase 13.2kV feeder from the Swaggertown 364 substation into the Village of Scotia via Spring St and Sacandaga Rd. It will fund the conversion of the 4.16kV feeders

that today make up the Scotia 4.16kV feeders. It will fund the construction of double circuit feeders necessary to extend the Swaggertown 36453 and 36454 into the Village of Scotia down Sacandaga Rd and any other ancillary D-Line construction to adjust feeder loading in the surrounding area to a level necessary for forecasted 2033-2037 loading.

- **Swaggertown Station Upgrades (C091754)** - This project will upgrade the 115kV/13.2kV station transformer TB1 at Swaggertown to a 40MVA bank, replace 115kV CS 6177, replace all 15kV class oil filled circuit breakers, and add a fourth feeder breaker to accommodate a new 36454 feeder. These upgrades will resolve all substation asset condition issues, loading concerns in the 2032-2037 timeline, and provide an additional 22.9MVA hosting capacity.
- **Delaware D-Line (C091776)** - To resolve asset condition issues, this project will convert the Delaware 33053 feeder from 4.16kV to 13.2kV and transfer its load to the Delaware 33052. This will allow for the retirement of Delaware TB1 which has ongoing Asset Condition issues placing load on Delaware TB2.
- **Ruth Rd Station Rebuild (C081613)** - The Karner 317 substation has significant asset condition issues and serves a 4.16kV island in the Town of Colonie. This project is to rebuild the Ruth Rd 381 substation with two 40MVA station transformers and eight distribution feeders to allow for the retirement of the Karner 317 substation and conversion of the Karner distribution to 13.2kV while providing ample capacity for future load growth.
- **Karner 4.16kV Feeder Conversions (C049958)** - This is under the Ruth Rd area study and is responsible for the D-Line work associated with converting the Karner overhead distribution feeders to 13.2kV and tying them out to the new feeders that were constructed under the Ruth Rd and the Sand Creek D-line FPs, C052304 and C052306 respectively.
- **Ruth Rd Rebuild Distribution Work (C052304)** – This project will consist of distribution work associated with the rebuild of the Ruth Rd 381 substation into a two-bank, eight feeder substations per the Ruth Rd Area study.
- **Sand Creek 54 Distribution (C052306)** – To help the conversion and transfer of multiple existing Karner 4.16kV distribution feeders as per the Ruth Road study, we will be constructing a new Sand Creek 45254 distribution feeder.
- **Liberty St 34.5/13.8kV Subs Transformer (C081420)** - This project provides for the replacement of one power transformer. This project will also address other asset condition issues at the substation, including replacing targeted and deteriorated equipment.
- **Newtonville Area Study: Johnson (C091023)** - Replace both transformers, TB1 and TB2, each with a 40MVA. Replace both metal-clads, each rated for 3,000A with six breakers.
- **Newtonville Area Study: D-Line (C091022)** - Installation of 1000 CU cable, in concrete-encased conduit, to commission a fourth feeder out of Forts Ferry substation. Installation of 1000 CU cable, in concrete-encased conduit, to commission a seventh feeder out of Johnson substation. Replacement of all existing, direct-buried getaway cables out of Johnson substation with 1000 CU in concrete-encased conduit. Replacement of all existing, direct-buried getaway cables out of Maplewood substation with 1000 CU in concrete-encased conduit. Replacement of all existing, direct-buried getaway cables out of Forts Ferry substation with 1000 CU, in concrete-encased conduit, up to the first switch. Using 336 AL, install new three-phase, 13.2kV distribution along Wade Rd Extension, between Sparrowbush Rd and Forts Ferry Rd. Using 336 AL, extend three-phase, 13.2kV along Latham Ridge Rd, Ford Avenue, Broadway, and Scully Avenue. Using 336 AL, extend three-phase, 13.2kV along Latham Ride Rd, between Ford Avenue and Miller Rd, and remove all rear-lot distribution. Convert the entirety of the Newtonville 30567 to 13.2kV. Convert the entirety of the Newtonville 30568 to 13.2kV. Convert the entirety of the Newtonville 30581 to 13.2kV. Convert the entirety of the Newtonville 30583 to 13.2kV. Convert the entirety of the Newtonville 30584 to 13.2kV.

- **Smith Bridge 2nd Bank & Metal-clad (C081418)** - This project will expand Smith Bridge to a two-bank station by installing a 40 MVA transformer and a new metal-clad to enable the retirement of the Saratoga Substation which has significant asset condition issues.
- **Smith Bridge - New TB2 Getaways (C083483)** - The Smith Bridge Substation is being expanded from a single to a two-bank station to allow for the retirement of the Saratoga Substation to address the significant asset conditions issues which exist at Saratoga. This project will construct feeder getaways for three new 13.2 kV distribution feeders.
- **Smith Bridge 56 & 57 - Build Feeders (C083485)** - Construct new Smith Bridge 56 & 57 feeders using former 34.5kV lines into Saratoga to support the expansion of Smith Bridge substation and the retirement of Saratoga Substation which is necessary due to asset condition issues at the Saratoga Substation.
- **Manheim Distribution (C074489)** - To address asset condition issues and historical flooding issues at the Inghams Substation, this project will connect the existing 13.2kV Inghams distribution feeder 02051 to the new Manheim substation while also creating a new distribution feeder which will be used to relieve the load on the nearby Salisbury Substation.
- **Cobleskill Area Study D-Line (C091671)** - This project is required to convert the Cobleskill 11,12,13 feeders from 4.8 to 13.2 kV, which will enable the energization of the new 69kV/13.2kV TB2 at Cobleskill. This conversion will enable future expected load growth capacity on the Cobleskill feeders.
- **Cobleskill Connect Transformer TB2 (C086902)** - Installs a new 69kV CS, low side bank breaker and three feeder breakers to energize 13.2kV distribution transformer TB2 to the Cobleskill substation. This project will also address all asset condition concerns at Cobleskill and remove old 4.8kV equipment.
- **Avenue A Station 291 Metal-clad Replacement (C056609)** - This project is to replace the 34.5kV metal-clad switchgear due to asset condition issues in line with the metal-clad strategy.
- **Gloversville D-Line (C091775) -** This project will convert the existing 4.16 kV distribution feeders out of the Gloversville substation to 13.2 kV while creating a new 13.2 kV distribution feeder to address system capacity and asset condition concerns as part of the Gloversville area enhancements study.
- **Gloversville Station Rebuild (C093731)** - Gloversville transformer (TB1) is forecasted to reach 100% of its summer normal rating by 2037. This project is to upgrade Gloversville Station to a 40 MVA, 69/13.2 kV station transformer.
- **Lake George Station (C093767)** - This project aims to address forecasted load growth and asset condition concerns at a number of substations in the Lake George area of the Upstate New York service territory. This project is still in the conceptual stages to develop a more detailed scope of work.
- **Lasher Road - 53 Feeder OH (C068348)** - This project is to convert and rebuild the Lasher Road 53 feeder to 13.2 kV and retire the Randall Rd 57 feeder. This was the last phase of the overall plan to retire Randall Road Substation with a greenfield substation, Lasher Road.
- **McClellan Station Rebuild (C093728)** - This project will rebuild McClellan Substation to accommodate projected load growth. The existing substation transformer is expected to exceed 100% of its winter normal rating by 2039 and therefore requires a system capacity upgrade to accommodate the load in the area and ensure system reliability is maintained.
- **Rensselaer Area Study: D-Line (C091127)** - There are numerous aging assets surrounding the Rensselaer area needing replacement in the next five years based on substation asset condition reports. Additionally, forecasts out to 2050 depict neighboring assets exceeding both Summer Normal (SN) and Winter Normal (WN) ratings by over 200%. These forecasts are further amplified given the urban environment wherein EV adoption and electric heat pump adoption are forecasted to be high with minimal opportunity for large, distributed energy

resources for load mitigation. This project is for the distribution work associated with the Rensselaer area study.

- **Schenevus Rebuild (C093665)** - The existing transformer at Schenevus Substation is loaded to 79% of its summer normal rating today and is in deteriorated condition. The projected load growth indicates that a system capacity upgrade is required to accommodate the load in the area, address asset condition concerns, and ensure system reliability.
- **Seventh Ave North Feeder Conversion (C080476)** - The City of Troy is powered by antiquated infrastructure, with every substation serving National Grid's customers at a voltage of 4.16kV. Not only is the infrastructure aging, but the City of Troy has also seen significant load growth; growth of which the 4.16kV cannot handle when compared to National Grid's current standard of 13.2kV. Adding to the significant load growth, thus requiring significant upgrades, is an increased installation of EV chargers, rising residential loading, new commercial businesses, and the electrification of city buses.
- **Seventh Ave South Feeder Conversion (C080475)** - This project will convert Seventh Avenue feeder 24483 from 4.16 kV to 13.2 kV to address significant load growth in the city of Troy.
- **Voorheesville Station Rebuild (C093711) -** The transformer at Voorheesville station is forecasted to reach 100% of its summer normal rating by 2031. This project will upgrade Voorheesville station to a 115/13.2kV 1-40 MVA bank station and add a fourth feeder The Voorheesville asset conditions to be resolved under the station rebuild are the demolition of the old 34.5kV structure and replacement of its 34.5kV disconnect 34.5kV lightning arresters and 35kV rated cable to outside the station coordinating with a Sub-T FLISR scheme.
- **Elnora Station Rebuild (C093680)** - This project will rebuild Elnora Substation to accommodate projected load growth. The existing substation transformer is expected to exceed 100% of its summer normal rating by 2036 and therefore requires a system capacity upgrade to accommodate the load in the area and ensure system reliability.
- **Grand St Rebuild (C093693)** - The existing transformer at Grand Street Substation is loaded to 79% of its summer normal rating today and is in deteriorated condition. The projected load growth indicates that a system capacity upgrade is required to accommodate the load in the area, address asset condition concerns, and ensure system reliability.
- **Everett Station Rebuild (C093704)** - Rebuild the Everett Road substation, with single 40 MVA, 115/13.2 kV transformers and replace the 2000 Amp distribution metal-clad. Will also require 3V0 CCVT installation with all work internal to the Everett Road station fence.
- **Wolf Road Getaway Replacement (C093700)** - To address both system capacity and asset conditions issues. This replacement of the 34457 underground will increase the getaway size to match future load growth and replace all failing underground cable of the 34457. These underground cable failures were exacerbated by a motor vehicle accident VA that occurred in 2025 which ripped a switchgear from its foundations pulling the underground and causing further failures on the underground cable**.**
- **Southern Adirondack D-Line Work (C095254)** - This project will include the following: - Reconductor approximately 5 miles of the Schroon Lake 51 circuit due to projected overloads on the Schroon Lake 51 main line - Establish a 2nd circuit out of Schroon Lake substation following Station rebuild (Schroon Lake 52). - Construct tie between Warrensburg 52 and Chestertown 51 - Construct tie between Chestertown 51/Riparius 95 and North Creek 52
- **Lake George D-Line Work (C093759)** - This project will include the following: Construct a 3rd Feeder out of Warrensburg substation (Warrensburg 53) south along US Highway 9 into the Village of Lake George, Construct a 3rd feeder out of Scofield Road substation (Scofield Rd 51) north along State Highway 9N into the Village of Lake George. Tie new Scofield Rd 51 to Birch Ave 51 - Construct tie between Birch Ave 52 and Warrensburg 51

- **Firehouse Rebuild: D-line (C096101) –** This project will work to perform Distribution work associated with the rebuild at the Firehouse substation.
- **Firehouse Rebuild: Substation (C093657)** – Due to forecasted to reach 100% of the SN rating by 2041, this project will upsize TB1 from 25 MVA to 40 MVA.
- **Buckley Corners D-line (C093772)** - This project will build an estimated 15 miles of new 13.2 kV distribution to create new feeder ties with the Blue Stores and Hudson substations. This distribution work will enable the full capacity added by the Buckleys Corner substation rebuild project and help improve reliability by enabling future FLSIR schemes between Buckleys Corners, Blue Stores and Hudson substations.
- **Buckley Corners Station Rebuild (C093768)** - This project will rebuild Buckley Corners Substation to accommodate projected load growth on a neighboring Blue Stores Substation. The Blue Stores substation transformer is expected to exceed 100% of its summer normal rating by 2034 and therefore Buckleys Corners will require a system capacity upgrade to accommodate the load in the area and ensure system reliability.
- **Bolton Station Rebuild (C093761)** - Upgrade the Bolton station transformer to a 20 MVA transformer to provide capacity for future load on the west shore of Lake George.
- **Brook Road Rebuild (C093748)** - Upgrade TB1 and TB2 each to a 55 MVA. Install two new metal-clads.
- **Knapp Road D-Line (C096279)** - Construct the necessary 13.2 kV distribution to connect the existing Chestertown 13.2 kV distribution feeders to the new Knapp Hill substation.
- **Knapp Road Station (C093760) -** Construct a new 115/13.2 kV substation in the existing Knapp Road substation in Chestertown to allow for the retirement of the 34.5/13.2 kV substation while provide the capacity needed to serve future projected load.
- **Schenevus 26127 13.2 kV Rebuild (C093667)** - Schenevus 26127 is limited by the substation transformer at Schenevus Substation, which is loaded to 79% of its summer normal rating today and is in deteriorated condition. The projected load growth indicates that a system capacity upgrade is required to accommodate the load in the area, address asset condition concerns, and ensure system reliability.
- **Seventh Avenue Rebuild: Substation (C080474)** – This project plans to rebuild the Seventh Avenue substation to handle 15 kV operation.
- **Sharon 36352 D-line Extension (C093697)** - This is a placeholder project to improve system capacity and reliability by extending three-phase distribution to create a feeder tie between Sharon 36352 and Marshville. Sharon TB1 is expected to overload by 2036, so further study is required to develop the most effective mitigations to address this concern.
- **Warrensburg Rebuild (C093763)** - This project proposed to upgrade the existing 115/13.2 kV TB3 transformer at Warrensburg substation to a new 115/13.2 kV 25 MVA transformer, as well as install the needed equipment to utilize the third 13.2 kV feeder position at Warrensburg substation. In addition, all equipment will be upgraded as identified by the Asset Condition reports.

Central:

- **Mexico D-line (C093643)** - To address system capacity and asset condition issues, this project will install a 34.5/13.2kV 7.5MVA padmount transformer, reclosers, regulators, and convert 9.7 mi. D-line & Ratios
- **Stittville Station D-line (C093785)** – To address system capacity and asset condition issues, this project will build three new feeder getaways out of the substation, extend new feeders North and South out of the station, split existing feeders out onto new feeders including approximately five miles of OH line build for new feeders to tie locations.
- **Dorwin D-lines (C093699)** – This project and associated projects will retire Dorwin substation after boutique substations are built and serving load.

- **Alder Creek Substation Rebuild (C093792)** – This project will address asset condition issues at Alder Creek substation, as well as system capacity violations on the 4.8kV bank in 2022, forecasted violations on the 13.2kV in 2033 and hosting capacity increase to the area. This project will rebuild Alder Creek with 7.5MVA 46/13.2kV boutique station. Conduit and cable to three-position switchgear and convert approximately ten miles to 13.2kV.
- **Chadwicks Expansion - D-line (C093804)** – This project will expand Chadwicks station with a second bank (40MVA) and four open air feeder positions to support load and retirement of neighboring 5kV systems.
- **Granby Center Expansion (C093650)** – To address asset condition issues at both Granby Center and Third St, this project will install a 115/13.2kV 40MVA and switchgear at Granby Center.
- **Fayette St Substation (C081981)** - Fayette St substation is being rebuilt due to asset condition issues. Fayette is a 34.5-4.16kV substation. As part of the rebuild, it is being converted to 13.2kV. Fayette St, along with Ash St, Park St, and Galeville, form a 4.16kV pocket on the North and West side of the City of Syracuse.
- **Rebuild Ash 4160 (C082032)** - Rebuild and convert Ash St 4.16kV and place it on the new 13.2kV at Fayette St and Galeville.
- **Galeville Station Rebuild (C050746)** - Galeville is 34.5/4.16kV station surrounded by 13.2kV stations Ash St and Hopkins Rd with limited tie capability. Several asset condition issues were identified at Galeville Substation: Westinghouse Type DH AMCB breakers 1958 to 1963 vintage. Convert Galeville station from 4.16kV to 13.2kV standard by replacing the existing transformer with 34.5/13.2kV 7.5/9.395MVA unit and the Metal-clad with open air configuration with three feeders.
- **Galeville 71, 72, & 73 Feeders Conversion (C050749)** - This project is a distribution line portion of Galeville station rebuild project C050749. The main driver for the project is the asset condition of Galeville transformer and Metal-clad.
- **Cortland Area-Enhancement D-Line Work (C090298)** - This project is the D-line work for the Cortland area study. It involves: Dismantling the Cortland Underground into radial lines, Converting the 4.8kV Underground to 13.2kV, Converting the 4.8kV Overhead line to 13.2kV, Installing 13.2/4.8kV padmounts for McGraw 4.8kV feeder tie
- **MV-Clinton TB1 Replacement HC (C086880)** – This project is to replace Clinton TB1 for asset condition and investigate a larger bank for load and hosting capacity.
- **West Adams 2nd Bank (C084111) -** This project is to add a second 115/13.2kV station transformer at West Adams substation. This project will allow for the retirement of Dexter substation and will create a new distribution feeder. This project supports CLCPA per PSC Case 20-E-0197.
- **Fayette St Line (C081980)** - Fayette St substation is being rebuilt due to asset condition issues. Fayette is a 34.5-4.16kV substation. As part of the rebuild, it is being converted to 13.2kV. Fayette St, along with Ash St, Park St and Galeville, form a 4.16kV pocket on the North and West side of the City of Syracuse. There are also asset condition issues at Ash and Galeville. There is currently a project in to convert Galeville to 13.2kV. By also converting Fayette St to 13.2kV, the 4.16kV at both Ash St and Park St can be retired through conversions to Galeville and Fayette.
- **Cortland Area-Enhancements Substation work (C090284)** - Cortland Station has several assets that are level 3 asset condition, needing to be replaced within 5 years. Cortland Station loading is also above its summer normal rating and forecasted to be loaded beyond its summer emergency rating within the next 7 years. The majority of assets at Miller Street Station are also level 3 and need to be retired/replaced within 5 years. This is part of a series of projects to retire Miller St Substation and convert the majority of Cortland area to 13.2kV. This Project focuses on the substation by installing a new 115kV/13.2kV bank, bringing the

overhead bus connection up to standard, and building a new control house for 13.2kV relay equipment at Cortland.

- **Lighthouse Hill Relocation-Dist Line (C074342) –** Presently, Lighthouse Hill Station is a shared facility with Brookfield Hydro Power. Assets are comingled throughout the existing stations with mutual dependencies, presenting access and operational issues at the site for both parties. Additionally National Grid has 34.5kV subtransmission and 12kV distribution circuits that originate at the station. This project supports the Lighthouse Hill Rebuild project by installing (3) three new 12kV distribution circuits from the new substation location and rearranging them with existing circuits.
- **Middleville Boutique, D-line (C095741) -** Middleville has aging assets and forecasted load to exceed existing thermal ratings in FY39. This project is to install a new 46/13.2kV 10MVA pad mounted transformer and convert ~5miles of D-line of the Middleville feeder to 13.2kV.
- **LEVITT D-Line (C093702) -** This project is for 15 miles of D-Line rebuild and conversion in conjunction with 13.2kV station rebuild to address asset condition age of equipment and system capacity due to forecasted loading exceeding 95%SN in 2023.
- **Rock Cut Metal-clad (C083445)** - Project is to replace the metal-clad at Rock Cut Substation due to asset condition issues.
- **East Pulaski Station Rebuild (C099114)** – East Pulaski's transformer bank is inadequate for the load in the area. The transformer exceeded its Summer Normal rating in 2025. Additionally, there are some asset condition concerns with the transformer being rated 3/5 ("Fair, develop replacement plan"). The substation will be rebuilt with a 40 MVA transformer.
- **Old Forge D-Line (C096437) –** This project specifies new feeder getaway cables on all feeders (61,62,63, and 64) at Old Forge station. Also, 15 miles of D-Line rebuild and conversion to 13.2kV to address asset condition system capacity due to forecasted loading exceeding 95%SN in 2043.
- **New Haven Bank Upgrade (C099105) –** New Haven's substation transformer is experiencing severe asset condition concerns and is thermally inadequate for the power needs of the area. Replace this transformer with 40 MVA dual bank and add two feeder positions for a total of four feeders.
- **Old Forge Station (C096436) –** Due to forecasted load seen in 2043 of 80% SN, this project will plan to rebuild Old Forge Station with 2-10/12.5 MVA 46/13.2kV transformers.
- **S Washington Boutique D-Line (C096439) –** Removal of exiting and upgrade station assets to a single transformer at 10 MVA 46/13.2kV, this will follow current Boutique Style station standards.
- **Whitesboro Rebuild, D-Line (C095366) –** This project will convert feeders 64, 65 & 66 from 4.16kV to 13.2kV. Total OH line conversion of 14 miles.
- **Arnold Upgrade, D-line (C095364) –** This project will convert feeders 71 and 73 from 4.16kV to 13.2kV. Total OH line conversion of 5.3 miles.
- **Cavanaugh Rd Station (C096431) –** This project will rebuild the station utilizing existing property, removing existing equipment, and have a 55MVA MVA Single 115/13.2kV transformer, open air configuration, consisting of 5 feeder locations, following current Traditional Substation standards (Relaying, Conduits, Getaways, etc.).
- **Central Utica Boutique Sub - D-Line (C093808) -** From the incoming new 46kV cable off the new riser pole under C093809, install new 46/13.2kV 10MVA pad mounted transformer. Install new getaway conduit and 1000Cu cable to new 13.2kV feeder riser split to 2 new reclosers and two 3-333kVA regulators with two 3-500kVA 13.2/4.16kV rack-mounted ratios. Intent is to connect each to existing Conklin feeder 73 and 74 respectively. Exact location of new equipment and distribution feeder connections to be determined through design but intent is to locate on existing NG property adjacent to Conklin substation.

- **Chadwicks Expansion – Sub (C093803) –** Station expansion, at existing Chadwicks substation location, add a second transformer at 40MVA, 115/13.2kV. A) open air configuration, consisting of 4 feeder locations, following current Traditional Substation standards (Relaying, Conduits, Getaways, etc.).
- **Eagle Bay Pad, D-line (C093628) –** This project will Install a single 46/13.2kV transformer at 7.5 MVA, and follow the current Boutique Style station standard (Each feeder 13.2kV will have: 1000Cu getaway cable, conduit, load break switches, recloser protection, and 3-333kVA regulators), having two 13.2kV feeder locations. Two additional 13.2/4.8kV ratios will be required until the 4.8kV system can be converted to 13.2kV
- **LEVITT Sub (C093701) –** This project will retire the existing Madison and Levitt stations feeding the 4.8kV system within Rome and remove the existing station assets at Madison location, install one 46/13.2kV transformer at 10 MVA. Then project will follow the current Boutique Style station standard (Each feeder 13.2kV will have: 1000Cu getaway cable, conduit, load break switches, recloser protection, and 3-333kVA regulators), having two 13.2kV feeder locations.
- **MV-Clinton Substation Rebuild, DLine (C094222) -** The d-line portion encompassed by this project is to replace all four (4) original led coded feeder getaways cables, with 500MCM Cu cables, total cable replacement is approximately 1000' of new cable.
- **Stittville Station (C091745) –** This project looks to upgrade the transformers due to the ACR and EV charging on Thruway
- **White Lake Pad D-Line (C093608) -** Install a single 46/13.2kV transformer at 10 MVA, this project will follow the current Boutique Style station standard (Each feeder 13.2kV will have: 1000Cu getaway cable, conduit, load break switches, recloser protection, and 3-333kVA regulators), having two 13.2kV feeder locations. Two additional 13.2/4.8kV ratios will be required until the 4.8kV system can be converted to 13.2kV

West:

- **Buffalo Station 30 Rebuild (C046519)** - Refurbishment of Buffalo Indoor Substation #30 as per appropriate Asset Strategy and Sanction. Additionally, this will replace the first section of getaway cables as part of the Buffalo Station 30 rebuild.
- **Buffalo Station 31 Rebuild (C046952)** - Refurbishment of Buffalo Indoor Substation #31 as per appropriate Asset Strategy and Sanction. Additionally, this will cover distribution line costs associated with the refurbishment of Buffalo Station 31.
- **Buffalo Station 38 Rebuild – Station (C046955) -** This project pertains to the refurbishment of the Buffalo Indoor Substation #38 as per appropriate Asset Strategy.
- **Buffalo Station 45 Rebuild (C090725, C090726)** - Refurbishment of Buffalo Indoor Substation #45 as per appropriate Asset Strategy and Sanction. Additionally, this will replace getaway cables for 4.16KV cables for Buffalo STA 45 Rebuild and to complete Pre-Construction distribution work.
- **Buffalo Station 51 Rebuild (C046958)** – This project is to refurbish the Buffalo Indoor Substation #51 as per appropriate Asset Strategy and Sanction.
- **New College Ave Substation (C097427)** - This project is the preferred option for the Northern Niagara Falls Area Enhancement which seeks to alleviate the multiple substations in the Northern half of Niagara Falls that face severe asset condition and forecasted system capacity concerns. This project will build a new 115/13.2 kV 40 MVA dual bank substation in the center of Northern Niagara Falls under existing transmission lines on College Ave. This new College Ave substation will supply distribution to the entirety of the northern half of the city of Niagara Falls with the help of the Lockport Rd 13.2 kV feeders.
- **Northern Niagara Falls D-Line (C097431)** - This project is the preferred option for the Northern Niagara Falls Area Enhancement which seeks to alleviate the multiple substations

in the Northern half of Niagara Falls that face severe asset condition and forecasted system capacity concerns. To facilitate the new College Ave substation and 13.2 kV distribution this project is required to convert large portions of Niagara Falls and ratio down where appropriate. This project will build out 4-13.2 kV distribution feeders from College Ave up to disclosed ratio installation locations to absorb the loading of the existing Beech Ave 81 and Eleventh St 82 4.16 kV substations, converting as necessary. This project will also create new feeder ties and FLISR schemes to the Lockport Rd 216 feeders for system resiliency.

- **Rebuild Lockport Rd Substation (C097432)** - This project is the preferred option for the Northern Niagara Falls Area Enhancement which seeks to alleviate the multiple substations in the Northern half of Niagara Falls that face severe asset condition and forecasted system capacity concerns. This project will rebuild Lockport Rd 216 with a 40 MVA transformer as well as create feeder ties and FLISR schemes to the new College Ave substation.
- **Eighth St 80 - Refurbishment (C046585)** - This project will refurbish the existing obsolete 23kV-4.16kV, three 3.5MVA transformers with a single 13.2kV-4.16kV, 9.375MVA transformer. Additionally, this will cover distribution line costs associated with the refurbishment of Station 80. Formerly called "Eighth St 80 - Indoor Substation Rd".
- **Station 140 Station Rebuild (C056616)** – The project is addressing asset condition and increasing system capacity at the substation.
- **Station 140- Station Rebuild D-Line Portion (C093018) –** This project is required due to the substation rebuild project and the relocation of the metal-clad switchgear requiring the relocation of the feeder getaway cables.
- **Station 79 Rebuild (C082713)** – This project is addressing asset condition issues and redesign with additional capacity at the substation.
- **Grand Island Station Build (C081485)** - This project is to modernize and increase capacity to Grand Island Station 64's aging devices due to their asset condition.
- **Roberts Rd Sta – Replace TB1 (C086985)** – This project is for the replacement of the power transformer with the standard size 115/13.2kV (15/20/25MVA). TB1 is on the transformer watchlist due to asset condition. The new TB1 increases capacity and addresses asset condition.
- **Waterport Asset Condition (C091751)** – To resolve asset condition issues, this project will rebuild or replace (34.5kV/4.8kV) Station due to Asset Condition & Thermal Overload with two new 13.2kV or 4.8kV Padmount Transformers
- **Shawnee Rd Station 76- TRF1 AC (C097155) -** This funding project is to provide funding for the removal and replacement of TRF1, which is being replaced due to severe asset conditions and environmental issues. This project funding will also address environmental remediation of the station area and the replacement of TRF1 with a system capacity increase to 40MVA due to future forecasted loading at this station.
- **Katherine St New 115/13.2kV Sub (C098695) –** This project is for the installation of a new 115 kV/ 13.2 kV substation on Katherine St. in the City of Buffalo, which included 55 MVA 115/13.2 kV transformers, associated buses, switches, and breakers for multiple 13.2 kV distribution feeders. These additional feeders will be installed to improve reliability, energy efficiency, and capacity for the City of Buffalo for current and future rapid load growth.
- **Station 154 Dx Station (C099017) –** The project involves the conversion of the existing infrastructure from 4.16 kV to 13.2 kV and includes funding for a new dual bank 50 MVA 115 kV/13.2 kV greenfield station next to Kensington Terminal Station, aimed at increasing system capacity to accommodate new customer loads, future load forecasts, and current loading on the 23 kV K cables in the area.
- **Black Rock Area Enhancement Station (C098382) –** This funding project is for a new dual bank 50 MVA 115 kV/13.2 kV greenfield station in the Black Rock/ Riverside area of the City of Buffalo. The aim is to increase the system capacity in the area based on the needs from

new customer loads, load forecast seen in future years, and current loading that is present on the 23 kV H cables that run through this part of the city.

- **Black Rock Area Enhancement – Dline (C099004) –** This funding project is for the distribution line work that will be needed after the installation of the new two (2) 115 kV/ 13.2 kV transformers associated with the new greenfield substation that will be constructed with the Black Rock Area Enhancement study. There will be rebuilding, replacing of assets, and conversion work necessary in the area since it is currently 4.16 kV grounded-wye. The aim is to increase the system capacity in the area based on the needs from new customer loads, load forecast seen in future years, and current loading that is present on the 23 kV H cables that run through this part of the city.
- **Station 34/35 Boutique – Dline (C099195) –** This funding project is for the installation of two new 5 MVA 23/13.2 kV boutique substations adjacent to existing substations 34 and 35, which are beyond their designed service life. The initiative includes the conversion of approximately 5 miles of 4.16 kV mainline to 13.2 kV, aimed at enhancing reliability and capacity in the Seneca area to accommodate new customer loads, replace aging assets, and reconfigure circuits, thereby addressing potential capacity constraints and service interruptions as demand continues to grow.
- **Upgrade 139 Dx Line (C099197) -** This funding project addresses capacity and forecasted loading concerns in the Erie South area by installing a new boutique substation near existing substation 41. The initiative includes the D-line work for the installation of a pad-mounted transformer, cable, and conduit to a new riser pole, followed by connections to new reclosers and regulators. This project will facilitate mainline conversion and rebuild work for eight feeders coming from the 154 Station, aligning with the new 115/13.2 kV transformers to enhance distribution capacity, replace aging assets, and meet projected load growth in the area. Without these upgrades, the existing system risks capacity constraints and potential service interruptions as demand continues to increase**.**
- **Station 154 Dx Line (C099018) -** This funding project is for the distribution line work that will be required following the installation of the new dual bank 50 MVA 115 kV/13.2kV station next to Kensington Terminal Station. The work will address the necessary system upgrades to accommodate new customer loads, replace/retiring of aging assets, and reconfigure circuits in the area currently supplied via the 23kV cables. This will include rebuilding and replacing line sections, as well as any voltage conversion work needed to align with the new 13.2 kV distribution capacity, reliability, and overall asset condition in the surrounding network to meet projected load growth in future years.
- **Livonia, 10 Mile Voltage Conversion (C096429) –** This funding project is the distribution component of the Livonia Rebuild and will convert ten miles of existing 3-phase 4.8 kV distribution of 13.2 kV. This will address the load increases in the area as well as increasing the available hosting capacity. Additionally, it will create feeder ties to Conesus 52 and Hemlock 38.
- **Avon 43, 10 Mile Voltage Conversion (C096408) –** This project will convert the existing 3-phase 4.8 kV distribution out of Avon Substation to 13.2 kV. Approximately 14 miles of distribution work in total, and this work is outlined in the Avon-Lima study.
- **Upgrade 139 Dx Station (C099200) -** This funding project is for the distribution line work that will be required following the installation of the new dual bank 50 MVA 115 kV/13.2 kV station next to Kensington Terminal Station. The work will address the necessary system upgrades to accommodate new customer loads, replace and retire aging assets, and reconfigure circuits in the area currently supplied via the 23 kV cables. This will include rebuilding and replacing line sections, as well as any voltage conversion work needed to align with the new 13.2 kV distribution capacity. These enhancements are essential for improving reliability and overall asset condition in the surrounding network to meet projected load growth in future years.

- **Livonia 37 Substation Rebuild (C096426) –** This project will rebuild the Livonia substation 37 from a 34.5/4.8kV (3.75MVA) single bank station, to a 34.5/13.2kV (12.5MVA) single bank station. This project will address the asset conditions, load growth and hosting capacity in the area. It will create feeder ties to Conesus 52 and Hemlock 38.
- **Station 41 Boutique - Dline (C099196) -** This funding project is for the distribution line work that will be required following the installation of the new 115 kV/13.2kV station next to Kensington Terminal Station. The work will address the necessary system upgrades to accommodate new customer loads, replace/retiring of aging assets, and reconfigure circuits in the area currently supplied via the 23kV cables. This will include rebuilding and replacing line sections, as well as any voltage conversion work needed to align with the new 13.2 kV distribution capacity, reliability, and overall asset condition in the surrounding network to meet projected load growth in future years.
- **Black Rock Dx Station Land (C099001) -** This funding project is for the acquisition of new land for the construction of the 115 kV/13.2 kV Black Rock substation in the Buffalo, NY area. This initiative is essential to support the upcoming enhancements in the Black Rock Area, facilitating the installation of new infrastructure to meet the growing demands of customer loads and improve overall system reliability.

4. F. Reliability

Reliability projects are intended to ensure the electric network has sufficient operability to meet the demands of the system and National Grid's customers. Projects in this spending rationale are intended to improve performance of facilities where design standards have changed over time, and to provide appropriate degrees of system configuration flexibility to limit adverse reliability impacts of contingencies. The Company has instituted planning criteria for CI and CHI at risk following an N-1 contingency that sets CI and CHI exposure thresholds for various supply and feeder contingencies with the purpose of setting a standard for minimum electrical system performance. These thresholds are applied in conjunction with other criteria - such as maintaining acceptable delivery voltage and observing equipment capacity ratings - to ensure the system operates in a reliable manner while managing risk of customer interruptions to an acceptable level.

Analysis of interruptions under these criteria assume that any and all practical means are used to return load to service including use of mobile transformers and field switching via other area supply lines and/or area feeder ties. CHI and CI analysis recognizes the approximate times required to install mobile/back-up equipment as well as stepped field switching, *i.e.*, moving load from the adjoining in-service station with feeder ties, that will be used to pick-up customers experiencing an interruption, to a second adjoining station to increase the capability of the feeder ties. In addition, the expenditures in this rationale are used to install reclosers that limit the customer impact associated with an interruption. It also includes investment to improve performance of the network through the reconfiguration of feeders and the installation of feeder ties. The projected distribution investment in the reliability spending rationale over the Plan period is shown below.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans are shown in the table below.

Table 4-26
Reliability Spending Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	30.9	40.0	31.6	39.4	37.1	-	178.9
2026	-	37.1	32.4	39.6	32.9	24.5	166.6

The following specific projects are classified as Reliability program and have planned spending in excess of $1 million in any fiscal year. Details on the planned spending profiles for these projects are included in Exhibit 3.

- **Sorrell Hill Rebuild (C077170)** - This project is to install a second bank at Sorrell Hill to relieve MWh violations at Lysander and Sorrell Hill. This project supports CLCPA per PSC Case 20-E-0197.
- **Corliss Park South Feeder Conversion (C081414)** - This project is for feeder conversion and overhead work on the Corliss Park 33817 feeder.
- **Long Rd 209 (CD00977 – Station, CD00964 - Feeder)** - These projects are to install a transformer and new feeder to resolve MWh violations at Long Rd.
- **Mohican Getaways (C081399)** - Mohican Station Feeder Getaways Civil, Cable, Riser Poles, and Feeder voltage upgrades to support new 13.2kV metal-clad at Mohican Station. Also includes Henry St. network feeder, Ogden Brook 52 Getaway and OH, and Ogden Brook 55 Henry St load transfer.
- **Baker St – Install 2nd Transformer (C046553)** - This project will look to install a new second transformer at Baker St substation in Busti, NY to alleviate MWh violations.
- **McIntyre-Hammond #24 Dist. Taps (C083853)** - This project will relocate several miles of the McIntyre-Hammond #24 line out of a swamp area.
- **Targeted UG Grooms Rd Tie (C093862)** - The Grooms Rd 34553 rises up on Ray Rd for only a few sections to create OH field ties to the Grooms Rd 34554 and the Grooms Rd 34558. The location that this UG to OH transition occurs is in an area where there are a lot of trees, and over the past several years there have been tree related outages in this area that have locked out the feeder breaker impacting the 1,756 customers fed from the Grooms Rd 34553. The project being proposed is to move those overhead conductors and switches associated with the field ties to underground. The underground setup will include: 4,500' of underground cable and conduit, a four-position dead front switchgear, and two riser poles with normally open vertically mounted hook-stick disconnects allowing the Grooms 34553 to tie to the Grooms 34554 and Grooms 34558 through underground facilities and removing the risk of tree related outage at the feeder head.
- **36955 S Greenfield Rd. Conversion (C092821)** - Ratio is overloaded to over 150% and is at risk of failing. Converting approximately 1.4 miles of 4.16 kV to 13.2 kV will assist in mitigating potential low voltage concerns as well as eliminate sequential ratios (4.16 kV, to 13.2 kV, back to 4.16 kV) thus significantly improving protection coordination.
- **12353 Middleburgh St Conversion (C092618)** - The 2,500 kVA, pad-mounted, step-down, ratio transformer on Middleburgh Street in Troy is overloaded to over 150% and is at risk of failure. This conversion will also enable the installation of two (2) step-down, ratio transformers tying the North Troy 12353 (13.2 kV) to the Seventh Avenue 24480 (4.16 kV) and Seventh Avenue 24481 (4.16 kV), thus increasing reliability and decreasing the length of sustained Customer outages.

- **Burgoyne 52 – Eldridge Rd Rebuild (C091948)** – This project will construct new distribution from the south along Eldridge Road and retire the existing cross lot distribution through the wetlands.
- **Sorrell Hill Rebuild D-Line (C094698)** - Distribution work required for the Sorrell Hill substation rebuild. Bring two new feeders out of Sorrell Hill and split the 52 & 54 feeders and off load a portion of Lysander.
- **22151 NY-66 Conversion (C096962)** - Removal of three (3) 500 kVA ratio transformers. Convert approximately 7,162' of 3-phase, 4.8 kV to 3-phase, 13.2 kV. Using 336 AL, reconductor approximately 2,310' of 3-phase. Install two reclosers. Install six 500 kVA ratio transformers. Install one 167 kVA ratio transformer.
- **Paloma 55 Delta Conversion Phase 2 (C094235) –** This project is related to converting delta portions of Paloma Feeder 25455 from 4.8 kV to 13.2 kV which will increase the capacity of the converted portions. Convert 2 Miles of 3 Phase Delta to 3 Phase 13.2kV Beginning at P12h on County Route 42 (P12h TD6012, LN12)
- **26453 NY-351 Conversion (C098636) –** The 500 kVA ratio on White Church Lane in Troy is nearing overload and is at risk of failing. Converting from 4.8 kV to 13.2 kV will mitigate low voltage concerns as well as align with the Company's initiative to convert 4.8 kV delta. Additionally, the Brunswick 26453 is a worst-performing feeder; relocating this line to the road will further improve reliability on the feeder. This conversion will also eliminate three step-up ratios, thus eliminating potential failure points and lowering operational costs. Lastly, the 3-phase extension within this project will be one of multiple steps towards eliminating the approximate 2-mile-long, rear lot, overhead getaway of the Brunswick 26452, also a worst-performing feeder.
- **41352 NY-32 Conversion (C098576) –** DER cases 670828 and 670845 are moving forward with a conversion from 3-phase, 4.16 kV to 3-phase, 13.2 kV which will bring 3-phase, 13.2 kV within close proximity of two 13.2 kV, step-down, ratio transformers; one on the Newark 30057 and one on the North Troy 12352. This project will continue said conversion, thereby creating the first 3-phase, 13.2 kV feeder tie between the Prospect Hill 41352 and the Newark 30057 as well as between the Prospect Hill 41352 and the North Troy 12352. These two new 13.2 kV ties become increasingly critical given the radial 115 kV feed into Prospect Hill substation, allowing the entirety of the Prospect Hill 41352 to be energized in the event of a transmission outage. These new ties will also provide viable, alternate feeds onto Van Schaick Island which is currently served by a single, radial 13.2 kV feed.
- **Bartell 32554 - Convert 4.8kV areas (C094191) –** This project is related to converting delta portions of Bartell Feeder 32554 from 4.8 kV to 13.2 kV which will increase the capacity of the converted portions. Convert 1.70 miles of 3 phase delta to 3 phase 13.2kV beginning at the following Locations Pole 5.5 on Bennett St. (P.5 1/2, TD:6039, LN:7), P. 33h on County Route 37 (P. 33h, TD:6065 LN:11) , and P1 on Main St (P.1 TD: 6019 LN:12)
- **Bartell 55 Conversion (Ladd Rd) (C094187) –** This project is related to converting delta portions of Bartell feeder 32555from 4.8 kV to 13.2 kV which will increase the capacity of the converted portions. Convert the area beyond the ratio on P65 Ladd Rd on Bartell 32555 to 13.2kV. This is approximately 9,300' of conversion. Then install 33kVA single phase ratios where it goes single phase.
- **Lockport Road 216 - Install TB#2 (C036057) –** This project will address all asset condition concerns at Lockport Rd 216 and install one new 40 MVA 115/13.2 kV transformer to accommodate large projected load growth in the region.
- **Paloma 55 Delta Conversion Phase 3 (C094236) –** This project is related to converting delta portions of Paloma Feeder 25455 from 4.8 kV to 13.2 kV which will increase the capacity of the converted portions. Convert 1.5 Miles of 3 Phase Delta to 3 Phase 13.2kV Beginning at P3 on County Route 42 (P3 TD6005 LN10).

- **Schroon Lake 51 Submarine Cable (C096687) –** A single phase 13.2 kV submarine cable currently serves 21 customers on the east shore of Schroon Lake, most of which are only accessible via boat as there is no road access. Over the last several years, there have been a number of reliability issues with the cables, and several emergency repairs have needed to be made in order to address where the cable has worn through posing a safety risk. By extending the existing single phase along Nesa Rd from the Pottersville substation, it will be possible to retire the largest section of submarine cable, removing an environmental concern and lowering potential safety risks.
- **Wetzel 55 - Convert Caughdenoy (C094192) –** This project is related to converting delta portions of Wetzel Rd Feeder 690055 from 4.8 kV to 13.2 kV which will increase the capacity of the converted portions. Convert 1.66 Miles of 3 Phase Delta to 3 Phase 13.2kV Beginning at P40 on Caughdenoy Rd (P40, TD6040, LN28)

Engineering Reliability Review

An Engineering Reliability Review ("ERR") can be completed for any feeder experiencing reliability problems or any localized pocket of poor performance. ERRs are often performed on those feeders defined as Worst Performing Feeders ("WPF") as described in the Electric Service Reliability Report, filed annually in accordance with Case 90-E-1119. The scope of an ERR typically involves:

- Review of one-year and multi-year historical reliability data to identify issues and/or trends.
- Review of recently completed and/or planned work expected to impact reliability.
- Review of the need for installation of radial and/or loop scheme reclosers.
- Review for additional line fuses to improve feeder sectionalization.
- Review of the coordination of protective devices to ensure proper operation.
- Review for equipment in poor condition.
- Review of heavily loaded equipment.
- Review for other feeder improvements such as fault indicators, feeder ties, capacitor banks, load balancing, additional switches, and reconductoring (overhead and/or underground).

Drivers:
ERR recommendations are used to improve reliability on circuits experiencing recent poor reliability performance.

Customer Benefits:
The ERR program improves customer reliability in areas where performance has been substandard. ERR work also helps harden the feeder to make it more resilient.

2025 to 2026 Variance:
Projects associated with the ERR program are reactionary and are identified as reliability concerns arise. As such, specific projects are only identified in the early years of the plan. A future spending plan is created and reviewed annually to target priority projects. The planned spend for the ERR program has been reduced to accommodate higher priority projects for the next several years.

Table 4-27
Engineering Reliability Review Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.3	2.2	0.2	0.0	0.6	-	3.3
2026	-	2.4	0.3	1.5	0.6	0.0	4.8

The following specific projects are classified as Engineering Reliability Review program and have planned spending in excess of $1 million in any fiscal year.

- **Chrisler Ave 25735 Conversion (C057133)** - Convert all of mainline Chrisler 25735 from 4.16kV to 13.2kV. Convert the Emmet 25605 feeder west of I-890 from 4.16kV to 13.2kV then reallocate all load to the Weaver 24551 feeder - transferring ~1.3MVA.
- **Church St 53 - County Hwy 132 Convert (C049652) –** This project will reconductor about 2.4 miles of County Hwy 132 east of pole 18 to replace the 2 - #2 CU conductors with 336.4 MCM AL and convert the 3-phase mainline to 13.2 kV.

Storm Hardening

The Storm Hardening program increases the resilience of the distribution system in areas that have experienced repeated outages during adverse weather to improve reliability performance and customer satisfaction. Minor Storm Hardening ("MSH") projects include moving pole lines to the road, review of pole size, class, and use of Grade B construction at critical poles (*i.e.*, junction poles, switch poles and road/rail/water crossings), additional sectionalizing points (*i.e.*, reclosers, fuses and switches), enhanced lightning protection, and enhanced vegetation management.

Drivers:
Storm Hardening recommendations are utilized as a basis to improve reliability in targeted areas that have experienced poor performance during adverse weather events.

Customer Benefits:
The Storm Hardening program will enhance distribution resiliency in targeted areas.

2025 to 2026 Variance:
The projected investment and the variation between the 2025 and 2026 Plans are shown in the table below. Variance is due to improved project scopes and estimates due to the analysis performed on the circuits identified for the program. The forecast decrease is due primarily to the fact that one of the three projects currently under this program (C057386 - Battenkill 57-FY17 Storm Hardening) is under construction in FY24 and will have a majority of its spend take place in that FY. The remaining two projects shifted to FY26 due to priority changes in the plan.

Table 4-28
Storm Hardening Review Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.7	0.4	0.0	0.0	0.0	-	1.1
2026	-	0.4	0.0	0.0	0.0	0.0	0.4

There are no specific projects in this category forecasted with planned spending in excess of $1 million in any fiscal year.

Substation Flood Mitigation

Major flood events, floodwater heights associated with such events, and specific time and location of events are inherently difficult to predict. Extensive research, analysis, examination of historical events, and FEMA flood maps have been used to assess risks and facilitate the substation flood mitigation program.

Under National Grid's Distribution Substation Flood Mitigation Program, substantial investment has occurred in recent years to mitigate flood risk and increase substation resiliency in accordance with FEMA recommendations and sound engineering practices. Mitigation efforts have included raising the height of vulnerable equipment, constructing barrier floodwalls surrounding substations, relocating substations out of flood zones, and purchasing emergency flood deployment materials. Flood risks are examined with each project's scope of work to improve flood mitigation when feasible.

Drivers:
Severe storms and flooding have highlighted the potential vulnerability of substations. Several recent events in the Company's service territory have exceeded FEMA's 100-year flood height elevation and are a driving force for the program.

Customer Benefits:
Reliable power to communities during a flood event is critical and has the potential to preserve extensive real and personal property (*i.e.*, individual customers' sump-pump systems, *etc.*).

2025 to 2026 Variance:
The projected investment is shown in the table below. This is a new program as part of the CCVS and CCRP, and the planned investment has remained the same since the program was created in the 2023 CIP.

Table 4-29
Substation Flood Mitigation Program Variance ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	0.0	0.0	0.0	0.0	-	0.0
2026	-	0.0	0.0	0.5	2.0	3.5	6.0

The following specific projects are classified as Targeted Feeder Tie Enhancements and have planned spending in excess of $1 million in any fiscal year.

- **Hawkeye Station Sub (C097560)** –This project calls for the retirement of Union Falls 844 Substation due to high risk of flooding. The Federal Emergency Management Agency locates the substation in a high-risk flood zone, thus placing the station equipment at risk. The recommended solution is to retire Union Falls Substation build the new Hawkeye 46kV Substation designed to mimic the electrical configuration of the existing Union Falls station.

4. G. Resiliency

Resiliency projects are intended to allow the electric power system to anticipate extraordinary, high-impact, low-probability events and rapidly recover from these disruptive events. Historically, reliability and resiliency projects were detailed under the Reliability spending rationale; however, National Grid recognizes the importance of highlighting Resiliency as its own mechanism with system recovery and survivability as its core concepts. System recovery refers to the use of tools and techniques to quickly restore service to as many affected customers as practical. Survivability refers to the enhanced system planning or use of innovative technologies to aid customers, communities, and institutions in continuing some level of normal function without limited access to the grid. The main programs within this rationale are FLISR, distribution line sensors/monitors, targeted feeder ties, and climate change vulnerability.

FLISR is a method of installing switching devices to limit the customer impact associated with an interruption by automatically reconfiguring a feeder without the intervention of personnel to bring customers back on-line. Distribution line sensors/monitors provide greater insight into the real-time operation of the electric power system so that circuit capabilities can be maximized in a cost-effective way and reduce the likelihood of a potential emergency response. Targeted feeder tie installations create additional opportunities to quickly recover service to customers affected by an event.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans are shown in the table below. The Resiliency spending rationale was created in 2020.

Table 4-30
Resiliency Spending Rationale
Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	40.4	55.6	60.5	69.5	98.5	-	324.5
2026	-	51.9	62.3	72.9	102.0	92.2	381.3

FLISR

Traditional distribution design utilizes several types of sectionalizing devices. For radial distribution feeders, there is typically a three-phase breaker at the substation, which acts as the primary disconnecting means for the whole feeder. From the substation, there are three-phase reclosers and switches which are used to sectionalize the mainline of the feeder. Three-phase reclosers are designed to autonomously interrupt fault currents and isolate the faulted area of the feeder following a contingency event. Restoration of non-faulted segments of the feeder are generally performed through the manual operation of field switches.

In the event of a fault, traditionally implemented distribution systems will attempt to isolate the faulted section of the feeder through the fuse, recloser, or breaker protection capabilities. Once isolated, crews will manually find the fault, isolate, and then reconfigure the circuit using switches and feeder ties (in addition to reclosers and fuses). This ‘human in the loop’ method of service restoration necessarily takes time to implement, which results in additional CI and CMI as compared to a system where the field devices are automated.

As part of the FLISR program, all new and existing reclosers will be integrated with DSCADA to allow control center operators to monitor and control the devices remotely. For lateral taps off the mainline, fuses and manual switches will be used for sectionalization without remote monitoring or control capability.

Similarly, for contingency and maintenance purposes, "feeder ties" will be created where feasible. These feeder ties generally employ manual switches that are normally left in the open position.

Drivers:
FLISR is a control scheme which incorporates telecommunications and advanced capability of key switching devices to provide remote monitoring and operator control of field devices for normal operations and maintenance. At the same time, FLISR provides an automated response to system contingencies for minimizing customer interruptions and expediting system reconfiguration to facilitate service restoration. This greatly impacts the resulting CI and CMI performance from a fault event that occurs within a zone of protection. As part of a FLISR system, manual switches and feeder ties would be upgraded to automated switches (*i.e.*, reclosers) at three-phase mainline locations. In addition, these devices would be integrated with the Company's DSCADA system and the future ADMS.

The Distribution Line FLISR program development began in FY20 and has since deployed fifty schemes through FY25, with forty additional schemes under construction through FY26. In FY27 and beyond, the Company will continue to deploy and activate these schemes in high-value locations across the Company's NY Electric service territory.

Customer Benefits:
National Grid anticipates improved main line CMI performance for feeders targeted for FLISR deployment. The additional operational data collected by the automated reclosers will also support the improved management of the distribution system and assist in demand optimization, DER integration, and operational efficiency.

2025 to 2026 Variance:
The projected investment is shown in the table below. National Grid expects to continue statewide deployment of FLISR on selected circuits after an acceleration effort in the areas of reliability and resiliency.

Table 4-31
FLISR Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	27.2	31.6	35.3	30.9	32.4	-	157.4
2026	-	31.6	35.3	30.9	32.4	34.1	164.2

The following programs are classified as FLISR and have planned spending in excess of $1 million in any fiscal year. Details on the planned spending profiles for these programs are included in Exhibit 3.

- **NY FLISR – D line (C080089 – NYE, C080088 - NYC, C080090 - NYW)** - These projects will cover the deployment of the NY FLISR program across the Company's service territory. These project supports CLCPA per PSC Case 20-E-0197.

Targeted Feeder Tie Enhancement

This program is intended to create new high-value feeder ties. New feeder ties are established to make substations/feeders more resilient and to remove the need for a mobile substation by bolstering feeder capability. In case of an outage, feeder ties are used to reconfigure the system for rapid customer restoration. During a station interruption, the installation of a mobile substation can often take multiple hours leaving customers out of service, as ample feeder tie capacity does not exist. Targeted feeder ties can eliminate the need to deploy a mobile substation by establishing adequate feeder capabilities to offload an entire interrupted station to adjacent stations via ties.

Drivers:
Feeder enhancements are used to improve resiliency in targeted areas by improving contingency response and recovery.

Customer Benefits:
National Grid anticipates improved restoration times for future outages in targeted areas.

2025 to 2026 Variance:
The variances between the 2025 and 2026 Plans are shown in the table below. The Plan includes new programs, specifics projects, and reserves for resiliency, climate vulnerability and targeted undergrounding feeders.

Table 4-32
Targeted Feeder Tie Enhancement Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	11.6	14.6	13.5	7.7	16.5	-	63.6
2026	-	19.6	15.7	12.0	24.6	14.1	85.9

The following specific projects are classified as Targeted Feeder Tie Enhancements and have planned spending in excess of $1 million in any fiscal year.

East

- **East Worcester 21 Feeder Tie (C094409)** – This project is to extend 6,000' of three-phase and build 3,000' of new distribution line on the Worcester 18924 to create the feeder tie between Worcester 18924 and East Worcester 06021 feeders.
- **Shore Rd 28186 Elnora 55 Transfer (C067867) -** This conversion will complete the transfer of the load off the Shore Road substation to adjacent substations allowing for the retirement of the Shore Road substation. Recent Furan analysis test results show that the paper insulation in the transformer is at the end of its life. This transformer has been identified for replacement.
- **Weaver St 51 – Chrisler 51 Tie (C094373) -** This project will convert a portion of the Weaver Street 51 feeder along Crane Street and Francis Avenue to 13.2kV and extend three-phase distribution to create a feeder tie between Weaver Street 51 and the new Chrisler 51 feeders.
- **Selkirk 14951 – Thatcher River Conv (C049985) -** Selkirk 14951 was on the Worst Performing Feeder list previously. The existing 1,500kVA ratio on Thatcher St is already nearing its summer normal limits. This will also create a much needed 13.2kV tie for the

Selkirk 14951 and Quail Hollow. We are also working on retiring the Quail Hollow station and Sub-T tap. The Quail Hollow distribution load will be reallocated to the Bethlehem 02155 & the Selkirk 14951. This work is needed to improve the reliability of the Selkirk 14951 by increasing its number of feeder ties and available switching options.

- **Warrensburg 52 - Chestertown 51 Tie (C094376) -** This project will construct about 9,000' of new 3-phase, 336 AL along US 9 and convert the northern section of the Warrenburg 52 feeder to create a feeder tie between the Chestertown 51 and the Warrensburg 52 which could be automated with FLISR reclosers.
- **Weibel 56 Wall Street Rebuild (C051325) -** Rebuilding Wall Street establishes a 13.2 kV feeder tie between Weibel 41556 and Battenkill 34256, along with robust single-phase ties to Schuylerville 03912 and Wilton 32951, improving voltage performance across all three feeders.

Central

- **Milton Ave D-Line (C046643)** - This project is to address a CHI at Risk violation at the Milton Ave Substation and the associated feeders.
- **Rock City Station - 13.2kV Rebuild (C046671)** - This project provides for the replacement of one power transformer and rebuild/conversion of the substation to 13.2kV.
- **New Thousand Islands 81457 Feeder (C081805)** - This project will construct a new feeder using the existing spare feeder position at the Thousand Islands substation. The addition of this feeder will create ties between multiple feeders in the area.
- **Targeted Feeder Tie Truxton – McGraw (C094337) -** This project is to install a new feeder tie between McGraw 60 and Truxton 73. The purpose is to help prevent customer outages with the concern of the load forecast. It involves installing ~3 miles of new three phase 4.8 kV delta, and a new voltage regulator. Additional opportunity to add FLISR capability to reduce customer interruptions, with an estimated 1,102 customer count.
- **Feeder Tie Sandy Creek – East Pulaski (C094371) -** Convert 2 miles of single phase 4.8kV to 13.2kV three phase conductor and neutral wire, install two (2) sets of voltage regulators, install one (1) recloser. This is to create an additional feeder tie in the area to enhance system resiliency in the Pulaski planning area as limited ties are available at present. Additional opportunity to add FLISR capability to reduce customer interruptions.
- **Lehigh 53 / Rome 54 Tie Recon. P2 (C094423)** - This project is part 2 of the Lehigh 53 portion of the tie enhancement to Rome 54. This part includes reconductoring, adding neutral and converting ~1.4 Miles from 12kV ratio transformer towards Rome 54 along Herder Road.
- **McAdoo 91453 Reconductoring (C097804) -** The feeder tie between the McAdoo 91453 and North Gouverneur 98353 feeder is currently thermally limited due to the rating of 1/0 conductor on the 91453 feeder. This project will reconductor the 1/0 to 336.6 conductor and increase the thermal capacity of the feeder tie.
- **HWY 812 Rebuild 93851 (C094370)** - There are limited feeder ties with the Ogdensburg 93851 feeder and there is only one 13.2kV feeder tie with the Ogdensburg station. This project will rebuild and convert 4.65 miles of 3-phase 4.8kV to 13.2kV and create a new feeder tie with a different 13.2kV station.
- **Turin 57/58 Tie (C096509) -** 2.5 Miles 13.2kV conversion (Rome-Westernville Rd), 0.25 Miles 3 phase extension/Conversion and 1.4 miles new 3 phase build along Townline Rd.

West

- **Feeder 15351 Tie with 15353 Swede R (C094407)** – This project will provide feeder tie Support to communities along Lake Erie in which there are limited tie options. This will

convert 2.16 miles of 4.8 kV to 13.2 kV allowing for an additional tie to be created for Berry Rd 153.

- **Feeder 06_9561 Tie With 06_7863 (C094382) -** This project is to create a feeder tie between F9561 and F7863. This project will provide outage relief for 792 customers, 765 of which are residential. This will allow for a potential annual reduction of 2hours CAIDI.
- **Create Full tie F18251 to F18254 (C049882) -** Rebuilding & converting approximately 5000' of circuit on Old Lake Shore Rd. can eliminate 2 main line ratios and create a full feeder tie between F18251 and F18254**.**
- **F07_18151 Tie with F07_9354 (C094413) -** This project will create a feeder tie for F18151 with F9354; which will potentially help 700 customers eliminate a 2.5 hour CAIDI outage.
- **Middleport F7765 Tie w/Shelby 7656 (C049711) –** This project is to reconductor/rebuild/expand a portion of Middleport Feeder 7765 that has approximately 5,800 ft of small conductor and extend approx. 1,300 ft of 3-phase on Telegraph & Maple Ridge Road to create a ratio tie with Shelby F7656. The new tie would increase reliability and provide the ability for load transfers and operational flexibility during outage restoration and maintenance.
- **Feeder 03_7161 Tie with Feeder 9363 (C094342) –** This project addresses resiliency concerns for South Newfane 7161. This feeder has a CAIDI of 2 hours annually. This feeder tie will provide outage relief for 780 customers, 743 of which are residential. These 780 customers, given their location at the end of the feeder, currently have very limited options for feeder tie relief during outage events.
- **Feeder 04_0456 Tie with Feeder 5053 (C094406) –** This project is to Rebuild & Convert ~3.3 miles (17,400 ft.) of North Leroy F0456 to create feeder ties with Mumford F5053. This project will provide outage relief for 2452 customers. This will allow for a potential annual reduction of 2 hours of CAIDI.

Climate Vulnerability

In early 2025 the Company filed an updated CCRP that identified investments needed to adapt to changes in climate. The updated plan incorporated direction from the PSC order from late 2024 based on the Company's CCVS and CCRP filings. The goal of this effort was to understand the impact future climate hazard projections would have on transmission and distribution assets and design standards and how to adapt to the impacts of climate change. The priority climate hazards identified for distribution assets were high temperature, wind, ice, and flooding. These priority climate hazards were chosen based on temperature data from Columbia University and NYSERDA, wind and icing data that was provided by MIT and flood risk data from the Company's Climate Change Risk Tool and FEMA flood risk designation. The projects below were identified in the CCRP to upgrade assets and to better withstand increased intensity and frequency extreme weather events.

Drivers:
As a result of the CCVS, the below projects were recommended as part of the CCRP to adapt to a projected increase in frequency and intensity of climate hazards across distribution service territory. From the Study and Plan, it was determined distribution assets may be exposed and vulnerable to high temperatures, extreme wind gusts, icing, and flooding.

Customer Benefits:
These projects will strengthen distribution structures, underground facilities, and conduct flood mitigation.

2025 to 2026 Variance:
The variance from FY25 to FY26 seen in the table below is due to changes to the Company's approved CCRP and deferrals to align with the rate case.

Table 4-33
Climate Vulnerability Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	0.0	9.4	11.4	30.6	45.7	-	97.1
2026	-	0.5	11.4	29.4	44.7	44.1	130.1

The following specific projects and programs are expected to exceed $1 million in any fiscal year:

- **Distribution Line CCRP Projects (C094132 – NYE, C094130- NYC, C094133- NYW)** - To better maintain resilience during wind and icing events, future pole additions or replacements will use larger Class 1 poles (rather than Class 3 poles typically used today) for three-phase mainline areas as well as for poles carrying significant equipment such as regulators, capacitor banks, and ratio transformers. Approximately 8,000 distribution poles will be affected by this design standard upgrade.
- **Targeted UG CCRP Projects (C094140 - NYE, C094138 - NYC, C094141 - NYW)** - To better maintain resilience in areas that are projected to experience 50mph wind gusts and 0.75in. of radial icing, this program will target three-phase mainline sections of distribution feeders that should be undergrounded. Approximately two miles of overhead distribution feeders will be replaced with underground construction each year.
- **CCRP (Flood) Riverside Station 288 (C093553)** - CCVS has identified Riverside Station 288 as a location to address the possibility of new flood wall.

4. H. Communications / Control Systems

Communications and Control Systems projects ensure that the proper communications equipment is in place to modernize and efficiently operate the electric system. Projects in this spending rationale include monitoring and communications infrastructure for Company equipment and customer metering. These projects enhance automation and allow for better visibility of the operation of the electric system.

Drivers:
Communications and control systems allow for remote status monitoring and control of assets.

Customer Benefits:
The communications and control systems installations and upgrades will lead to the automation and modernization of electric system infrastructure to improve performance and reliability.

2025 to 2026 Variance:
The projected investment is shown in the table below. The variance between 2025 and 2026 Plans is due to shifts in timing and scope for projects in this spending rationale. Near-term spend was re-prioritized to address imminent risks with decommissions and increased rates for DS0 service. Additionally, projected substation upgrades driven by MVD, System Capacity, and Asset Condition present future opportunities to directly incorporate substation communications

equipment installs and upgrades within larger station rebuilds. These two considerations resulted in an overall decrease in projected investments from FY27 to FY29.

Table 4-34
Communications / Control Systems Spending Rationale Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	47.2	40.6	46.6	46.0	50.0	-	230.5
2026	-	41.0	46.6	46.0	50.4	51.8	235.8

Remote Terminal Unit ("RTU")

This strategy covers the addition or upgrade of RTUs and related infrastructure at substations presently lacking remote monitoring and control capabilities. RTUs in substations communicate with the EMS and leverage substation data to provide operational intelligence. This significantly reduces response time to abnormal conditions. In addition, RTU upgrade efforts are utilized to prepare integration of stations assets within the Company's planned efforts for ADMS development.

There is an additional investment to replace outdated RTUs based on asset condition. That investment is documented in the Asset Condition spending rationale section.

Drivers:
RTUs will allow for remote operation and management of the system at stations providing benefits in contingency response and recovery.

Customer Benefits:
This strategy leverages operational intelligence to reduce response time to abnormal conditions through real-time monitoring and control. The strategy also enables distribution automation, sub-transmission automation, and future modernization strategies to improve service to customers.

2025 to 2026 Variance:
The projected investment is shown in the table below. The spending has been modified based on further development of the plan for each substation.

Table 4-35
Substation RTU program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	10.1	7.0	10.9	10.6	13.2	-	51.8
2026	-	7.4	10.9	10.6	13.2	15.1	57.2

The following programs are expected to exceed $1 million in any fiscal year:

- **EMS/RTU Installs (C076123 - NYE, C076124 - NYC, C076125 - NYW)** - These programs are to install new RTUs or expand the existing EMS at a substation for the purpose of system modernization. These project supports CLCPA per PSC Case 20-E-0197.
- **EMS/RTU for Distribution Supervisory Control and Data Acquisition ("DSCADA") (C077972)** - This project is for the upgrade of existing RTUs at stations with both distribution and transmission voltages to make-ready for ADMS. To accomplish this, a second SCADA network will be operated through a separate port on the RTU i.e., dual-ported. Older RTUs

that cannot be dual ported will be upgraded or replaced. This project supports CLCPA per PSC Case 20-E-0197.

Substation Communications Expansion (Telecom)

This strategy upgrades and extends the statewide substation communications network. It provides private fiber connectivity to several larger stations and new public or private communications capability to stations that currently have no connection.

Drivers:
Through expanding its fiber network, the Company can increase its capacity and decrease the need for public telecommunications provider services by lowering the cost and complexity of deploying substation automation and distribution system technologies. This strategy directly supports the EMS RTU expansion proposed above by providing data backhaul for advanced metering system deployments and DR messaging.

Customer Benefits:
Customers benefit through the reduction in on-going telecommunications costs and more utility control of operations, maintenance, troubleshooting, and repair resulting in improved reliability and security.

2025 to 2026 Variance:
The projected investment is shown in the table below.

Table 4-36
Telecom program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	35.1	32.6	34.0	35.4	36.8	-	173.8
2026	-	32.7	34.0	35.4	36.8	36.6	175.4

The following programs are expected to exceed $1 million in any fiscal year:

- **EMS/RTU Telecom (C076107- NYE, C076108 - NYC, C076110 - NYW)** - These programs are to support the EMS/RTU Stations Programs above by installing or upgrading the communication line to a station when required for new equipment. These project supports CLCPA per PSC Case 20-E-0197.
- **Telecom Distribution Dark Fiber (C091326 - NYE, C091330 - NYC, C091331 - NYW)** – These programs procure IRUs to dedicated fiber optic strands to support the migration away from leased communications circuits and to meet demands of grid modernization initiatives.
- **Telecom and Radio Equipment (C004157)** – This program maintains and upgrades equipment at National Grid's land mobile radio tower sites, which are important communications tools for storm restoration and blue-sky field operations. Component failure, obsolescence and storm damage have contributed to the wear and tear on the system. Replacements and upgrades are required and prioritized annually to keep the system functioning as designed and maintain the reliability of voice communications for National Grid field personnel.
- **Upstate NYE and NYCD Dist Verizon Disconnect FY24 (C093061) -** Verizon each year plans retirement of copper communication to a certain number of accounts, in National Grid's case substations/sites, to replace their system with fiber. As part of this effort, they send National Grid "Disconnect" notices with a date in the near future that the existing

communication service at a station/site will be terminated. We have set up this and other NY region projects to address the expenses associated with these disconnections of communication to station/sites. The specific stations/sites are not known in advance to National Grid therefore these NY regional projects are not specific to a location at this time.

- **AMI Field Area Networks (FANs) (C087158 - NYW)** – These projects are to install communications for advanced meters in various locations across the service territory.

Operational Telecommunications ("OpTel")

Considering the breadth of communications options and the evolution of technology, the Company understands that a flexible strategy is required when deploying communication systems. In particular, the OpTel system must be designed in a fashion that permits an efficient refresh of network technologies.

The majority of OpTel Strategy costs are to build and operate a private network, which will provide most communications for the new distribution devices such as those supporting DER. A key driver of this change is to reduce long-term costs (e.g., commercial cellular real-time-bidding costs) that increase with each new grid device added to the system.

Drivers:
The Verizon Enterprise Service Contract with National Grid for DS0 (Analog and Digital 56K) service has switched over to an off-tariff rate schedule resulting in substantial increases in the Monthly Recurring Cost (MRC) per circuit. Verizon is also currently decommissioning those circuits on an accelerated schedule and as they provide critical infrastructure protection, the company must transition to new technologies to avoid any service interruptions. As a result, the Company is making efforts to replace existing DS0 circuits with a combination of leased dark fiber through Competitive Local Exchange Carriers (CLEC), DS1 service over MPLS on Verizon Fiber, National Grid Private Fiber optic cable, and National Grid Private microwave along with other technology such as radios and cellphones when possible. By proactively responding, the Company will lead its network redesign and leverage on-going efforts to reduce costs.

Another key driver behind OpTel work is that multiple types of assets are also reaching the end of their service life and require replacement, such as obsolete DMX or microwave equipment. Grid Modernization demands will be putting more services on the network such as DG, AMI, ADMS, FLISR, etc.

Customer Benefits:
Telecommunications provide highly reliable connectivity under both normal and degraded system operating conditions. Operational Telecommunications functionality is a foundational element and supports all other key functionalities.

Specific benefits identified in the OpTel strategy include:

- Operational savings as leased lines are replaced with technology that is more robust and flexible.
- Creates a secure and reliable network for EMS / SCADA, relay protection, and wireless communications use for storm response and dispatch.
- Operational efficiency and overall cost reduction gained from combining disparate legacy telecommunications systems.

- Increased reliability of advanced field devices due to network reliability, flexibility, and scalability, especially where high availability and lower latency are required for devices to function properly.

2025 to 2026 Variance:
The projected investment is shown in the table below.

Table 4-37
OpTel Program Variance Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	14.6	18.5	19.0	20.2	21.0	-	93.4
2026	-	18.5	19.0	20.2	21.0	21.8	100.6

The following programs are expected to exceed $1 million in any fiscal year:

- **Verizon DS0 Replacement (DSCADA) (C084929 - NYE, C084926 - NYC, C088463 - NYW)** - These programs proactively transfer communications away from leased analog DS0 circuits before their service is decommissioned by utilities like Verizon. These circuits are critical for Energy Management System, system protections, IT, and data telemetry functions. These project supports CLCPA per PSC Case 20-E-0197.
- **OpTel – Digital Multiplexer ("DMX") Replacement (C084927 - NYE, C088464 - NYC, C088470- NYW)** – These programs replace existing Nokia (formerly Alcatel-Lucent) DMX SONET equipment, which is obsolete and reaching their end of life. This project supports CLCPA per PSC Case 20-E-0197 and allows all equipment on the company fiber backbone networks to operate on a packet-based technology, dramatically increasing capacity/flexibility and allowing scalability.
- **OpTel – Dense Wavelength Division Multiplexing ("DWDM") (C088747 - NYE, C088717 - NYC, C088718 - NYW)** – These programs upgrade the Nokia Dense DWDM equipment, 1830 PSS to accommodate increased network traffic and to support DMX replacements.
- **Distribution Microwave Network (C094105 - NYE, C094104 - NYC, C094106 - NYW)** – These programs rebuild, upgrade, and expand National Grid's private microwave communication network, which handles critical communications for Company assets that do not have terrestrial-based fiber connectivity or that require redundant paths. Existing Harris-Constellation microwave equipment must be replaced as they are nearing end-of-life with limited replacement parts available. Additionally, the microwave network is expected to expand to accommodate the migration away from leased communications circuits and to meet demands of grid modernization initiatives.
- **Distribution Satellite Network (C094111 - NYE, C094110 - NYC, C094112 - NYW)** – These programs will develop, deploy, and maintain a private satellite network, to quickly establish new communication links to substations, AMI collectors, and other remote equipment in areas with limited cell and fiber connectivity and line-of-sight propagation.

4. I. Non-Infrastructure

This spending rationale includes projects that do not fit under other spending rationales but are necessary for the safe and reliable operation of the distribution system. They include capitalized tools such as micro-processor-based relay test equipment and SF6 gas handling carts. In

addition, LMR systems not associated with the transmission and distribution system are included in this spending rationale.

Drivers:
Specialized tools are required by Operations personnel to perform equipment maintenance and for capital projects. Similarly, radio communication system upgrades and replacements are necessary for real-time communications while performing switching and for other operational needs.

Customer Benefits:
The proper tools allow Operations personnel to work safely and efficiently. Radio communications promote personnel safety by allowing the control centers to direct Operations personnel during field switching. In addition, timely communications allow a coordinated response to interruptions thereby limiting the duration of customer interruptions.

2025 to 2026 Variance:
The projected investment is shown in the table below. The forecast has been updated to reflect latest spending trend.

Table 4-38
Non-Infrastructure Spending Rationale Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	6.4	4.8	4.9	5.1	5.2	-	26.4
2026	-	4.8	4.9	5.1	5.2	5.4	25.4

There are no specific project in this spending rationale that exceed one million dollars.

4. J. Policy Initiative

Policy Initiative projects are non-discretionary and are associated with a determination or directive from an external entity having authority. Examples are CLCPA or FERC1000 projects.

With this, CLCPA Dependent and CLCPA Phase 1 are being addressed under this section. These projects were planned prior to CLCPA for various system needs but also serve to support CLCPA Phase 1 and Phase 2 projects to address both National Grid system needs, and State transmission needs to integrate renewable generation and storage.

Drivers:
These projects support CLCPA projects by limiting project constraints like outages. In turn, the CLCPA project directly address the New York State mandate to get 70% of energy from renewable sources by 2030 and achieve a 100% emission free grid by 2040 will require not only a large number of new renewable generators and storage, but also investment in the transmission and distribution systems. National Grid studies have shown that the transmission system in many of the areas of highest renewable generator interest is not capable of delivering power from the generators to the loads, both local and statewide.

Customer Benefits:
These projects support CLCPA projects to allow for additional renewable energy to reach the customers in support of the State's clean energy goals.

2025 to 2026 Variance:
This variance shown below is a consolidation of the CLCPA Ph1 and Dependent projects as this new spending rationale combines the two previous independent spending rationales.

Table 4-39
Policy Initiative Spending Rationale Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	17.2	4.6	0.3	0.7	0.0	-	22.8
2026	-	6.3	2.9	0.7	0.0	0.0	9.9

The following projects are expected to exceed $1 million in any fiscal year:

- **Coffeen Station Rebuild D-Line (C095230) -** The justification for this project is the replacement of deteriorated assets to maintain the system reliability and the installation of assets to support the transmission system planning needs for CLCPA. The Coffeen substation was constructed in 1959 and the original assets in the substation are in deteriorated condition, have limited spare parts and limited to no OEM support. In addition, the original oil filled assets have had a history of leaks. This project constructs distribution feeder getaways to support CLCPA station work.
- **CLCPA Golah Remote End Upgrades (C098303) -** This project is upgrade both North Leroy and East Batavia substations in relation to the rebuild of the Golah Substation.

4. K. Cost Share 2.0

Cost-sharing 2.0 provisions apply to two categories of system modifications: Utility-Initiated Upgrades and Market-Initiated Upgrades which both utilize a pro rata approach whereby the applicant pays only for the specific distribution hosting capacity assigned to its project for these types of system modifications. Cost Share 2.0 are created out review from the CIP developments. These projects are designed to address both National Grid system needs, such as asset conditions, reliability, and more along with creating greater DG/ESS Hosting Capacity. The mechanism of Utility-Initiated Upgrades consists of substation transformer bank (bank) installations or replacements and proactive 3V0 installations which is identified this annual CIP. Market-Initiated Upgrades are determined in the CESIR study phase wherein the utility determines the triggering project, qualifying upgrade (cost and increase in hosting capacity), estimated shared cost, and preliminary schedule. Upgrades with qualifying upgrade disclosures are published on the system data portal on a monthly basis,

Drivers:
National Grid initiated discussions at Integrated Planning Working Group ("IPWG") between the Department of Public Service ("DPS") Staff, NYSERDA, the other Joint Utilities, and industry to negotiate a proposal for cost-sharing mechanisms that embraced the pro rata methodology. This included controls around utility customer risk, safeguards depending on the level of the upgrade, and new mechanisms for line work. The proposal was adopted by the Commission in the CS2.0 Order[6] and made part of the NY-SIR in April 2022. The Company posts monthly updates on qualifying upgrade project estimates and payments on the System Data Portal[7]. National Grid will

[6] *IPWG Petition for SIR Cost-Sharing Amendment, CS2.0 Order.*
[7] *Available at https://systemdataportal.nationalgrid.com/NY/*

evaluate the effectiveness of the CS2.0 mechanisms and continue to discuss improvements to cost allocation methodologies at the IPWG.

Customer Benefits:
These projects support additional customer interconnection requests within National Grid's service territory.

2025 to 2026 Variance:
The Variance shown in the table below is to capture the expected 2% cap based on the respective 5-year average in the Company's long-term business plan.

Table 4-40
Cost Share 2.0 Spending Rationale Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	22.3	19.7	22.0	24.1	25.8	-	113.9
2026	-	19.7	22.0	24.1	25.8	27.2	118.9

The projects listed below are forecasted to exceed $1 million dollars in any given fiscal year:

- **Cost Share 2.0 Reserve – (C091882 – NYW, C091880 – NYC, C091879 - NYE)** – In April of 2022 the commission issued an order that adopted the "Cost Share 2.0" methodology as part of Case 20-E-0543.[8] This program is to capture the Company's contribution to eligible cost share projects where developers have met the defined threshold for construction start. These funds are capped at two percent of a utility's distribution/sub-transmission electric fiscal year capital investment budget per the "Cost Share 2.0" methodology.

4. L. Approved Proactive Planning

In August 2024, the PSC commenced the Proactive Planning Proceeding (Case 24-E-0364) to address grid infrastructure barriers to electrification from transportation and buildings (inclusive of economic development). Proactive Planning increase system capacity for granular hotspots of electric load growth driven by customer demands and policy requirements. Please note, this section only includes capital projects approved within the Order Addressing Urgent Upgrade Filings, issued on June 12, 2025.

On September 18, 2025, the Commission issued an order in this proceeding (Order Adopting Modified Proactive Planning Framework) which directs the Joint Utilities of New York to submit by November 2025 a methodology framework for granular studies of building and transportation electrification, economic development, and DER deployment. The Order also requires the Joint Utilities to submit the first Proactive Planning Study Report by September 2026, "identifying the grid needs driven by electrification for which proactive investment would improve overall cost-effectiveness, minimize ratepayer impacts, and support policy outcomes," which may include specific project proposals. Given the timing of the Order, such projects are not included in this version of the CIP; however, the Company expects to see additional funding beyond this filing as we plan to file for the next Proactive Planning filing in fall of this year.

[8] *Case 20-E-0543 et al, Petition of Interconnection Policy Working Group Seeking a Cost-Sharing Amendment to the New York State Standardized Interconnection Requirements. Filed 11/30/2023.*

Drivers:
Increased load growth related to both transportation and building electrification have become a major driver for thermal constraints on both distribution and transmission circuits. In addition, "large load" interconnection requests have accelerated over the past several years, with particular concentration of requests in Upstate New York. To remove barriers and timeline requirements for new or upgraded electric interconnections, system capacity needs to be expanded in anticipation of certain load growth. These projects will look to address distribution system limitations and expand capacity for allowing new load growth to take place and interconnect.

Customer Benefits:
This provides shorter interconnection timelines for transportation and building electrification loads. In addition, this provides less exposure to service interruptions due to overloaded cables, distribution lines, and transformers that are expected to be realized at a rapid pace. The projects from these studies are proactive and look to remove urgent constraints.

2025 to 2026 Variance:
The variance seen below from FY 2025 to 2026 is due to project rationales changing and adjustment of project scopes and schedules during project maturity or project completion.

Table 4-41
Proactive Planning Spending Rationale Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	16.0	22.9	28.5	4.8	0.1	-	72.4
2026	-	23.0	26.7	3.7	0.1	0.0	53.5

EV Highway[9]: The below projects are a part of a suite of projects to support EV charging at NYS Thruway travel plazas.[10]

- **Mobile Storage at Guilderland (C094584)** - This Project is required to support the additional EV charging at the NYS Thruway travel plaza. This project will install a mobile BESS at Guilderland Rest Stop for load relief as an interim solution prior to long-term upgrades can be constructed. Once long-term upgrades are constructed, the mobile BESS will be removed and installed at a different location to provide load relief.
- **Mobile Storage at Chittenango (C094585)** - This Project is required to support the additional EV charging at the NYS Thruway travel plaza. This project will install a mobile BESS at Chittenango Rest Stop for load relief as an interim solution prior to long-term upgrades can be constructed. Once long-term upgrades are constructed, the mobile BESS will be removed and installed at a different location to provide load relief.
- **Mobile Storage at Angola (C094583)** – This Project is required to support the additional EV charging at the NYS Thruway travel plaza. This project will install a mobile BESS at Angola Rest Stop for load relief as an interim solution prior to long-term upgrades can be constructed. Once long-term upgrades are constructed, the mobile BESS will be removed and installed at a different location to provide load relief.

The rest of these projects are forecasted to exceed $1 million dollars in any given fiscal year:

[9] For the associated Transmission EV Highway projects, refer to section 2.C. of this document. For the associated Mobile Storage EV Highway projects, refer to section 4.A. of this document.
[10] The Company's Urgent Upgrade Projects filing notes that final locations are pending evaluation after the Order and after an RFP.

- **Delameter Substation Rebuild (C046536)** - This project is to install two 20/26/33MVA transformers and to reconfigure feeder 9352 Layout. The existing station transformer is leaking and violates the 240MWh criteria. The station also has only one tie to an adjacent 13.2kV station (Lakeview).
- **Station 3012 Substation (C074909)** – This project will address the loading concerns in the area.
- **Teall 55 Upgrades for CNY Bus Depot (C098155) -** Teall Ave 7255 was at 88% (307A) of its SN Rating (347A) in 2024. The CNY Bus Depot has a proposed load of 2.2MW (96A), most of which is EV (bus) charging. This will put the feeder at 116% of its SN rating. The feeder is limited by 4/0 aerial lashed cable, but the 750AL is only rated at 361A. Initial request was for a summer 2025 I/S date.
- **Delameter new F9355 – Express (C047885) -** This project supports load relief work associated with the new feeder 9355 out of Delameter Station New TB2.
- **Delameter F9356 – Express and Rebuild (C047877) -** This project supports Distribution Line work for the new 9356 feeder out of Delameter station TB2 for the express circuit underbuild and the rebuild of Versailles Rd.
- **Hancock 2 DLine upgrade (C093668)** – This project will upgrade Hancock #2 ESS138 to help serve the Syracuse Airport expansion.
- **Sand Road 2 DLine upgrade (C093669)** – This project will upgrade Sand Road #2 ESS141 to aid in the Syracuse Airport expansion by installing second 5MVA pad in parallel with the existing pad and upgrade the regulators to 333kVA units. This will increase capacity at the airport due to terminal expansion and addition of EV chargers.
- **Colosse feeder work for EV Charging (C093499)** - This project is to perform feeder work on TB2 Colosse, including splitting ~1/3 of double circuit to a single circuit.

4. M. Policy Initiative - CLCPA Phase 2

These projects are designed to address both National Grid system needs, and State transmission needs to integrate renewable generation and storage. These projects will be funded by National Grid ratepayers and contributions from outer Transmission and Distribution Companies' ratepayers throughout the State.

Drivers:
The New York State mandate to get 70% of energy from renewable sources by 2030 and achieve a 100% emission free grid by 2040 will require not only a large number of new renewable generators and storage, but also investment in the transmission and distribution systems. National Grid studies have shown that the transmission system in many of the areas of highest renewable generator interest is not capable of delivering power from the generators to the loads, both local and statewide. These projects are designed to address transmission system limitations and correct the curtailment of renewable generation.

Customer Benefits:
These projects allow for additional renewable energy to reach the customers in support of the State's clean energy goals.

2025 to 2026 Variance:
A decrease in spending is being seen due to project deferrals aligning with the rate case.

Table 4-42
CLCPA Ph2 Spending Rationale Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	3.6	5.6	1.8	0.0	0.0	-	11.0
2026	-	4.4	1.8	0.0	0.0	0.0	6.2

The projects listed below are forecasted to exceed $1 million dollars in any given fiscal year:

- **North Carthage Substation Upgrades (C090054)** - This project is going to replace two existing circuit breakers and four disconnects in Wilna, NY. This project supports CLCPA per PSC Case 20-E-0197.

4. N. EV MRP

The following programs for costs associated with utility side of the meter upgrades for EV MRP customers interconnecting to the electric system are classified as New Business Commercial and are forecasted with planned spending in excess of $1 million in each fiscal year.

Drivers:
This is a mandatory program in response to DPS Order 18-E-0138 - Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure. The Order directs National Grid to establish a Make Ready Program for Electric Vehicle charging infrastructure supporting both customer side and utility side infrastructure for Level 2 and DC fast chargers. The program supports both Light-Duty Vehicle and MHDV projects.

Customer Benefits:
The program assists the expansion of electric transport by encouraging the buildout of charging infrastructure, in order to meet the NY state goals for electric transportation. The utility transportation programs for the Joint Utilities are designed to deploy an EV charging network across NYS that could support 850,000 light-duty ZEVs, consistent with the 2013 ZEV Memorandum of Understanding ("MOU"). In September 2021, NYS passed NYS Senate Bill 2758/Assembly Bill 4302 that targets 100 percent of new light-duty vehicle sales to be ZEV by 2035.

2025 to 2026 Variance:
The 2026 NY CIP now includes EV MRP spending in FY31. This projected investment extends beyond the existing phase of the EV MRP, with a projected continuation to support the state's long-term transportation electrification goals.

Table 4-43
EV MRP Spending Rationale Summary ($ millions)

CIP	FY26	FY27	FY28	FY29	FY30	FY31	Total
2025	4.5	8.7	10.8	11.5	15.9	-	51.4
2026	-	8.7	10.8	11.5	15.9	20.2	67.1

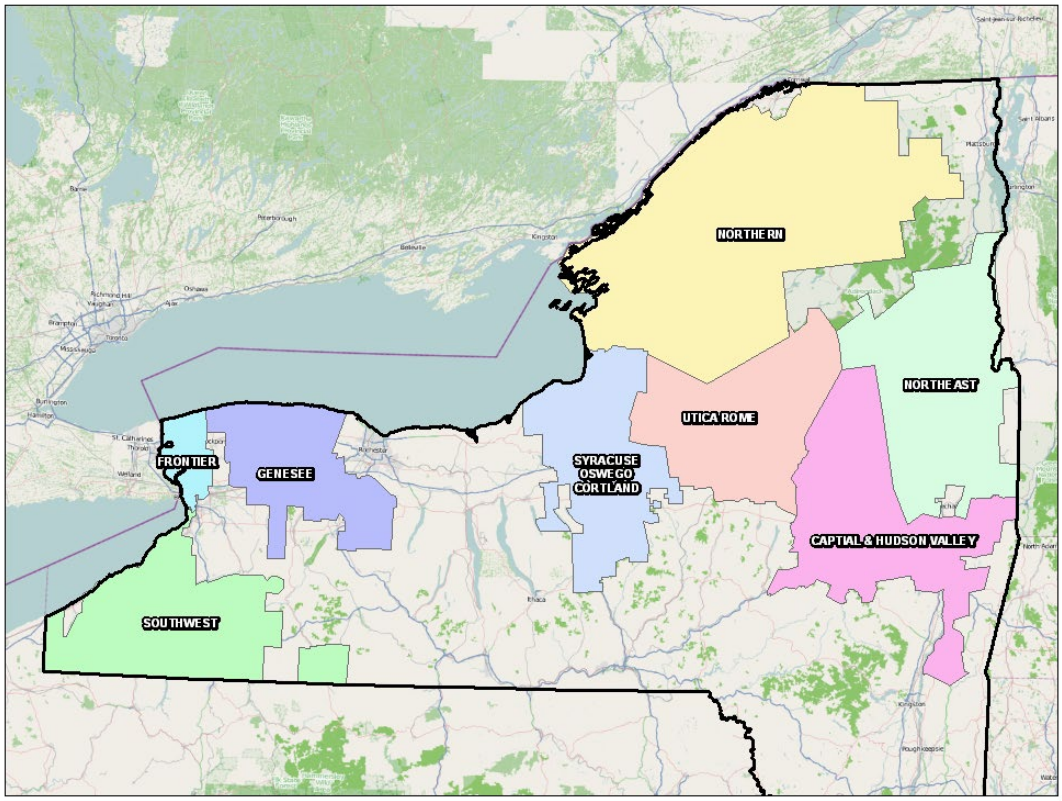
The projects listed below are forecasted to exceed $1 million dollars in each given fiscal year:

- **Electric Transport Initiative – FTM NY (C085240 - NYE, C086719 - NYC, C086718 - NYW) –** Utility side make ready work associated with DPS Order 18-E-01388 establishing an EV Make Ready Program. This funding project covers the dollars associated with the program across NYS.

Chapter 5: Investment by Transmission Study Area

For regional analysis, the Company's service territory is divided into eight transmission study areas. The transmission study areas are shown in Figure 5-1. Within the eight transmission study areas, the sub-transmission and distribution networks are further subdivided into 43 distribution study areas.

Figure 5-1
Transmission Study Areas



Each of the transmission study areas is described separately below in the following format:

- Area Summary
- Area Description
- Major Project Table

5. A. Northeast Transmission Study Area

Area Summary

Key drivers behind the transmission capacity related projects in this transmission study area include the following:

- Transmission needs will be driven by renewable generation interconnections and some asset condition issues.

Key sub-transmission and distribution drivers include the following:

- In conjunction with the Mohican transmission substation rebuild project, a 13.2kV distribution transformer will be added at Mohican with four new distribution feeders to address significant asset condition issues at the McCrea Street 272 and Henry Street 316 substations; both of which will have their distribution retired. The new Mohican distribution bank will also allow the Farnan Road 476 and Hudson Falls 088 substations to be retired, providing additional capacity for distributed generation.
- A review of the condition of the Schuylerville – Mechanicville #4, 34.5kV line determined that 90% of the poles on this 15.5-mile sub-transmission line are in need of replacement.
- The deterioration of the Saratoga 142 substation within the city limits of Saratoga Springs, in conjunction with the Saratoga substation‘s location on a former coal gasification site with identified environmental issues, is driving the addition of a second distribution transformer at the Smith Bridge 464 substation. This will allow for the retirement of the Saratoga substation and the conversion of the remainder of the distribution within the City of Saratoga Springs to 13.2kV standards. This will provide more feeder ties with surrounding 13.2kV substations which could be automated in the future to increase system reliability.
- A new 69kV CS will be installed within the Cobleskill 214 Substation as the high-side protection for an installed but not connected, 69/13.2kV, 10/12.5MVA distribution transformer. In addition, a low side bank breaker and three 13.2kV feeder breakers will be installed with all associated bus work. Once the substation work is complete, the three 4.8kV distribution feeders served out of Cobleskill will be rebuilt as needed to be converted to 13.2kV eliminating a 4.8kV island.

Area Description

The Northeast transmission study area serves approximately 149,400 customers. The study area extends approximately 90 miles north along the western Vermont border, from Cambridge in the south to Westport in the north and extends approximately 45 miles to the west at its widest point to Indian Lake. The area incorporates the southeastern section of the Adirondack State Park. Much of the area load is concentrated in the southern portion of the study area, along Interstate I-87 and US Route 9, particularly in the Towns of Ballston Spa, Lake George, and Queensbury and the cities of Saratoga Springs and Glens Falls. Some of the areas offer summer recreation and see a spike in load during the summer months, while some of the northern section of the Northeast area is winter peaking.

The Northeast transmission area consists primarily of 115kV rated facilities. The 115kV system runs primarily in a north-south direction on both sides of the Hudson River. There is a single radial 115kV line, east of Lake George, which runs north from the Whitehall substation through Ticonderoga and Crown Point to the Port Henry substation and then extends to the New York State Electric and Gas ("NYSEG") system north of Port Henry. The western 115kV radial line extends from the Spier Falls substation to the North Creek substation in the Adirondack State Park. There is an extensive 34.5kV system in the study area supplying the heart of Glens Falls and Saratoga Springs as well as smaller towns along Interstate I-87 and Route 28 and throughout the entire region.

In the Northeast transmission study area, there is one distribution study area, also referred to as Northeast. The Northeast distribution study area has a total of 115 three-phase distribution feeders that supply customers in this area. There are 95 13.2kV feeders, with 27 being supplied from 34.5/13.2kV transformers, and the remaining 68 supplied by 115/13.2kV transformers; 24 34.5kV sub-transmission lines that supply the distribution step down transformers in the area; nine 4.8kV feeders with six supplied by 34.5/4.8kV transformers; and 11 4.16kV feeders all supplied by 34.5/4.16kV transformers.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-1
Northeast Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Approved Proactive Planning	**D/SUB T_Load Relief**	Distribution	**Saratoga District**	Wilton 13.2kV Double Circuit	C097302
		Sub-T	**Saratoga District**	Wilton Sub-T Double Circuit	C099128
Asset Condition	**Component Fatigue/Deterioration**	Transmission	**None**	Queensbury - Rplc GCB w VCB	C095690
				Warrensburg-Schofield Rd 10 Str Repl	C086755
	D/SUB T_Asset Replacement	Distribution	**Saratoga District**	Schuylerville Retirement - Dist.	C084726
		Sub-T	**Glens Falls District**	Ashley - Glens Falls 5 ACR	C094096
			Saratoga District	Spier-Saratoga Tap #3 & #12 ACR	C084068
	D/SUB T_Sub-T Overhead Line	Sub-T	**Saratoga District**	South Street Tap #10 & #11 ACR	C096948
Damage/Failure	**D/SUB T_Damage Failure Other**	Distribution	**Champlain District**	Hague Rd 53 - Submarine Cable.	C050522
	Damage/Failure	Transmission	**None**	Spier Falls-Lasher Rd: SW 30125 DF	C097912
Multi Value Distribution (MVD)	**MVD_AC_System Capacity**	Distribution	**Champlain District**	Port Henry Rebuild	C093742
				Schroon Lake Getaway Rebuild	C097275
			Mountain District	Bolton Station Rebuild	C093761
				Knapp Road D-Line	C096279

				Knapp Road Station	C093760
				Lake George D-Line work	C093759
				Lake George Station	C093767
				Southern Adirondack D-Line Work	C095254
				Warrensburg Rebuild	C093763
			Saratoga District	Brook Road Rebuild	C093748
				Smith Bridge - New TB2 Getaways	C083483
				Smith Bridge 2nd Bank & Metalclad	C081418
				Smith Bridge 56 & 57 -Build Feeders	C083485
			Schenectady District	Lasher Road - 53 Feeder OH	C068348
		Sub-T	**Mountain District**	W'burg-Chestertown 6 Reconductor OH	C093770
				W'burg-Chestertown 6 Reconductor UG	C093771
			Saratoga District	W. Milton Tap-34.5kV new line	CD00898
Muti-Value Transmission (MVT)	**MVT Asset Condition**	Transmission	**None**	Ballston Rebuild: Substation	C093946
				Mohican - Rplc 115kV, 34.5kV assets	C053133
				Spier Falls - Asset Rplc/Sep	C097316
Reliability	**D/SUB T_Reliability**	Distribution	**Champlain District**	Hague Rd - 4th Feeder Distribution	C095404
				Schroon Lake 51 Submarine Cable	C096687
			Glens Falls District	Burgoyne 52 - Eldridge Rd Rebuild	C091948
				Mohican Distribution	C081399
			Saratoga District	36955 S Greenfield Rd. Conversion	C092821
	Performance	Transmission	**None**	Lasher Rd LN1 first 3 spans rcndctr	C093224
				Luther Forest - 3rd 115kV Cap Bank	C093225
				Rotterdam-Lasher Rd 1 Swagger Tap	C098901
				Spier- Queensbury LN 5 & 17 Rebuild	C093172
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Mountain District**	Warrensburg 52 - Chestertown 51 Tie	C094376
			Saratoga District	Weibel 56 Wall Street Rebuild	C051325
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Champlain District**	*Hague Rd 52 - Convert Delta Route 22	C050717
				Crown Pt 51 - Route 9N Conversion	C081834

				Otten 3 Phase Extension	C093754
			Mountain District	Birch Ave 51 Route 9N Extension	C093530
				Warrensburg 52 - Glen Athol Road	C081457
			Saratoga District	Sodeman Rd 51 Feeder Construction	C076785
				South Street Rebuild	C093745
				Union St 52 - County Hwy 59	C056632
				Woodard Road Greenfield: Station	C097429
	TO Led System Studies	Transmission	**None**	Battenkill Rebuild: Substation	C093948
				Lasher Rebuild	C093947
				Whitehall Station Rebuild	C093957

5. B. Capital and Hudson Valley Transmission Study Area

Key drivers behind the transmission capacity related projects in this transmission study area include the following:

- Asset condition issues on the transmission system.
- MVT/CLCPA projects planned for the area between Inghams and Rotterdam to support the large amount of renewable generation proposed for the area.
- Interconnection of renewable energy sources to the transmission grid.

There are multiple asset condition-related projects, such as substation rebuilds and line refurbishment.

Key sub-transmission and distribution drivers include the following:

- Liberty Street 094 Station in the city of Troy will install a second 34.5/13.2kV, 10/12.5MVA transformer, TB5, with related bus work, 13.2kV breakers, and getaway cables. Along with associated conversion work on the surrounding distribution in downtown Troy, these projects will eliminate a 4kV island and provide for more switching opportunities between the surrounding stations, thereby improving reliability in the area.
- The rebuild of the Corliss Park 338 Substation with a 34.5/13.2kV, 20 MVA transformer, along with the associated distribution work from 4kV to 13.2kV standards, will address many asset condition, capacity, and voltage issues in the North Troy area. It will also lead to the eventual retirement of the Lansingburg 4kV Substation.
- The Chrisler Ave 257 Substation, which was a 34.5/4.16kV substation that was to be rebuilt to a 34.5/13.2kV, 20MVA station, completed its work and was energized in 2023. The construction of four new Chrisler Ave 13.2kV distribution feeders is ongoing and scheduled for completion in 2027. Once completed, it will allow for the retirement of the distribution assets at Emmet Street 256 substation, which have significant asset condition issues. Emmet Street substation will remain a sub-transmission switching station. The

ongoing conversion work on the distribution system will eliminate the 4kV island and improve reliability in the area.

- Swaggertown 364 substation in the town of Glenville will upgrade its 115/13.2kV, 22.4MVA transformer to a 115/13.2kV, 40MVA transformer and will install a fourth feeder breaker allowing for a fourth 13.2kV distribution feeder. The additional capacity and fourth feeder at Swaggertown will facilitate the conversion and offloading of the 34.5/4.16kV Scotia substation to neighboring 13.2kV feeders. The retirement of the Scotia 255 substation will follow shortly thereafter. This project addresses asset condition issues and loading concerns at both Swaggertown and Scotia substation and improves reliability by eliminating the 4kV island fed by Scotia substation.
- Ruth Road 381 substation in the town of Colonie will be upgraded from the existing one 115/13.2kV, 33.6MVA transformer and one 6 position metal-clad, to a two 115/13.2kV, 40MVA transformer station with two 6 position metal-clads. The new accommodation will allow for the construction of three new feeders out of Ruth Road. Along with the station work, new overhead distribution construction and conversion work in the surrounding area will facilitate in the retirement of the 34.5/4.16kV Karner 317 substation. The project addresses asset condition and loading issues at both Ruth Road and Karner substation and will eliminate a 4.16kV island.
- The Newtonville Area Study developed a comprehensive plan that involves many stations that will address asset condition concerns and loading concerns, including the elimination of a 4.16kV island. Johnson 352 substation will upgrade both TB1 and TB2 115/13.2kV, 40MVA transformers, with both metal-clad switchgear to be replaced with 6 position metal-clads. Maplewood 307 substation will upgrade its existing bank to a 115/13.2kV, 40MVA transformer. The distribution work involved in this study will construct two new 13.2kV feeders out of Johnson and nearby Forts Ferry 459 substation and convert 4.16kV in the area to 13.2kV. This will enable retirement of the Newtonville 305 substation and TB2 at Oathout 402 substation.
- Two of the three feeders for the 115/13.2kV Lasher Road 3221 substation are still under construction and are not in their final configuration. The final configuration of these two feeders will be used to address asset condition issues at Shore Road 255 substation, via its retirement, and loading issues in the Ballston Spa area by transferring load from the Ballston 012 substation to the Lasher Road 32212 substation.
- New Krumkill 421 and Patroon 323 substations will each be upgraded from a single transformer to a pair of 115/13.2kV, 40MVA transformers with 8 total feeder positions at each substation in order to accommodate forecasted load growth in Albany. Once complete, this will allow for the retirement of the 4.16kV distribution and transfer load off of the 34.5kV network, retiring the distribution at Colvin Ave 313, Seminole 339, and Partridge St 128, all 34.5/4.16kV substations.

Area Description

The Capital and Hudson Valley study area is connected to the Utica Rome study area in the west at the Inghams 115kV substation, the New England system in the east, the Central Hudson Gas and Electric (“CHG&E”) and Consolidated Edison (“ConEd”) systems in the south, and the Northeast study area in the north. The transmission system consists primarily of 115kV and 345kV transmission lines. There is one 230kV line emanating from Rotterdam Substation that connects to New England. There are multiple transformers connecting the LS Power 345kV Gordon Road Substation to National Grid’s Rotterdam substation. The Capital and Hudson Valley study area is the east end of the Central-East interface, which is a power interface between central New York

and eastern New York. Several transmission lines in the area are also important facilities to the Upstate New York/Southeast New York interface between the eastern and downstate NY systems.

National Grid has three 345/115kV transformers in the region: two at New Scotland and one at Reynolds Road. There are five existing 230/115kV transformers: three at Rotterdam, and two at Eastover Road. In addition, ConEd has one 345/115kV transformer at Pleasant Valley, CHG&E has one 345/115kV transformer at Hurley Ave. station, and LS Power has two 345/230kV transformers at Gordon Road, all of which impact the National Grid system.

Within the Capital and Hudson Valley study area, there are six distribution study areas: Capital-Central, Capital-East, Capital-North, Mohawk, Schenectady, and Schoharie.

The Capital-Central study area serves approximately 26,000 customers. The study area encompasses the greater Albany area, including a mixture of commercial customers heavily concentrated in downtown Albany and industrial and residential customers spread across downtown to the suburban areas. The primary distribution system in Capital-Central is predominantly 13.2kV with pockets of 4.16kV primarily in the City of Albany and 4.8kV south of the City of Albany. Most 4kV distribution substations are supplied from the local 34.5kV sub-transmission system, whereas most 13.2kV distribution substations are supplied from the local 115kV transmission system.

The Capital-East study area serves approximately 88,200 customers. The study area is located east of the Hudson River, with the center approximately adjacent to the City of Albany. This area extends approximately from Valley Falls in the north to Tivoli in the south. The larger load concentrations are in the cities of Rensselaer and Troy and in the towns along US Route 9. There is a 345kV source into the area at Reynolds Road substation and a 115kV corridor running in a north-south direction supplying approximately 90% of the distribution load in the area. There is also a 34.5kV sub-transmission system in the central area with the 115kV sources from Greenbush, North Troy, Hudson, and Hoosick substations. In addition, there is scattered generation on the 34.5kV system in the area.

The Capital-North study area serves approximately 102,000 customers. The study area encompasses the suburban area north of the City of Albany, including a mixture of industrial, commercial, and residential customers throughout Colonie, Cohoes, Watervliet, Clifton Park, Halfmoon, Waterford, Niskayuna, and Ballston. The primary distribution system in Capital-North is predominantly 13.2kV with a few pockets of 4.16kV in the Newtonville area and 4.8kV in the Town of Ballston. All 4kV distribution substations are supplied from the 34.5kV sub-transmission system, whereas most 13.2kV distribution substations are supplied from the 115kV transmission system. Maplewood and Patroon substations are the main sources for the 34.5kV sub-transmission system in this area, which is operated in a loop configuration. Along with these facilities, a group of hydro and cogeneration power plants located along the Mohawk River (School St., Crescent, Vischer Ferry, Colonie Landfill, etc.) form the backbone of the local 34.5kV sub-transmission system. In addition to supplying power to all 4kV and a few 13.2kV distribution substations, the 34.5kV sub-transmission system serves several industrial customers such as Mohawk Paper, Honeywell, Norlite, and Cascade Tissue. Major distribution customers in this area include the Albany International Airport, which is supplied by feeders from Forts Ferry, Sand Creek, Wolf Road, and Inman Road substations.

The Mohawk study area serves approximately 67,000 customers. The study area includes the City of Amsterdam and the rural areas west of the city. This area is comprised of mostly residential customers and farms with some commercial and industrial customers located in areas such as the City of Amsterdam, Gloversville, Johnstown, Northville, and Canajoharie. The primary distribution system in Mohawk is predominantly 13.2kV with areas of 4.16kV (Gloversville and Johnstown areas) and 4.8kV (Canajoharie). Most 4kV distribution substations are supplied from the 23kV and 69kV sub-transmission system, whereas most 13.2kV distribution substations are supplied from the 115kV transmission system.

The Schenectady study area serves approximately 60,800 customers. The study area is defined by the region that includes the City of Schenectady and the surrounding suburban areas. This area includes a mixture of industrial, commercial, and residential customers spread across downtown to suburban areas such as Niskayuna, Glenville, and Rotterdam. The primary distribution system in the Schenectady area is predominantly 13.2kV with a few pockets of 4.16kV (Schenectady, Scotia, and Rotterdam areas). All 4kV distribution substations are supplied from the local 34.5kV sub-transmission system, whereas most 13.2kV distribution substations are supplied from the local 115kV transmission system. In addition, the downtown areas of Schenectady are served by a general network that is supplied by the Front Street Substation. Rotterdam, Woodlawn, and Rosa Rd. are the main sources for the local 34.5kV sub-transmission system, which is operated in loop configuration.

The Schoharie study area serves approximately 21,600 customers. The study area is defined by the region west and south of the City of Schenectady that includes towns and villages along the I-88 and Route 20 corridors such as Delanson, Schoharie, Cobleskill, Schenevus, and Sharon Springs. This area is mostly rural and is comprised mainly of residential customers and farms with few commercial and industrial customers. The primary distribution system in Schoharie is predominantly 13.2kV with areas of 4.8kV (Cobleskill, Worcester, and Schenevus areas). Most distribution substations in this region are supplied from the local 23kV and 69kV sub-transmission system. Marshville and Rotterdam are the main sources for the local 69kV sub-transmission system which is operated in loop configuration. The 69kV sub-transmission system supplies power to both 4kV and 13.2kV distribution substations, and a few industrial and commercial customers, such as Guilford Mills and SUNY Cobleskill. The existing 23kV sub-transmission system in Schoharie, which supplies power to East Worcester, Worcester, and Schenevus substations, is operated in radial configuration from Summit substation.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-2
Capital and Hudson Valley Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Approved Proactive Planning	**D/SUB T_Load Relief**	Distribution	**Albany District**	Mobile Storage at Guilderland	C094584
Asset Condition	**Component Fatigue/Deterioration**	Transmission	**None**	Feura Bush - N. Catskill 2 ACR	C083073

				Greenbush - N Troy Corridor ACR	C094479
				Greenbush 993 I-90	C098716
				Greenbush 993 Road Crossings	C096411
				Leeds - SVC Prot & Cont Repl	C091040
				Leeds LN93 & LN94 "A" Relay Upgrade	C096221
				Leeds Station-Repl Disconnect SWs	C098939
				Long Lane - Rplc GCB w VCB	C095695
				N.Scotland-Feura Bush/Long Lane ACR	C084554
				New Scotland R93&R94 Asset Replace & 115kV BPS Upgrades	C062752
				NS - Knickerbocker #2 l/B/G	C096415
				Patroon Substation Rebuild/Expand	C092739
				Rotterdam - New Scotland 19 ACR	C084588
				School St - Asset Replacement	C091969
				Thompson-N Troy Corridor ACR	C081667
				Trinity Pumping Plant Refurb	C091980
	D/SUB T_Asset Replacement	Distribution	**Albany District**	Avenue A 13.2 kV Distribution	C092747
				Avenue A Getaways	C092920
			Cobleskill District	Summit Station 347 Rebuild	C095623
		Sub-T	**Albany District**	Rensselaer Area Study: Sub-T	C091818
	D/SUB T_Sta Metal-Clad Switchgear	Distribution	**Albany District**	Riverside IMCS A and B ACR replace	C098097
			Hudson District	Blue Stores - Replace IMCS	C081611
			Troy District	Sycaway - Metalclad Replacement	C081630
	D/SUB T_Substation Power Transformer	Distribution	**Albany District**	Trinity TB4 and TB6 XFMRs and Bus	C086717
	D/SUB T_Sub-T Overhead Line	Sub-T	**Capital Region**	Maplewood-Menands 17/18 d/c-34.5kv	C046432
Interregional Transmission	**MVT Asset Condition**	Transmission	**None**	Interregional Transmission - Transmission Line	C094532
Customer Requests/Public Requirements	**D/Sub T_Meter Installations**	Distribution	**Capital Region**	AMI - NY Electric, East	C083340
	Public Requirements (additional need)	Transmission	**None**	Reynolds Rd Short-Term Upgrades	C096212
				Rotterdam Asset Replacement and 230 kV upgrades	C034850
Damage/Failure	**D/SUB T_Damage Failure Other**	Distribution	**Albany District**	DF- Riverside Sta 288- TB4 Failed	C091468
			Capital Region	NY Mobile 2E - Replacement	C086808
	MVD_AC_System Capacity	Distribution	**Albany District**	Avenue A Station Rebuild/Retirement	C056609

Multi Value Distribution (MVD)				Delaware D-Line	C091776
				Everett Station Rebuild	C093704
				Karner 4.16 kV Feeder Conversions	C049958
				Menands Station D-Line 10158	C096262
				Newtonville Area Study: D-Line	C091022
				Rensselaer Area Study: D-Line	C091127
				Ruth Road Station Rebuild	C081613
				Sand Creek 54 Distribution	C052306
				Unionville 27651 D Line Conversion	C099047
				Voorheesville Station Rebuild	C093711
				Wolf Road Getaway Replacement	C093700
			Cobleskill District	Cobleskill D-Line 4.8 to 13.2 kV Conversion	C091671
				Cobleskill Station 4.8 to 13.2 kV Conversion	C086902
				Grand St Rebuild	C093693
				Schenevus 26127 13.2 kV Rebuild	C093667
				Schenevus Rebuild	C093665
				Sharon 36352 D-line Extension	C093697
			Gloversville District	Gloversville D-Line	C091775
				Gloversville Station Rebuild	C093731
				Manheim Distribution	C074489
			Hudson District	Buckley Corners D-Line	C093772
				Buckley Corners Station Rebuild	C093768
			Schenectady District	Elnora Station Rebuild	C093680
				McClellan Station Rebuild	C093728
				Ruth Road Rebuild Distribution Work	C052304
				Swagertown Station Upgrades	C091754
				Swaggertown 54 and Scotia Conversion	C091774
			Troy District	Firehouse Rebuild: D-Line	C096101
				Firehouse Rebuild: Substation	C093657
				Liberty Street TB5	C081420
				Newtonville Area Study: Johnson	C091023
				Seventh Ave North Feeder Conversion	C080476
				Seventh Ave South Feeder Conversion	C080475
				Seventh Ave TB1	C080474

		Sub-T	**Schenectady District**	Rotterdam #34 #36 34.5kV Cable Repl	C077065
Muti-Value Transmission (MVT)	**MVT Asset Condition**	Transmission	**None**	Bethlehem Xfrm Upgrade 40MVA	C093949
				Greenbush Control House	C091536
				Greenbush Station Rebuild (base project)	C079224
				Greenbush T-Line	C091535
				Greenbush-Knickerbocker 13/14/15 DCT Rebuild	C069540
				Hoosick - Replace Bank 1 & relays	C053132
				Inghams-E. Springfield #7 Rebuild	C060209
				Newtonville Area Study: Maplewood	C091024
				North Troy - 34.5kV refurb/rebuild	C079223
				Reynolds Rd - Asset Replacement CH	C098141
				Reynolds Road - Asset Replacement	C077616
				Woodlawn Transformer Replacement	C051986
Policy Initiative	**CLCPA Dependent**	Transmission	**None**	Gloversville - Marshville #6 Refurb	C081458
				MVT Scho/Sch Int-Rott 18/4 Rebld	C082182
				New Manheim - Assoc Line work	C060240
				New Manheim Greenfield project	C050917
	CLCPA Ph1	Transmission	**None**	Inghams/Rotterdam Circuit Rebuild	C088402
				Marshville 115kV Rebuild	C088329
				Meco 115kV Rebuild	C088414
				Saltsman Rd New 5 Breaker Ring	C091495
Policy Initiative - CLCPA Ph2	**CLCPA Ph2**	Transmission	**None**	Ames Road Greenfield Substation	C090032
Reliability	**D/SUB T_ERR_Eng Reliability Review**	Distribution	**Gloversville District**	*Church St 53 - Cnty Hwy 132 Convrt	C049652
			Schenectady District	Chrisler Ave 25735 Conversion	C057133
	D/SUB T_Reliability	Distribution	**Albany District**	22151 NY-66 Conversion	C096962
			Schenectady District	Targeted UG - Grooms Rd Tie	C093862
			Troy District	12353 Middleburgh St. Conversion	C092618
				26453 NY-351 Conversion	C098636
				41352 NY-32 Conversion	C098576
				Corliss Park South Feeder Conversio	C081414
	NERC/NPCC Standards	Transmission	**None**	Greenbush – Schodack #13 CCR	C096911

				Greenbush-Stephentown #993 CCR	C098409
				Inghams-Richfield Springs 7-942 CCR	C098394
				Woodlawn-State Campus #12 CCR	C098389
	Performance	Transmission	**None**	Amsterdam Switches	C096659
				Feuz Rd - Oak Ridge 345kV 3.3mi line	C093354
				Luther Forest - Rotterdam SWs	C098854
				Rotterdam - Menands corridor upgrds	C093226
				SpierFalls-Lasher 302 Brook Rd Tap	C098715
				State Campus 115kV LN12/15 UG Rplcmnt	C088133
				Sugar Hill Station - Station Work	C084589
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Albany District**	*Selkirk 14951 - Thatcher/River Conv	C049985
				45151 CR-2 42754 Tie	C094377
			Cobleskill District	East Worcester 21 Feeder Tie	C094409
			Schenectady District	Shore Rd 28186 - Elnora 55 Transfer	C067867
				Weaver St 51 - Chrisler 51 Tie	C094373
	D_Climate Vulnerability	Distribution	**Albany District**	CCRP (Flood) Riverside Station 288	C093553
			Gloversville District	CCRP(Flood)Glovers ville Station 72	C093814
	System Recovery	Transmission	**None**	Spare NYE Trans Xfrmrs	C090951
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Albany District**	Commerce D Line	C091528
				Commerce Station	C091533
				Delmar Feeders Rebuild and Convert	C083926
				Elsmere Substation Rebuild	C083916
				Greenbush 07857	C091131
				Greenbush Getaways	C097545
				New Krumkill - Feeder Getaways	C083927
				New Krumkill 52 Feeders	C083928
				New Krumkill Station	C091748
				New Krumkill/Ave A Line	C091773
				RR-Menands 10157-Getaway Replacemen	C053966
				Unionville D-Line Work	C093713
			Cobleskill District	Delanson TB1 40 MVA Rebuild	C092947
			Gloversville District	Caroga D-Line	C093737
				EJ West 51 - Convert South Shore Rd	C098361

				Gloversville 53 D-Line	C096331
			Schenectady District	Sunny Side - Substation	C097312
			Troy District	33452 NY-43 Conversion	C081968
				Boyntonville Rebuild: D-Line	C093661
				Boyntonville Rebuild: Substation	C093660
				Firehouse 44951	C050081
				Liberty Street D-Line	C083844
		Sub-T	**Troy District**	School St - N. Troy #19 Reconductor	C099660
	TO Led System Studies	Transmission	**None**	Capital N AreaStudy Rosa Rd rebuild	C093956
				Eastover 230kV 70 MVAR cap bank	C096187
				Ephratah Station Rebuild	C093959

5. C. Northern Transmission Study Area

Area Summary

Key drivers behind the transmission capacity related projects in this study area include:

- Reinforcements to the Northern Area 115kV system are needed due to increased wind and solar generation and declining area load.
- Area load growth resulting in the need for a second transformer and metal-clad at the Malone substation.
- A Transmission Resiliency project is being constructed including a new transmission line between Indian River and Lyme Junction (North Watertown).
- Replacing assets at Coffeen and adding a capacitor bank to address asset condition and system voltage issues.
- Interconnecting renewable energy sources to the transmission grid.

Key sub-transmission and distribution drivers include the following:

- Malone substation second transformer, new feeders adding more capacity and switching flexibility to the area.
- Relocating Union Falls substation and the associated sub-transmission lines and distribution feeders due to risk of flooding.
- Distribution construction to improve reliability and eliminate asset condition issues.
- Increasing capacity of transformers at Coffeen as part of rebuild to support forecasted load growth in the area.
- Rebuilding West Adams substation multiple larger transformers to increase reliability and system capacity in support of forecasted load growth.
- Mill Street station rebuild to address asset condition issues.

Area Description

The Northern transmission study area includes the 115kV transmission facilities in the Northern Region south to Boonville and Lighthouse Hill.

The backbone of the 115kV Northern area system runs from National Grid ALCOA substation to Boonville substation. The important substations along the 115kV transmission corridor are Browns Falls, Colton, Dennison, and Taylorville.

The Jefferson/Lewis County area is bounded by the Lighthouse Hill-Black River 5 and Lighthouse Hill – Middle Road 6 lines to the west and the Taylorville-Boonville 5 & 6 lines to the east. The Ogdensburg-Gouverneur area is served by the 115kV Colton-Battle Hill 7, Colton-McIntyre 8 and the ALCOA-North Ogdensburg 13. The Black River-Taylorville 1 & 2 and the Black River-Coffeen 3 supply the load in the Watertown area. The Thousand Islands region is served by the radial 115kV Thousand Islands-Coffeen 4. The Colton-Malone 3, Malone-Lake Colby 5, and Malone-Willis (NYSEG) 1-910 115kV lines serve the Tri-Lakes region. The Akwesasne Tap 21 served from the Reynolds/GM #1 (NYPA) 115kV line supplies part of the Nicholville-Malone area.

Within the Northern study area, there are four distribution study areas: Nicholville-Malone, St. Lawrence, Tri-Lakes, and Watertown/ Lowville ("WL"). The Nicholville-Malone study area serves approximately 16,400 customers. There are total of 25 feeders - 18 4.8kV and 7 13.2kV feeders in the study area. The distribution substations are primarily supplied from the 34.5kV system with the exception of Malone 13.2kV and Akwesasne 4.8kV substations that are served by the 115kV system. The main supplies for the 34.5kV sub-transmission system are Akwesasne, Malone, and Nicholville substations. It is operated as a radial system due to loading issues although the system is constructed as a loop design. There are also two hydroelectric facilities connected to the system (Macomb and Chasm substations).

The St. Lawrence area serves approximately 39,800 customers. There are 23 4.8kV feeders and 30 13.2kV feeders in the study area. The distribution substations are supplied from 23kV and 34.5kV sub-transmission lines with the exception of four substations - Corning, Higley, North Gouverneur and Ogdensburg - that are served from the 115kV system. The main supplies for the 23kV sub-transmission system are Balmat, Little River, McIntyre, and Norfolk substations. Browns Falls substation is the main supply for the 34.5kV sub-transmission system. Mine Road serves as a tie between the 23 and 34.5kV at Balmat and Browns Falls.

The Tri-Lakes area serves approximately 8,900 customers. There are two 2.4kV feeders, 9 4.8kV feeders, and six 13.2kV feeders in the study area. Most of the distribution substations are supplied from the 46kV sub-transmission system apart from Lake Colby and Ray Brook substations that are served by the 115kV system. The supply for 46kV sub-transmission system in the area is Lake Colby substation. There are two municipal electric companies served in the area; one each on the 46kV (Tupper Lake) and the 115kV (Lake Placid).

The WL area serves approximately 79,100 customers. There are nine 23/4.8kV substations supplying 27 4.8kV feeders; and ten 115/13.2kV substations supplying 38 13.2kV feeders. The 23kV sub-transmission system is supplied from the Boonville, Black River, Coffeen, Indian River, North Carthage, Lowville, and Taylorville substations.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-3
Northern Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Asset Condition	Component Fatigue/Deterioration	Transmission	None	Battle Hill - Rplc GCB R50	C099220
				Browns Falls - Asst Sep/Rplc	C081427
				Coffeen-W.Adams 2 ACR	C091986
				Colony - Asset Replacement	C091871
				Colton-Townline 9 Replacements	C091987
				Dennison - Rplc OCB w VCB	C099219
				L.Colby-L. Placid 3 ACR	C091989
				McIntyre - Rplc GCB w VCB	C095694
				Mill St Station Rebuild	C093267
				North Ogdensburg - Rplc GCB w VCB	C095687
				Norwood - Asset Repl/Sep	C093552
	D/SUB T_Asset Replacement	Sub-T	Clayton District	Theresa - S Philadelphia 21 Refurb	C094064
			Lowville District	Taylorville - Int Sol 23 Refurb	C094145
			Ogdensburg District	McIntyre-Hammond 24 reloc/refurb	C075852
			Watertown District	Coffeen Asset Replacement SubT Relo	C089520
	D/SUB T_Substation Mobile	Distribution	Watertown District	Mobile 4C - Mobile Sub Replacement	C089181
	D/SUB T_Sub-T Overhead Line	Sub-T	Lowville District	Lowville - Boonville 22 ACR	C095402
			Potsdam District	Piercefield - Tupper Lake 39 ACR	C095362
				Townline - Piercefield 32 ACR	C095407
			Saranac Lake District	Union-Ausable Forks 36-46kV ref	C050320

				Union-Lake Clear 35-46kV refurb	C050324
	Failure Trend	Transmission	**None**	McIntyre-Colton 8 Rein. 275-359	C086662
Multi Value Distribution (MVD)	**MVD_AC_System Capacity**	Distribution	**Saranac Lake District**	Bloomingdale/ Gabriels D-Line	C093906
				Bloomingdale/ Gabriels Rebuild	C093900
			Watertown District	Mill St D-Line	C097755
				West Adams 2nd Bank	C084111
				West Adams Control House	C097476
Muti-Value Transmission (MVT)	**MVT Asset Condition**	Transmission	**None**	Balmat Station TB 1 & 2	C091767
				Colton Substation Rebuild	C091862
				Colton-BF 1-2 T3140-T3150 Rebuild	C036164
				Higley	C093965
				Lake Colby - Asset Replacement	C091042
				Parishville	C093966
Policy Initiative	**CLCPA Dependent**	Transmission	**None**	Coffeen - Asset Replace CH	C087772
				Coffeen - Asset Rplc T-line	C089326
				Coffeen St. Substation	C081787
				Flat Rock Upgrades - Line	C087428
				Indian River- N Watertown Line	C082190
				Malone Control House	C097803
				Malone Substation Rebuild_T_Sub	C069306
	MVD_AC_System Capacity	Distribution	**Watertown District**	Coffeen Station Rebuild D-Line	C095230
Policy Initiative - CLCPA Ph2	**CLCPA Ph2**	Transmission	**None**	Beaver River Greenfield Substation & Synchronous Condensers	C090053
				Black River - LHH Rebuild	C089996
				Black River - Taylorville Rebuild	C089997
				Black River Substation Upgrades	C090000
				Coffeen Synchronous Condensers	C090023

				Coffeen-Black River 3 Rebuild	C090008
				Coffeen-Staplin Creek 14 Rebuild	C090009
				Colton - Malone #3 Rebuild	C090024
				Gulf Rd CLCPA Upgrades (Boonville Greenfield)	C090005
				Land-CLCPA P2-Colton-Malone Rebuild	C095175
				Land-CLCPA-P2 Black River-Clay	C095172
				McIntyre - Colton DLR	C090047
				North Watertown-Coffeen 7 Rebuild	C090010
				Staplin Creek Greenfield Substation	C090051
				Taylorville - Boonville Rebuild	C090050
	D/SUB T_Load Relief	Distribution	**Lowville District**	North Carthage Substation Upgrades	C090054
Policy Initiative - Priority Transmission Project	**Priority Transmission Project**	Transmission	**None**	Smart Path Connect - T Line	C088956
Reliability	**D/SUB T_Reliability**	Distribution	**Ogdensburg District**	McIntyre-Hammond #24 Dist. Taps	C083853
	D/SUB T_Substaion Flood Mitigation	Distribution	**Saranac Lake District**	Hawkeye Station Sub	C097560
		Sub-T	**Saranac Lake District**	Hawkeye Station Sub - SubT	C097562
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Clayton District**	New Thousand Islands 81457 Feeder	C081805
			Ogdensburg District	HWY 812 Rebuild 93851	C094370
				McAdoo 91453 Reconductoring	C097804
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Lowville District**	Lowville 54 Conversion	C094215
			Malone District	Malone 2nd Bank Feeders (D-Line)	C082332
			Watertown District	Coffeen 55 Upgrade, I-81 EV Fleets	C097421
				Coffeen 56 Delta Conversion	C094206
				West Adams New Feeders TB2	C084110

	TO Led System Studies	Transmission	**None**	Black River 115/23kV bank Upgrade	C096057
				Ogdensburg Station Rebuild	C096059
				Watertown 23kV	C093964

5. D. Syracuse Oswego Cortland Transmission Study Area

Area Summary

The drivers behind the transmission capacity related projects in the Syracuse Oswego Cortland ("SOC") study area are:

- Area load has, over time, reached levels that result in potential post-contingency overloading of multiple 115kV circuits in the Syracuse area.
- The changing location of generation versus load has decreased west-to-east flow and increased loading on lines west of Syracuse.
- There are a number of Resiliency projects proposed on the 115kV system.
- CLCPA Phase 1 projects to improve capacity.
- CLCPA Phase 2 projects include new greenfield substations at East Ave and Maiden Lane near Oswego as well as rebuilding 115kV transmission lines between South Oswego and Lighthouse Hill, and from Lighthouse Hill to Clay.
- Interconnection of renewable energy sources to the transmission grid.

Key sub-transmission and distribution drivers include the following:

- Load growth in the Syracuse University and North Syracuse areas, including a new major micro-chip manufacturing campus, are major drivers of distribution capacity work.
- The existing infrastructure in Cortland city is at risk supporting the forecasted load growth, increasing the risk directly towards the 4.8kV stations. New EV charging stations, aging assets at the substations, and past flooding events add to driving factors.

Area Description

The SOC study area includes the 345kV and 115kV transmission facilities in the Central Region and all the 115kV and above transmission facilities around the Oswego Complex area, including the 345kV Scriba and Volney stations.

The SOC area is bordered by Elbridge substation in the West, Cortland substation in the South, Oneida substation in the East, and Oswego substation in the North. The important substations in the area include Clay, South Oswego, Dewitt, and Geres Lock. This area also includes some of the assets stretching between Mortimer and Elbridge.

Within the SOC study area, there are eight distribution study areas: Cazenovia, Cortland, East Syracuse, Manlius-Fayetteville, North Syracuse, Syracuse, Volney and West Syracuse.

The Cazenovia study area serves approximately 5,400 customers, 34 of which are critical. The study area is a very rural region, with the Village of Cazenovia and the Cazenovia Industrial Park being the only large loads. The distribution system consists of one 34.5/13.2kV substation, three 34.5/4.8kV substations and one 34.5-4.16V substation. The only physical constraint is Cazenovia Lake and the residential load, which is spread around Cazenovia Lake.

The Cortland study area serves approximately 23,500 customers, 72 of which are critical. The study area is defined by the region that includes the City of Cortland and the surrounding towns and villages. It is located in central New York between Syracuse and Binghamton. The primary distribution system voltages in Cortland are 13.2kV and 4.8kV. Most of the area is fed from a 34.5kV sub-transmission system supplied out of the Cortland and Labrador substations.

The East Syracuse study area serves approximately 13,500 customers, 21 of which are critical. The study area is an industrial and residential suburb of the City of Syracuse. The distribution system consists of one 115/34.5kV, three 115/13.2kV, one 34.5/4.8kV and one 34.5/4.16kV substations. The transmission supply is adequate. The only noteworthy physical barriers are Interstate I-690 and Interstate I-481 which go through the area. Customers are served via 16 13.2kV feeders, two 4.8kV feeders, and five 4.16 kV feeders.

The Manlius-Fayetteville study area serves approximately 25,100 customers, 63 of which are critical. The study area is a residential suburb of Syracuse. The distribution system consists of one 115/34.5kV, four 115/13.2kV and two 34.5/13.2kV substations. Most new load additions to the area are residential developments.

The North Syracuse study area serves approximately 75,100 customers, 126 of which are critical. The study area contains many of the suburbs to the north of the City of Syracuse, including but not limited to Cicero, Salina, Clay, Bridgeport, and Brewerton. It has experienced the majority of the new housing which has been built in the Syracuse metropolitan area. The distribution system consists of one 115/34.5kV, nine 115/13.2kV, three 34.5/4.8kV and one 34.5/4.16kV stations. The physical barriers in the North Syracuse area are the two interstate highways, I-81 and I-90. The Oneida River also serves as a physical barrier in some locations.

The Syracuse study area serves approximately 71,900 customers, 119 of which are critical. The study area is made up of the City of Syracuse. The primary distribution system voltages in Syracuse are 13.2kV and 4.16kV. There is also a 12.47kV network fed out of Ash St. substation. Most of the area is fed from a 34.5kV sub transmission system supplied by Ash St, Elbridge, Solvay, Teall Ave., and Tilden substations. There is also some 13.2kV fed directly from the 115kV transmission system.

The Volney study area serves approximately 57,800 customers, 124 of which are critical. The study area includes the cities of Oswego and Fulton and primarily serves jurisdictions within Oswego County. The distribution system consists of four 115/34.5kV, seven 115/13.2kV, five 34.5/13.2kV, eight 34.5/4.8kV and one 34.5/4.16kV substations, as well as two 12.47 kV feeders supplied by foreign-owned assets at the Lighthouse Hill substation. Most distribution infrastructure in the area is either 13.2 kV grounded-wye or 4.8 kV delta. A physical barrier in this area is the Oswego River, which is also a canal. The area has seen significant growth in DG within the past 5 years. There is currently 62.7 MVA of DG capacity connected in the area with an additional 142 MVA of DG in queue. Current major distribution projects in the area include substation rebuilds at

East Pulaski and Gilbert Mills stations due to thermal loading and asset condition concerns, as well as a suite of projects to address these same issues at two substations north of Oneida Lake (Cleveland and Constantia) by retiring existing substation assets and installing larger 34.5/13.2kV distribution padmounts.

The West Syracuse study area serves approximately 23,100 customers. The study area is a suburb west of the City of Syracuse. The distribution system consists of one 115/34.5kV, two 115/13.2kV, and four 34.5/4.16kV substations.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-4
Syracuse Oswego Cortland Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Approved Proactive Planning	**D/SUB T_Load Relief**	Distribution	**Pulaski District**	Colosse feeder work for EV Charging	C093499
			Syracuse District	Hancock 2 DLine upgrade	C093668
				Mobile Storage at Chittenango	C094585
				Sand Road 2 DLine upgrade	C093669
				Teall 55 upgrades for CNY Bus Depot	C098155
	D/SUB T_Public Requirements	Sub-T	**Cortland District**	Cortland OVS Truck chargers	C097372
Asset Condition	**Component Fatigue/Deterioration**	Transmission	**None**	Border City-Elbrdge #10/#5 Crossings	C075723
				Bristol Hill - Asset Replacement	C084072
				Curtis St - Teall #13 ACR	C084496
				Elbridge-Gears Lock 3 Woodard 4 ACR	C084521
				Elbridge-Geres Lock 18/19 ACR	C084522
				Oswego - Lafayette 17 Lam Arm	C097086
				S Oswego-Clay #4 T-334 ACR	C075544
				Scriba - Rplc CB R200	C093255
				Scriba - Rplc GCBs w VCBs	C095689
				Scriba-Volney 20/21 Lam Arm/ACR	C093004
				Solvay: Asset Replacement	C079463
				South Oswego: 115kV Asset Rplc	C081781
				South Oswego: 115kV Asset Rplc CH	C092436
				Teall-Carr 6 ACR	C091985
				Volney Station-Repl Disconnect SWs	C098938

				Volney-Marcy 19 Tower Painting	C096532
				West Adams Radial 115kV Line Tap	C096831
	D/SUB T_Asset Replacement	Distribution	Syracuse District	DLINE trf for Woodard-Ash 27/28	C084566
		Sub-T	Cortland District	Cortland 20 refurbish 34.5 kV	C081639
				Cortland 21 34.5 kv Refurbish	C081646
				Cortland 23 34.5 kv Refurbish	C081647
			Syracuse District	Mallory - Constantia 31 34.5kV Refurb	C084194
				Teall 23 34.5kV Refurb	C084196
				Woodard 24 Refurb	C094066
				Woodard-Ash27 Partial UG OH portion	C086593
				Woodard-Ash27 Partial UG UG portion	C086594
	D/SUB T_Sta Metal-Clad Switchgear	Distribution	Cortland District	Tuller Hill 246 Unit Metalclad Repl	C056611
			Syracuse District	Pine Grove Metalclad Replacement	C056614
	D/SUB T_Substation Breaker	Distribution	Syracuse District	Belmont Sta 260- R550, R560, R570	C094486
	D/SUB T_Substation Mobile	Distribution	Syracuse District	Mobile 9C -Mobile Sub Replacement	C089184
	D/SUB T_Sub-T Overhead Line	Sub-T	Pulaski District	LHH-Mallory 22-34.5kv ACR	C046441
			Syracuse District	Solvay/Woodard-Ash st 27&27&28- 34.	C046439
				Woodard 24 Refurb N.-I90	C060445
				Woodard 29-34.5kv ACR	C046473
	Failure Trend	Transmission	None	Pannell-Border 4-977 Reins 246-303	C098930
Customer Requests/Public Requirements	Customer Interconnections	Transmission	None	Customer_Transmsn Strctr relo	C093492
				Customer 345 kV Service	C092142
				Customer (Clay Sub Interconnection)	C092344
				Customer Trans Line Work	C094246
				Customer UG 345 kV Service	C094819
				Customer (Clay Interconnect)	C094582
	D/Sub T_Meter Installations	Distribution	Central Region	AMI - NY Electric, Central	C087167
	D/SUB T_Public Requirements	Distribution	Syracuse District	PIN#3501.60 I-81 Contract 6	C099135
				PIN#3501.60 I-81 Contract 6A	C099136
				PIN#3501.60 I-81 Contract 7	C099137
				PIN#3501.60 I-81 Contract 8	C091451
		Transmission	None	Dewitt - 115kV Rebuild CH	C098377

	Public Requirements (additional need)			Dewitt Station 115kV Rebuild	C081783
Damage/Failure	**Damage/Failure**	Transmission	**None**	Curtis - Teall #13 SW X13-2	C094940
Multi Value Distribution (MVD)	**MVD_AC_System Capacity**	Distribution	**Cortland District**	Cortland Area-enchantment d-line work	C090298
				Cortland Area-Enhancements Substation work	C090284
			Pulaski District	East Pulaski Station Rebuild	C099114
			Syracuse District	Dorwin D-lines	C093699
				Fayette St Line	C081980
				Fayette St Substation	C081981
				Galeville 71,72&73 fdrs conversion	C050749
				Galeville Station Rebuild	C050746
				Rebuild Ash 4160	C082032
				Rock Cut Metalclad	C083445
			Volney District	Granby Center Expansion	C093650
				LighthouseHill Relocation-Dist Line	C074342
				Mexico Dline	C093643
				New Haven Bank Upgrade	C099105
		Sub-T	**Syracuse District**	Bristol Hill-Phoenix 23-34.5kv	C046474
Muti-Value Transmission (MVT)	**MVT Asset Condition**	Transmission	**None**	Geres Lock - CH replacement	C090822
				Teall Ave - Asset Replacement	C086893
				Tilden - Asset Rplc CH	C095820
				Tilden: Asset Replacement	C081785
				Whitman - Transformer Replacement	C091870
Policy Initiative	**CLCPA Dependent**	Transmission	**None**	LightHH 115kV Yard Repl & cntrl hs.	C031662
				LightHH Trans Lines Reconnect	C073997
				Mallory 115kV Breakers	C084074
				Recond Cortland Clarks Corners	C053141
Policy Initiative - CLCPA Ph2	**CLCPA Ph2**	Transmission	**None**	Duer Street	C090027
				Land-CLCPA P2-LHH-S Oswego	C095174
				Lighthouse Hill - Clay Rebuild	C090028
				Lighthouse Hill - S. Oswego Rebuild	C090029
				Maiden Lane station - Greenfield	C090031
				South Oswego Station Upgrades	C090052
Reliability	**D/SUB T_Reliability**	Distribution	**Cortland District**	Truxton 27-Cuyle 25 new tie	C095612
			Syracuse District	Bartell 32554 - Convert 4.8kV areas	C094191

				Bartell 55 Conversion (Ladd Rd)	C094187
				Sorrell Hill Rebuild	C077170
				Sorrell Hill Rebuild - Control House FP	C094883
				Sorrell Hill Rebuild DLine	C094698
				Wetzel 55 - Convert Caughdenoy	C094192
			Volney District	Paloma 55 Delta Conversion Phase 2	C094235
				Paloma 55 Delta Conversion Phase 3	C094236
	Performance	Transmission	**None**	Cicero Substation T-Line Taps	C093003
				New Mobile tap for East Pulaski	C098489
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Cortland District**	Targeted fdr ti Cuyler-Delphi Dline	C094340
				Targeted fdr tie Truxton - Mcgraw	C094337
			Pulaski District	fdr tie Sandy Creek - East Pulaski	C094371
			Syracuse District	Milton Ave DLine	C046643
			Volney District	Fdr tie G.Mills-New Haven Phase 2	C097370
		Sub-T	**Cortland District**	Targeted fdr ti Cuyler-Delphi SubT	C094341
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Pulaski District**	Constantia D-Line Boutique Sub	C093653
				UG for E Pulaski rebuild	C097013
			Syracuse District	Cicero D-Line	C091779
				Cicero sub Control House	C097043
				Cicero Substation	C091713
				MITS D-Line	C093714
				Peat St rebuild, Sub	C095378
			Volney District	Gilbert Mills Rebuild-Control House	C098005
				Gilbert Mills Xfmr Upgrade-Xfmr	C046563
	D/SUB T_Safety	Distribution	**Cortland District**	Cortland LVAC_Disassemble	C087469
	ISO Led System Studies	Transmission	**None**	Dewitt - Asset Replacement ST	C096652

5. E. Utica Rome Study Area

Area Summary

The drivers behind the transmission capacity related projects in this study area include the need to address thermal and voltage issues in area substations and to improve resiliency of the system.

- Oneida substation new capacitor bank for improved system voltage control.
- Rebuilding of Oneida and Boonville substations to address asset condition issues.

- Interconnection of renewable energy sources to the transmission grid.
- Completion of Smart Path Connect

Key sub-transmission and distribution drivers include the following:

- Refurbishment of several 46kV sub-transmission circuits to address asset condition concerns.
- Rebuilding of Terminal Substation to address asset condition, reliability and environmental concerns.

Area Description

The Utica Rome transmission study area includes the 115kV and above transmission system with the northern boundary at Boonville substation, west at Oneida, and east ending before Inghams substation. Within the Utica Rome study area, there are four distribution study areas: Oneida, Rome, Utica and Old Forge.

The Oneida study area serves approximately 18,600 customers. The study area includes the City of Oneida and the Village of Canastota. In the City of Oneida, the Oneida Hospital has dual distribution supplies. Nearby, H.P. Hood Dairy Products Inc.'s facility represents 4MVA of the load and has dual distribution supplies. The Village of Canastota, which is in the western section of the Oneida area, has several large commercial and industrial customers including Canastota Industrial Park, Owl Wire and Cable Inc., and Die Molding Inc. A geographic constraint is the distance to other substations and the lack of feeder ties. There have been improvements made to feeder ties between the Oneida and Peterboro substations. Developing these ties was challenging due to the New York State Thruway's stringent road crossing regulations.

The Rome area serves approximately 24,700 customers. There are 16 13.2kV and 10 4.8kV feeders in the study area. All distribution substations are supplied from the 115kV system. As a result, there are no sub-transmission lines in the area.

The Utica study area serves approximately 81,900 customers. The study area includes the City of Utica. The distribution system consists of four 115/46kV, 10 115/13.2kV, six 46/13.2kV and eight 46/5kV substations. Rock City substation will be converted to 46/13.2kV to address loading concerns at So. Washington and Salisbury substations.

The Old Forge study area serves approximately 8,000 customers in Old Forge. There are five 46-4.8kV substations supplying nine 4.8kV feeders and one 13.2kV substation supplied out of Alder Creek substation. The 46kV sub-transmission system is supplied out of the Boonville substation. The 46kV sub-transmissions system also serves approximately 1,800 NYSEG customers in Long Lake.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-5
Utica Rome Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Asset Condition	**Component Fatigue/Deterioration**	Transmission	**None**	Deerfield: Asset Replacements	C081797
				Watkins Road - Rplc GCB w VCB	C095692
				Yahnundasis: Asset Replacement	C081794
	D/SUB T_Asset Replacement	Distribution	**Utica District**	Terminal Station Relocation_DLine	C059671
				Yahnundasis Rebuild, D-line	C093627
	D/Sub T_Dist. Overhead Line (Program)	Distribution	**Utica District**	Deerfield Sub Rebuild, D-Line	C094317
	D/SUB T_Primary UG Cable Replacement	Distribution	**Mohawk Valley Region**	MV-Camp KillKare/Lake Kora-Cable	C088822
			Utica District	Utica, NY 5kV UG System Elimination	C090618
	D/SUB T_Sub-T Overhead Line	Sub-T	**Mohawk Valley Region**	Trenton-Whitesboro 25, 46kV	C058579
Multi Value Distribution (MVD)	**MVD_AC_System Capacity**	Distribution	**Herkimer District**	Middleville Boutique, D-line	C095741
			Rome District	LEVITT D-Line	C093702
				LEVITT Sub	C093701
			Utica District	Alder Creek Substation Rebuild	C093792
				Arnold Upgrade, D-line	C095364
				Cavanaugh Rd Station	C096431
				Central Utica Boutique Sub - D-Line	C093808
				Chadwicks Expansion - D-line	C093804
				Chadwicks Expansion - Sub	C093803
				Debalso Expansion - D-Line	C093802
				Eagle Bay Pad, D-line	C093628
				MV-Clinton Substation Rebuild, Control House	C096907
				MV-Clinton Substation Rebuild, DLine	C094222
				MV-Clinton Substation Rebuild, Station	C086880
				Old Forge D-line	C096437
				Old Forge Station	C096436
				S Washington Boutique D-line	C096439
				Stittville Station	C091745
				Stittville Station, D-line	C093785
				White Lake Pad D-Line	C093608
				Whitesboro Rebuild, D-Line	C095366
		Sub-T	**Utica District**	Alder Creek Substation - Sub-T	C093793
	MVT Asset Condition	Transmission	**None**	SCHUYLER Sub	C093968

Muti-Value Transmission (MVT)				Terminal Station Relocation	C076242
				Terminal Station Relocation_TLine	C080493
Policy Initiative	**CLCPA Dependent**	Transmission	**None**	Gulf Road Assc Tline work (Boonville Greenfield)	C082488
				Gulf Road Control House (Boonville Greenfield)	C082487
				Gulf Road Sub Remote End - Rome	C096122
				Gulf Road Substation (Boonville Greenfield)	C049903
				Oneida - Sub Rebuild T-line	C084674
				Oneida Substation Rebuild	C034443
Policy Initiative - CLCPA Ph2	**CLCPA Ph2**	Transmission	**None**	Boonville - Porter Rebuild	C090003
				Land-CLCPA-P2 Black River-Porter	C095170
Reliability	**D/SUB T_Asset Replacement**	Sub-T	**Utica District**	Whitesboro-Schuyler 29 Sauq Reconfg	C098344
	NERC/NPCC Standards	Transmission	**None**	Porter - 230kV	C097183
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Herkimer District**	Rock City Station - 13.2kV Rebuild	C046671
				Rock City Sub - Distribution Line	C082291
			Rome District	Lehigh 53/Rome 54 Tie Recon. P2	C094423
				Turin 57/58 Tie	C096509
		Sub-T	**Mohawk Valley Region**	Valley-Middleville 46kV Tie	C095738
	D_Climate Vulnerability	Distribution	**Utica District**	CCRP(Flood)Peterboro 514-Flood Wall	C093813
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Herkimer District**	Salisbury Station - D-line	C093800
				Salisbury Station - Sub Rebuild	C093794
			Rome District	Cleveland D-Line Boutique Sub	C093655
				Rome 55 Delta Conversion Phase 1	C094210
				Rome 55 Delta Conversion Phase 2	C094211
				West Cleveland D-line	C097940
			Utica District	Debalso Expansion - Sub	C091746
	TO Led System Studies	Transmission	**None**	Oneida-Rome LN1 new DCT - Line work	C096178

5. F. Genesee Transmission Study Area

Area Summary

The drivers behind capacity driven projects in Genesee area are:

- Supporting the State's Clean Energy Goals with CLCPA Phase 1 projects at Golah and on the lines between Batavia, Golah and Mortimer.
- Interconnection of Renewable Energy resources to the transmission grid.

- There are also a number of transmission projects between Lockport and Batavia in the Genesee study area that have Asset Condition as its main driver.

Key sub-transmission and distribution drivers include the following:

- Capacity load relief concerns in the Geneseo / Livonia areas will be addressed with new distribution feeders supplied from Sonora Way substation.

Area Description

The Genesee transmission study area includes National Grid assets within NYISO Zone B. The area includes assets as far west as Lockport and as far east as Mortimer. The system consists of several 115kV circuits between Lockport and Mortimer stations. Three circuits go directly from Lockport to Mortimer, three circuits go from Lockport to Batavia and several circuits in a series connect Batavia and Golah. Today, one 115kV line and one 69kV line connect between Mortimer and Golah.

Two 345kV circuits owned by the NYPA travel through this area from Niagara to Rochester.

At Rochester Station 80, Rochester Gas and Electric ("RG&E") has four 345/115kV transformers with 115kV connections to Rochester Station 82. Rochester Station 82 is the RG&E 115kV station adjacent to and tied to National Grid's Mortimer Station.

This area also includes some of the assets stretching between Mortimer in the Western Region and Elbridge in the Central Region also known as the Finger Lakes area. At Pannell Road, there are connections between NYPA 345kV, RG&E 115kV and National Grid 115kV circuits.

Within the Genesee study area, there are three distribution study areas: Genesee North, Genesee South and Livingston.

The Genesee North study area serves approximately 37,500 customers. There is a total of fifty-four distribution feeders that supply customers in this area. There are twenty-two 13.2kV feeders, with four being supplied from 34.5/13.2kV transformers, and the rest being fed from 115/13.2kV transformers. The thirty-two 4.8kV feeders are all fed from 34.5/4.8kV transformers. There are ten 34.5kV sub-transmission lines that supply the distribution step down transformers in the area.

The Genesee South study area serves approximately 33,700 customers. The study area is defined by the region that includes the City of Batavia and the surrounding towns and villages. There is a total of forty-one feeders that supply the customers in the area. It is located east of Buffalo and southwest of the City of Rochester. The primary distribution system voltages in Genesee South are 13.2kV and 4.8kV. Most of the 13.2kV system is supplied by the area 115kV transmission system. The rest of the 13.2kV system, as well as the 4.8kV system, are fed from a 34.5kV sub-transmission system supplied out of the North Akron, Batavia, North Leroy, and Oakfield substations. There are several customers supplied directly from the sub-transmission system.

The Livingston study area serves approximately 29,700 customers. The study area is largely made up of Livingston County, which is south of Rochester and east of Batavia. There is a total of thirty-nine feeders that supply the customers in the area. The primary distribution system

voltages in Livingston are 13.2kV and 4.8kV. Half of the load is supplied from the 115/13.2kV East Golah, Mumford and Sonora Way substations. The remainder is supplied from 69kV at York Center and the 34.5kV sub-transmission system supplied out of the Golah and North Lakeville substations. Two customers are supplied directly from the 115kV system.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-6
Genesee Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Asset Condition	Component Fatigue/Deterioration	Transmission	None	Gardenville 230kV - Asset Rplc	C089270
				Golah-NLakeville#116 Priority 2 Str	C086697
				Lockport-Mortimer 113/114 ACR	C081664
				Medina - CB Replacements	C097123
				Mortimer - Asset Replacement	C093538
				Pannell-Geneva 4-4A Road Crossings	C030889
	D/SUB T_Asset Replacement	Sub-T	Albion District	Gasport-Telegraph 312 34.5kV Refurb	C084019
				Telegraph-Medina 302 &303 34.5 kV	C081634
			Avon District	North Lakeville-Ridge 218 refurb	C084014
			Batavia District	Attica-Wethersfield 209 ACR	C081705
				Oakfield-Caledonia 201 34.5 Refurb	C083975
	D/Sub T_Dist. Overhead Line (Program)	Sub-T	Albion District	Oakfield-Caledonia #201 Regs Str597	C098579
			Avon District	N Lakeville-Ridge #218 Line Regs	C098577
			Batavia District	N Akron-Attica #225 Regs Str104	C098580
				Oakfield-Caledonia #201 Regs Str518	C098578
	D/SUB T_Sub-T Overhead Line	Sub-T	Albion District	Barker-Lyndonville 301-34.5kV	C052511
			Genesee Region	N.Lakeville-Hemlock 224 Line Regs	C094356
				N.Lakeville-Richmond 226 Line Regs	C094354
Customer Requests/Public Requirements	Customer Interconnections	Transmission	None	Customer Data Center - STAMP Project	C098226
Multi Value Distribution (MVD)	MVD_AC_System Capacity	Distribution	Albion District	Waterport Asset Condition	C091751
			Avon District	Avon 43, 10 Mile Voltage Conversion	C096408
				Livonia 37 Substation Rebuild	C096426

				Livonia, 10 Mile Voltage Conversion	C096429
		Sub-T	**Albion District**	Lyndonville-Medina 301-34.5kV	C052512
				Waterport tap 301-34.5kV	C052515
			Genesee Region	Phillips-Barker 301-34.5kv	C046465
				Phillips-Telegraph 304-34.5kv	C046466
Muti-Value Transmission (MVT)	**MVT Asset Condition**	Transmission	**None**	Access Rd- Lockport-Batavia 112	C089590
				Lockport-Batavia 112 T1510 Rebuild	C003422
	MVT Reliability	Transmission	**None**	Access Roads-Mortimer-Pannell 24 25	C093207
				Easements-Line Rebuild MP 24	C093270
				Mortimer - Pannell 24/25	C047816
Policy Initiative	**CLCPA Dependent**	Transmission	**None**	Mortimer-Golah #110 ACR Rebuild	C060220
				Mortimer-Golah 109-69kV Rebuild	C081474
	CLCPA Ph1	Transmission	**None**	Easement-109-110-119 LN-CLCPA-West	C097443
				Golah Sub rebuild	C051831
				Mortimer 109 bay 115kV Upgrade	C088632
				New Golah 853 and 116 line Reloc	C095869
				New Golah Sub - Control House	C098366
				Old Golah Sub Retirement	C095871
				SE Batavia - Golah LN119 Rebuild	C088631
	D/SUB T_Reliability	Distribution	**Avon District**	East Golah 55 Golah Road UG Dip	C098232
	MVD_AC_Hosting Capacity	Sub-T	**Avon District**	Sub T LIne 213 tap to Golah Station	C095887
	MVD_AC_Reliability	Distribution	**Avon District**	CLCPA Golah Remote end upgrades	C098303
Reliability	**D/SUB T_Reliability**	Sub-T	**Avon District**	Mumford 5053 Boutique Sub-T	C098158
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Albion District**	*Middleport F7765 Tie w/Shelby 7656	C049711
				Feeder 06_9561 Tie With 06_7863	C094382
			Batavia District	Feeder 04_0456 Tie with Feeder 5053	C094406
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Avon District**	East Golah 52 Delta Conversion	C093853
				East Golah 55 Delta Conversion	C093852
			Batavia District	East Batavia 55 Delta Conversion	C093854
				N Leroy 56 Delta Conversion Phase 1	C093880
				N Leroy 56 Delta Conversion Phase 2	C093882
	TO Led System Studies	Transmission	**None**	E. Golah 2nd 115kV Tap	C051829

5. G. Frontier Transmission Study Area

Area Summary

The principal drivers for transmission projects in this area are:

- The NYISO selected project, in accordance with the PITPP, does not address overloads on the National Grid local transmission system. This results in the need for multiple area projects to relieve thermal constraints.
- High post-contingency 115kV line loadings on lines extending south and east from Niagara, Packard, and Gardenville.
- Recommended major projects that address capacity issues include reconfiguration of the #180, #181 and #182 lines, reconductoring of the #130, and #133. Connecting renewable energy sources to the transmission grid.
- Asset condition issues at Lockport.
- Supporting the Katherine Street Substation projects.

Key sub-transmission and distribution drivers include the following:

- To address new commercial load growth in the Larkinville section of Buffalo, a new 23-13.2kV substation (Station 3012 will be used).
- Sub-Transmission reconductorings to resolve aging infrastructure in both underground and overhead assets
- Load growth at the Buffalo Niagara Medical Campus as well as across downtown will be served by Elm Street substation.
- Area loading mixed with aging equipment requiring the upgrade of multiple Buffalo area substations, including Buffalo Stations 61, 122, 25, 30, 31, 32, 34, 35, 38, 41, 45,51, and 140. These stations rebuild are at various stages including design and construction.
- Indoor substations are an asset condition issue, and there are several replacement projects in progress in Buffalo. Similarly, the condition of Harper 115/12kV station and several indoor substations in the City of Niagara Falls are driving a new 115/13.2kV substation Royal Ave 2715 which has been put in service. Once rebuilds of other stations 80, 83 and 85 are completed and transferred to Royal for supply then Harper Station will be retired.
- Katherine St substation to provide a significant amount of system capacity to South Buffalo.

Area Description

The Frontier transmission study area includes assets within NYISO Zone A. The area includes assets as far east as Lockport, the cities of Niagara Falls and Buffalo areas and the system stretching south to Gardenville. The system consists primarily of 115kV and 230kV double circuit transmission lines. The important substations are Packard (230 and 115kV), Huntley (230 and 115kV), and Lockport (115kV). There is a joint National Grid and NYSEG substation at Gardenville (230 and 115kV). National Grid has three 230/115kV transformers at Gardenville and two at Packard. NYSEG and NYPA also have their own substations in the area.

Within the Frontier study area there are ten distribution study areas: Amherst, Cheektowaga, Elm, Grand Island, Kensington, Niagara, Niagara Falls, Sawyer, Seneca and Tonawanda.

The Amherst study area serves approximately 59,200 customers. The study area is located east of the cities of Tonawanda and Niagara Falls, and north of the City of Buffalo and encompasses the towns of Amherst, Pendleton, Wheatfield, Wilson and Lewiston. The Erie Canal divides the study area and may present challenges in creating new feeder ties and recommended supply expansion. The primary distribution system in Amherst is 13.2kV and 4.16kV, with a few small pockets of 4.8kV. The area substations are supplied by the 115kV transmission system with the exception of Buffalo Station 58 and Buffalo Station 124, which are supplied by 34.5kV sub-transmission lines originating from Youngman Terminal Station and Buffalo Station 67, which is supplied by the 34.5kV sub-transmission lines originating from Walden substation.

The Cheektowaga study area serves approximately 8,300 customers. The area is located east of the City of Buffalo. There are several stations in this area that are supplied by 115kV transmission lines. Walden is the largest; it has two transformers that serve the 34.5kV sub-transmission system. Dale Rd. substation is 115/13.2kV while Buffalo substations 61 and 154 are 115/4.16kV. Buffalo Substation 66 is a 34.5/4.8kV substation. The remaining substations in the area are 34.5/4.16kV. Buffalo Substation 146 has a 34.5/4.8kV and a 34.5/13.2kV transformer.

The Elm study area serves approximately 4,500 customers and is part of the City of Buffalo. It contains the downtown area as well as surrounding urban areas with a mix of residential, commercial, and industrial loads. Elm Street substation is a 230/23kV station that supplies the Buffalo network as well as the sub-transmission supply to several distribution stations. The Elm Street substation supplies approximately 120MW of load. Most of the load is served by a low voltage AC general network which is supplied by multiple paralleled transformers with multiple 23kV supply cables thus providing very high reliability.

The Grand Island study area serves approximately 9,900 customers. The study area is made up of Grand Island, which is between the cities of Buffalo and Niagara Falls. It is primarily suburban and rural residential with areas of commercial development and industrial parks. There are two National Grid substations supplied from 115kV lines with distribution feeders at 13.2kV.

The Kensington study area serves approximately 36,400 customers. There are 80 4.16kV feeders that are all fed from 38 23/4.16kV transformers and 19 23kV sub-transmission lines. The Kensington substation has four 115/23kV transformers that provide the supply to the 23kV sub-transmission system. This substation is in the City of Buffalo and the study area contains significant amounts of underground distribution mainlines and overhead laterals. The Kenmore Terminal station supplies several smaller commercial customers and the South Campus of the SUNY at Buffalo.

The Niagara study area serves approximately 13,300 customers. The study area encompasses the towns of Lewiston, Porter, and Wilson. The study area is bordered to the west by the Niagara River, to the north by Lake Ontario, and to the south by Power Reservoir. The area's distribution is served primarily at 4.8kV and supplied by a 34.5kV sub-transmission network. The 34.5kV sub-transmission network operates in a loop system that is supplied by both Mountain and Sanborn 115/34.5kV substations. Swann Road supplies a significant portion of this area and is 115/13.2kV.

The Niagara Falls study area serves approximately 51,100 customers. The study area is bordered to the north, south, and west by the Niagara River. The Power Reservoir also borders the area to the north, east of the Niagara River. Interstate I-190 runs from the north to the south along the eastern section of the study area. The CSX Railroad runs from the east to the west along the northern section of the area. The Niagara Falls International Airport lies east of the city. These boundaries limit feeder ties and distribution supply expansion in the area. The area is supplied primarily by the 115kV transmission system; however, a 12kV sub-transmission system is supplied by Harper and Gibson substations. Distribution load is served by 13.2kV, 4.8kV, and 4.16kV circuits.

The Sawyer study area serves approximately 72,200 customers. The study area contains portions of the City of Buffalo and the Town of Tonawanda. There are 154 4.16kV feeders supplying the area which are served by 23kV supply cables and multiple, paralleled transformers.

The Seneca study area serves approximately 48,400 customers. The study area is the southeast section of the City of Buffalo. It is served primarily from the Seneca Terminal Station which has four 115/23kV transformers and serves 25 supply lines at 23kV. Most of the distribution substations are served by four supply cables and have four 23/4.16kV transformers. As throughout the City of Buffalo, almost all distribution load is served at 4.16kV.

The Tonawanda study area serves approximately 27,900 customers. The study area encompasses the City of North Tonawanda as well as a portion of the City and Town of Tonawanda. Bordering the western section of the area is the Niagara River. Ellicott Creek flows parallel to Tonawanda Creek in the northern part of the town of Tonawanda, with a confluence just east of the Niagara River. These creeks flow through the central part of the area from east to west. The eastern section of the area is bordered by the Town of Amherst and forming the study area's southern border is the Village of Kenmore and the City of Buffalo. The area is served primarily by the 115kV transmission system and the 23kV sub-transmission system. Distribution voltage is served primarily by 4.16kV feeders.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-7
Frontier Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Approved Proactive Planning	**D/SUB T_Load Relief**	Distribution	**Buffalo District**	Station 3012 Substation	C074909
	D/SUB T_New Business	Sub-T	**Frontier Region**	Marine Drive Ph1 - Cables 35E & 9E	C095803
Asset Condition	**Component Fatigue/Deterioration**	Transmission	**None**	Gard-5 Mile Culvert 24 26 31.2 41.2	C087617
				Huntley-Gardenville 38/39 Reinsulation	C075543
				Huntley-Lockport 36/37 Ayer Rd ACR	C081670
				Kensington - 23kV replacements	C091035

				Knapp Road Storage Building	C083804
				Ridge Station 142 - Asset Rplc	C097565
				Seneca Term - 23kV Asset Rplc	C089269
				Station 078: Asset Replacement	C081792
				T-XFR Spare 115kV-23kV 50MVA	C081732
	D/SUB T_Asset Replacement	Distribution	Buffalo District	Station 121 Clinton - Rebuild	C097014
				Station 61 Distribution Relocation	C084919
		Sub-T	Buffalo District	12S, 10S, 27S, 17S - Rep Phase 1	C098917
				12S, 10S, 27S, 17S - Rep Phase 2	C098918
				35E & 7E - Replacement (Phase 1)	C097765
				35E & 7E - Replacement (Phase 2)	C097782
				8, 27, 16, 12, 10, 2 H - Rep Phase1	C097769
				8, 27, 16, 12, 10, 2 H - Rep Phase2	C097773
				8K & 4K – Cable Replacement Phase 1	C098923
				8K & 4K – Cable Replacement Phase 2	C098924
				Cable 6E Replacement	C098926
				Cables 1E & 2E Replacement	C098925
			Niagara Falls District	Ransomville-Phillips 402 refurb	C084189
	D/Sub T_Conductor Clearance	Distribution	Buffalo District	Station 79 D-Line Relocation	C084921
	D/SUB T_Primary UG Cable Replacement	Sub-T	Frontier Region	Buffalo 23kV UG Cable replacement	C092587
	D/SUB T_Sta Metal-Clad Switchgear	Distribution	Buffalo District	Station 61 - Station Rebuild	C051707
	D/SUB T_Sub-T Overhead Line	Sub-T	Buffalo District	Shaleton-Ridge 610, Station 207 Tap	C046779
				Tonawanda 601-604, 23kV - T22&T23	C067266
			Frontier Region	Kenmore-Winspear 630/631-ref	C050318
			Niagara Falls District	Tonawanda Lines 601-604-23kv	C046451
				Tonawanda Lines 622-624-23kv	C046452
				Youngstown - Mountain 401 ACR	C094088
Communications /Control Systems	D/Sub T_Meter Installations	Distribution	Buffalo District	AMI - Field Area Networks (FANs), W	C087158
Customer Requests/Public Requirements	D/Sub T_Meter Installations	Distribution	Buffalo District	AMI - NY Electric, West	C087168
	D/SUB T_Public Requirements	Sub-T	Buffalo District	Best Street Bridge Replacement	C095920
Damage/Failure	D/SUB T_Damage Failure Other	Distribution	Buffalo District	DF-Station 205 - TRF3 Failure	C091523

	Damage/Failure	Transmission	**None**	Ridge - Replacement TB#2	C097171
Multi Value Distribution (MVD)	**MVD_AC_System Capacity**	Distribution	**Buffalo District**	Black Rock Area Enhancement - DLine	C099004
				Black Rock Area Enhancement Station	C098382
				Black Rock Dx Station Land	C099001
				Buffalo Station 30 Rebuild - Sta	C046519
				Buffalo Station 31 Rebuild - Sub	C046952
				Buffalo Station 38 Rebuild - Sub	C046955
				Buffalo Station 45 Rebuild -Line	C090726
				Buffalo Station 45 Rebuild -Sub	C090725
				Buffalo Station 51 Rebuild - Sub	C046958
				Katherine St New 115/13.2kV Sub	C098695
				Station 140- D-Line Work	C093018
				Station 140 Station Rebuild	C056616
				Station 79 Rebuild	C082713
			Niagara Falls District	Eighth St 80 - Indoor Substation Re	C046585
				Grand Island Station Build	C081485
				New College Ave Substation	C097427
				Northern Niagara Falls D-line	C097431
				Rebuild Lockport Rd Substation	C097432
				Shawnee Rd 76- TRF1 AC D-Line	C097277
				Shawnee Rd Station 76-TRF1 AC	C097155
				Station 154 Dx Line	C099018
				Station 154 Dx Station	C099017
				Station 34/35 Boutique - DLine	C099195
				Station 41 Boutique - DLine	C099196
				Upgrade 139 Dx Line	C099197
				Upgrade 139 Dx Station	C099200
		Sub-T	**Niagara Falls District**	Station 34/35 Boutique - SubT	C099198
				Station 41 Boutique - SubT	C099199
Muti-Value Transmission (MVT)	**MVT Asset Condition**	Transmission	**None**	Elm St #2 TRF Asset Replacement	C069426
				Lockport - Rebuild T-line work	C085990
				Lockport Sub - Remote End Work	C095022
				LockportSubstationRebuild Co36TxT	C035464
Reliability	**D/SUB T_Reliability**	Distribution	**Niagara Falls District**	Lockport Road 216 - Install TB#2	C036057

				Long Rd 209 - New F20955	CD00964
				Long Road 209 - Install TB2	CD00977
	NERC/NPCC Standards	Transmission	**None**	Gardenville 115kV - PS	C095981
				Lockport - Mortimer 113/#114 CCR	C095298
	Performance	Transmission	**None**	149/150 Reinsulating	C090704
				Calspan Tap In-Line Switch	C098590
				Packard-Huntley 77 78 Reinsulation	C093019
				RC-MOD Packard-Gardenville 181&182	C085238
				SW41&42: H-L 36/37 - Tonawanda Tap	C097781
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Niagara Falls District**	Feeder 03_7161 Tie with Feeder 9363	C094342
	Survivability	Transmission	**None**	Huntley - Lockport (Getzville)	C084538
	System Recovery	Transmission	**None**	Spare NYW Trans Xfrmrs	C090950
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Buffalo District**	Upgrade and Convert STA 74 SUB	C093600
		Sub-T	**Frontier Region**	25H Cable- New UG 23kV Cable	C097197
	TO Led System Studies	Transmission	**None**	130/133 T-Line Reconductor	C079500
				Katherine St Term L145/146 T-Line	C089018
				Packard-Gardenville Station Upgrades	C079506
				Pack-Gardenville T-Line Reconfig	C081799

5. H. Southwest Transmission Study Area

Area Summary

The primary drivers of the transmission capacity related projects in the Southwest study area are:

- The interconnection of renewable energy sources to the transmission grid.
- Resiliency project on Dunkirk-Falconer #160
- Upgrades and new technology to support the State's clean energy goals

Key sub-transmission and distribution drivers include the following:

- The 34.5kV sub-transmission system, which consists of several very long loops that traverse rugged territory.
- Load growth and reliability concerns in the South Chautauqua portion of the area are driving station projects.
- Load growth and asset condition issues at stations in the Eden/Evans area that are being addressed by a new substation near the Eden switch structure and expansion/upgrade of

Delameter Road Substation.

- Reliability and asset condition issues in Fredonia are driving the Berry Rd station feeder tie and the Roberts Rd Station refurbishment respectively.

Area Description

The Southwest transmission study area spans as far north as the Gardenville station, east into Wellsville and south into Pennsylvania. The transmission system consists primarily of 115kV and 230kV double circuit transmission lines. The major stations are Gardenville (230/115kV), a joint National Grid and NYSEG station, Dunkirk (230/115kV), Falconer (115kV), Homer Hill (115kV) and Five Mile Road station (345/115kV). National Grid has one 345/115kV transformer located at Five Mile Road and five 230/115kV transformers at Gardenville (three) and Dunkirk (two). NYSEG also has two 230/115kV transformers at Gardenville.

Within the Southwest study area, there are six distribution study areas: Cattaraugus-North, Chautauqua North, Chautauqua South, Erie South, Olean and Wellsville.

The North Cattaraugus study area serves approximately 15,700 customers. There are seven 13.2kV feeders, five of which are fed via two 115/13.2kV transformers at the Valley substation. The remaining two 13.2kV feeders are fed from a 34.5/13.2kV transformer at the Price Corners substation. There are also nineteen 4.8kV feeders, all supplied by 34.5/4.8kV transformers at various area substations. There are seven 34.5kV sub-transmission lines that provide supply for the 34.5/4.8kV transformers. A minimal number of industrial customers are supplied directly from the 34.5kV system. There are several NYSEG substations and municipal electric departments supplied from the 34.5kV system.

The Chautauqua North study area serves approximately 23,900 customers. There are ten 4.8kV feeders, which are all fed from 34.5/4.8kV transformers. There are also nineteen 13.2kV distribution feeders with all but one fed by 115/13.2kV transformers at various substations in the area. One 13.2kV feeder is supplied by a 34.5/13.2kV transformer at the West Portland substation. There are also eight 34.5kV sub-transmission lines which provide the supply to the 34.5/4.8kV step-down transformers in the area.

The Chautauqua South study area serves approximately 17,600. Customers are supplied by twenty 4.8kV delta feeders, all of which are fed from 34.5/4.8kV transformers. There are four 13.2kV feeders with three fed by the Baker Street 115/13.2kV transformer and one fed by the French Creek 34.5/13.2kV transformer. There are five 34.5kV sub-transmission lines that are supplied from Hartsfield and South Dow 115kV substations.

The Erie South study area serves approximately 35,600 customers. The study area includes the City of Buffalo outer harbor area and the Angola area. There are nineteen 13.2kV feeders, which sixteen are fed from 115/13.2kV transformers at the Cloverbank, Delameter Rd, 212 Harbor Front, and Lakeview substations. The other three are fed from 34.5/13.2kV at 207 Slade Ave, Eden, and Perrysburg substations. There are seven 4.8kV feeders and thirteen 4.16kV feeders.

The Olean study area serves approximately 18,300 customers. There are twenty distribution feeders that provide service to area customers. There are eight 4.8kV feeders supplied by 34.5-4.8kV transformers at various stations. Of the area's 12 13.2kV feeders, 11 are fed from

115/13.2kV transformers. The remaining single feeder is served from a 34.5/13.2kV transformer at the Vandalia substation.

The Wellsville study area serves approximately 4,300 customers. This study area is a small, rural region located near the Pennsylvania border and is supplied by the 115/34.5kV Andover and Nile substations. There are two 34.5kV supply lines in the area. The load is served by five substations serving eight 4.8kV feeders.

Major Project Table

The following table identifies major projects by spending rationale for this study area.

Table 5-8
Southwest Major Projects

Spending Rationale	Program	System	Distribution Study Area	Project Name	Project Number
Approved Proactive Planning	D/SUB T_Load Relief	Distribution	Angola District	Mobile Storage at Angola	C094583
	D/SUB T_Reliability	Distribution	Angola District	Delameter Substation Rebuild	C046536
	D/Sub T_Targeted Feeder Tie Enhancements	Distribution	Angola District	Delameter F9356-express& rebuild	C047877
				Delameter new F9355 - express..	C047885
Asset Condition	Component Fatigue/Deterioration	Transmission	None	Falconer - Rplc GCB w VCBs	C095688
				Five Mile - Stolle Rd 29 Lam Arm	C093153
				Gard - Five Mile 151-152 & 167 North Rebuild	C027425
				Pierce Brook-Five Mile 37 Lam Arm	C097638
	D/Sub T_Dist. Overhead Line (Program)	Sub-T	Stow District	Sherman - W Ashville 863 Regs Str52	C098687
	D/SUB T_Sub-T Overhead Line	Sub-T	Olean District	Homer Hill - Ceres 809 ACR	C094127
				Homer Hill-Nile 811-34.5kV	C050326
Customer Requests/Public Requirements	D/Sub T_Other	Sub-T	Angola District	Angola Service Plaza East	C095532
				Angola Service Plaza West	C095531
Damage/Failure	Damage/Failure	Transmission	None	Andover - Transformer DF	C093609
				Gard-5 Mile 151&152 Culvert 40	C087268
				Gard-5 Mile 151&152 Culvert 42	C099690
Multi Value Distribution (MVD)	MVD_AC_System Capacity	Distribution	Fredonia District	Roberts Rd Sta-Replace TB1	C086985
		Sub-T	Southwest Region	Bagdad-Dake Hill 815-34.5kV refurb.	C050292
			Stow District	Sherman-Ashville 863-Ref/Rec	C079096
Muti-Value Transmission (MVT)	MVT Asset Condition	Transmission	None	Gard-Dun 141-142 T1260-70 Rbd Senec	C034193
				Homer Hill - 115kV 34.5kV Asset Rpl	C075942
				Substation - Tran Spare	C099272

Policy Initiative	**CLCPA Ph1**	Transmission	**None**	Dunkirk to Laona 161/162 Rebuild	C088399
Reliability	**D/SUB T_Reliability**	Distribution	**Stow District**	Baker St - Install 2nd xfmr	C046553
	NERC/NPCC Standards	Transmission	**None**	Dunkirk-Falconer 160 CCR	C086816
	Performance	Transmission	**None**	Dunkirk Falconer Sw Ring	C093023
				Gardenville Dunkirk 73/74 SNI ACR	C091979
Resiliency	**D/Sub T_Targeted Feeder Tie Enhancements**	Distribution	**Angola District**	*Create Full tie F18251 to F18254	C049882
				F07_18151 Tie with F07_9354	C094413
			Fredonia District	Feeder 15351 Tie with 15353 Swede R	C094407
	Survivability	Transmission	**None**	Dunkirk - Falconer Resiliency	C084537
System Capacity - NY	**D/SUB T_Load Relief**	Distribution	**Angola District**	South Eden Greenfield Substation	C046538
			Olean District	New Machias Station (Land Purchase)	C093642
				New Machias Substation (Station Wk)	C093639
				W. Wellsville Boutique sub - D-Line	C093790
				Wellsville Boutique sub - D-Line	C093741
			Stow District	BakerSt 56 Delta Conversion Phase 1	C093874
				BakerSt 56 Delta Conversion Phase 2	C093875
				W.Chautauqua Dline Work	C055265
	TO Led System Studies	Transmission	**None**	Nile Area Reinforcement	C086234

Exhibit 1 - Transmission Capital Investment Plan

ocal / Regiona	Category	Spending Rationale	Program Name	Project Description	Project Numbe	FY27	FY28	FY29	FY30	FY31	Total
			Asset Condition I&M	Inspection Identified Replac Progra	C082106	424	660	300	315	331	2,030
				NY Inspection Repairs - Capital	C026923	7,250	520	-	-	-	7,770
				NY Inspection Repairs - Capital NYC	C093942	29,285	16,316	10,575	11,129	13,785	81,090
				NY Inspection Repairs - Capital NYE	C093941	1,460	4,480	11,025	13,076	13,730	43,771
				NY Inspection Repairs - Capital NYW	C093940	4,480	1,860	11,025	13,076	13,730	44,171
				Trans Footer Program I&M Central	C094241	980	1,013	1,046	1,098	1,350	5,487
				Trans Footer Program I&M East	C094239	980	1,012	1,045	1,097	1,350	5,484
				Trans Footer Program I&M West	C094240	980	1,012	1,046	1,098	1,350	5,486
				Trans PIT I&M Central	C094245	303	303	303	318	343	1,569
				Trans PIT I&M East	C094237	221	221	221	232	252	1,145
				Trans PIT I&M West	C094244	359	359	359	377	405	1,858
				Trans Tower Coating I&M Central	C094243	1,250	1,837	1,929	2,025	2,169	9,209
				Trans Tower Coating I&M East	C094238	1,250	1,837	1,929	2,025	2,169	9,209
				Trans Tower Coating I&M West	C094242	1,250	1,837	1,929	2,025	2,169	9,209
				Wood Pole Replacement Prgm (PIT) NYC	C093908	90	2,592	361	379	398	3,819
				Wood Pole Replacement Prgm (PIT) NYE	C093910	700	361	361	379	398	2,198
				Wood Pole Replacement Prgm (PIT) NYW	C093909	780	361	361	379	398	2,278
				Asset Condition I&M Total		**52,042**	**36,579**	**43,811**	**49,026**	**54,326**	**235,784**
				153/154 Str. 308 Access Improve	C090061	480	-	-	-	-	480
				Alabama Switch- Replace Disconnects	C097116	322	-	-	-	-	322
				Alcoa - Rplc GCB w VCB	C095691	-	-	-	50	294	344
				Amherst 36 Termination Repl	C092036	279	-	-	-	-	279
				Amherst 37 Termination Repl	C092041	279	-	-	-	-	279
				AMT PS&I - NMPC	C042663	500	500	500	515	540	2,555
				Batavia - Transformer	C097122	10	-	-	-	-	10
				Battle Hill - Rplc GCB R50	C099220	100	400	690	15	-	1,205
				Border City-Elbrdge #10/#5 Crossings	C075723	-	-	-	105	4,735	4,840
				Bristol Hill - Asset Replacement	C084072	144	440	1,881	5,656	1,527	9,647
				Brockport - Asset Replacement	C099210	-	-	-	-	150	150
				Brockport Taps ACR	C055531	-	-	-	-	508	508
				Browns Falls - Asst Sep/Rplc	C081427	2,209	-	-	-	-	2,209
				Clay - 345kV relay replacement	C089255	-	-	-	50	250	300
				Clay - Fence Gate Rplc	C095853	-	50	-	-	-	50
				Coffeen-W.Adams 2 ACR	C091986	18	112	395	1,265	7,376	9,166
				Colony - Asset Replacement	C091871	-	25	650	850	3,370	4,895
				Colton - Battle Hill 7 Line Access	C097087	-	-	-	-	50	50
				Colton - Battle Hill ACR	C089293	-	-	120	240	490	850
				Colton-Townline 9 Replacements	C091987	20	120	240	490	7,461	8,331
				Curtis St - Teall #13 ACR	C084496	-	-	-	500	2,475	2,975
				Deerfield- Asset Replacement T-Line	C096913	-	-	2	-	-	2
				Deerfield: Asset Replacements	C081797	2,476	6,544	3,473	567	-	13,060
				Dennison - Rplc OCB w VCB	C099219	100	400	690	15	-	1,205
				Dennison-Colton 4/5 13 Str Rplc	C097152	302	-	-	-	-	302
				Edic - Fence Gate	C095851	75	-	-	-	-	75
				Edic - Rplc Bus Supports	C088876	-	75	200	276	291	842
				Edic: Protection Migration	C076214	-	-	-	-	-	-
				Elbridge - Fence Gate Rplc	C095861	-	50	-	-	-	50
				Elbridge-Gears Lock 3 Woodard 4 ACR	C084521	-	-	400	2,100	3,500	6,000
				Elbridge-Geres Lock 18/19 ACR	C084522	-	200	218	500	4,500	5,418
				Falconer - Rplc GCB w VCBs	C095688	-	-	-	49	1,470	1,519
				Feura Bush - N. Catskill 2 ACR	C083073	-	101	101	160	2,321	2,682
				Five Mile - Stolle Rd 29 Lam Arm	C093153	5,871	5,052	-	-	-	10,923
				Fort Covington: CB R260 work	C081774	-	100	189	15	-	304
				Gard - Five Mile 151-152 & 167 North Rebuild	C027425	-	50	100	100	4,000	4,250
				Gard-5 Mile Culvert 24 26 31.2 41.2	C087617	-	-	-	-	3,000	3,000
				Gardenville 115kV Building Removal	C097045	-	-	-	5	-	5
				Gardenville 230 - Replace 2 DFRs	C085567	230	-	-	-	-	230
				Gardenville 230kV - Asset Rplc	C089270	193	320	507	4,350	15,792	21,162
				Gardenville-Dunkirk 73/74 Shieldwire Replacement	C081669	-	-	73	227	506	806
				GCB to VCB Projects	C091903	-	-	-	9,578	17,349	26,927
				Gibson Substation Retirement	C046579	10	10	10	12	52	94
				Glens Falls - Asset Replacement	C097182	-	-	-	175	800	975
				Golah-NLakeville#116 Priority 2 Str	C086697	43	-	-	941	178	1,162
				Greenbush - N Troy Corridor ACR	C094479	50	1,365	9,678	8,570	870	20,533
				Greenbush 993 I-90	C098716	2,001	-	-	-	-	2,001
				Greenbush 993 Road Crossings	C096411	60	-	-	-	4,156	4,216
				Grooms Rd-Inman Rd 15 Str Rpl (WPC)	C097341	61	-	-	-	-	61
				Hudson - PT replacement	C097046	-	-	-	224	448	672
				Huntley-Gardenville 38/39 Reinsulation	C075543	240	1,000	2,420	-	-	3,660
				Huntley-Lockport 36/37 Ayer Rd ACR	C081670	213	56	620	6,019	4,872	11,781
				Independence - Fence Gate Rplc	C095857	75	-	-	-	-	75
				Kensington - 23kV replacements	C091035	-	-	125	750	8,400	9,275
				Knapp Road Storage Building	C083804	-	-	-	-	2,003	2,003
				L.Colby-L. Placid 3 ACR	C091989	20	120	240	490	5,623	6,493
				Labrador Station	C091768	-	-	-	-	110	110
				Lafayette - Fence Gate Rplc	C095858	75	-	-	-	-	75
				Lafayette-Clarks. 4 Washout	C091993	714	-	-	-	-	714
				Leeds - Fence Gate Rplc	C095860	-	50	-	-	-	50
				Leeds - SVC Prot & Cont Repl	C091040	1,967	1,203	-	-	-	3,169
				Leeds LN93 & LN94 "A" Relay Upgrade	C096221	75	1,000	238	-	-	1,313
				Leeds Station-Repl Disconnect SWs	C098939	-	-	100	1,715	2,400	4,215
				Levitt - Rome 8 Str 1 Replacement	C094953	-	313	-	-	-	313
				Lindsey Twr 345kV	C091990	50	500	-	-	-	550
				Lockport-Mortimer 113/114 ACR	C081664	-	-	-	478	5,528	6,006

			Asset Condition	Component Fatigue/Deterioration	Long Lane - Rplc GCB w VCB	C095695	100	400	690	15	-	1,205
					Malone - TR#1 Bushing Rplc	C094889	54	-	-	-	-	54
					Malone-Lake Colby 5 ACR	C091992	-	20	120	240	490	870
					McIntyre - Rplc GCB w VCB	C095694	600	3,685	1,300	-	-	5,585
					Medina - CB Replacements	C097123	1,008	10	-	-	-	1,018
					Menands Cntrl Bldg & Relay Replcmt	C049601	15	-	-	-	-	15
					Mill St Station Rebuild	C093267	-	1,100	1,200	1,400	7,301	11,002
					Mine Road - Asset Replacement	C097368	-	-	-	160	375	535
					Mortimer - Asset Replacement	C093538	-	-	150	850	4,000	5,000
					Mountain Switch - CB replacement	C097052	-	-	-	-	150	150
					N.Scotland-Feura Bush/Long Lane ACR	C084554	11,901	14,776	3,334	-	-	30,011
					New Scotland - AC SS Rplc	C088690	261	-	-	-	-	261
					New Scotland R93&R94 Asset Replace & 115kV BPS Upgrades	C062752	2,994	9,059	7,412	550	-	20,015
					Norfolk - Asset Repl/Sep	C093539	-	-	-	75	650	725
					North Ogdensburg - Rplc GCB w VCB	C095687	100	400	690	15	-	1,205
					Norwood - Asset Repl/Sep	C093552	-	-	50	400	3,800	4,250
					NS - Knickerbocker #2 I/B/G	C096415	12	12	6,263	-	-	6,287
					NY OHL Tran Switch Program NYC	C093904	-	1,246	980	2,940	3,087	8,253
					NY OHL Tran Switch Program NYE	C093905	-	-	970	2,940	3,087	6,997
					NY OHL Tran Switch Program NYW	C093902	50	743	980	2,940	3,087	7,800
					NY Transmission UG Strategy	C084550	-	1,000	5,000	7,500	10,000	23,500
					Oswego - Lafayette 17 Lam Arm	C097086	-	-	225	362	8,029	8,616
					Oswego Steam - Fence Gate	C095856	-	50	-	-	-	50
					Packard - Fence Gate Rplc	C095859	-	-	50	-	-	50
					Packard - Rplc two 115kV OCBs	C079222	714	-	-	-	-	714
					Pannell-Geneva 4-4A Road Crossings	C030889	165	-	2,113	11,598	5,050	18,927
					Patroon Substation Rebuild/Expand	C092739	-	-	250	4,213	4,513	8,977
					Pierce Brook-Five Mile 37 Lam Arm	C097638	92	140	3,768	8,692	2,000	14,692
					Porter - Fence Gate Rplc	C095852	75	-	-	-	-	75
					Porter/Deerfield 8 & 9 Re-Insulate	C086664	-	-	-	337	-	337
					Queensbury - Rplc GCB w VCB	C095690	-	50	294	686	15	1,045
					Remote end T work for South Eden	C090456	380	1	-	-	-	381
					Retire Ash St 4160 yard	C090581	0	0	11	71	75	157
					Reynolds Rd - Trans Foundation	C094462	106	-	-	-	-	106
					Ridge Station 142 - Asset Rplc	C097565	-	-	100	4,250	4,250	8,600
					Ridge Station 142 - Asset Rplc CH	C086898	-	-	-	-	300	300
					Rosa Rd - Line #14 Protection	C091039	(186)	-	-	-	-	(186)
					Rosa Road - Rplc 115KV Disconnect	C095336	30	206	10	-	-	246
					Rotterdam - Emergency Gen. Rplc	C097801	148	384	-	-	-	532
					Rotterdam - New Scotland 19 ACR	C084588	-	101	5,826	5,826	9,708	21,461
					S Oswego-Clay #4 T-334 ACR	C075544	-	-	-	611	455	1,066
					Schoharie - R21 Replacement	C098210	-	50	390	30	-	470
					School St - Asset Replacement	C091969	-	-	50	750	4,500	5,300
					Schuylerville Retirement - Station	C083967	-	-	-	-	5	5
					Scriba - Fence Gate RplC	C095854	-	50	-	-	-	50
					Scriba - Rplc CB R200	C093255	662	-	420	-	-	1,081
					Scriba - Rplc GCBs w VCBs	C095689	-	-	49	1,176	2,773	3,998
					Scriba-Volney 20/21 Lam Arm/ACR	C093004	268	208	450	4,108	20,730	25,765
					Seneca Term - 23kV Asset Rplc	C089269	-	-	125	750	8,400	9,275
					Solvay - Asset Rplc T-line	C096564	53	180	-	-	-	233
					Solvay: Asset Replacement	C079463	543	7,732	5,669	2,200	-	16,144
					Sour Springs - Disconnect	C097125	140	-	-	-	-	140
					South Oswego: 115kV Asset Rplc	C081781	220	260	480	1,116	7,855	9,932
					South Oswego: 115kV Asset Rplc CH	C092436	-	889	889	889	296	2,962
					Station 078: Asset Replacement	C081792	10	146	196	931	8,820	10,103
					Substation - Small Cap Blanket NYC	C099221	74	74	74	74	74	370
					Substation - Small Cap Blanket NYE	C099222	74	74	74	74	74	370
					Substation - Small Cap Blanket NYW	C099226	74	74	74	74	74	370
					Substation Trans dscada RTU	C099228	80	80	80	80	-	320
					Substations Trans Direct Telemetry	C099230	99	504	267	-	-	870
					Teall-Carr 6 ACR	C091985	380	266	339	5,190	1,457	7,632
					Telecom DC Battery Program T NYC	C094274	78	78	78	82	86	404
					Telecom DC Battery Program T NYE	C094272	22	78	78	82	86	347
					Telecom DC Battery Program T NYW	C094273	96	78	78	82	86	422
					Terminal Station D-25 cycle retire	C092497	-	-	-	-	-	-
					Thompson-N Troy Corridor ACR	C081667	-	386	491	1,028	13,389	15,294
					TLine Wood Pole Disposal	C084683	-	-	-	-	-	-
					Tran Sub Spare 345kV CB	C093864	1,587	-	-	-	-	1,587
					Transmission Sub - Spare CS West	C095442	185	-	-	-	-	185
					Transmission Sub NYC Battery Rplc	C094248	426	680	425	510	1,105	3,146
					Transmission Sub NYE Battery Rplc	C094247	340	595	255	340	170	1,700
					Transmission Sub NYW Battery Rplc	C094249	85	510	170	170	85	1,020
					Transmission Substation PS	C093611	-	-	-	-	3,072	3,072
					Trinity Pumping Plant Refurb	C091980	1,962	-	-	-	-	1,962
					T-Sub Obsolete Protection Replc NYC	C096987	660	1,000	1,200	4,267	5,100	12,227
					T-Sub Obsolete Protection Replc NYE	C096986	660	1,000	1,200	4,267	5,100	12,227
					T-Sub Obsolete Protection Replc NYW	C096988	660	1,000	1,200	4,267	5,100	12,227
					T-XFR Spare 115kV-23kV 50MVA	C081732	-	-	-	600	600	1,200
					Union Falls - Asset Rplc	C093097	-	-	-	-	-	-
					Volney - Fence Gate RplC	C095855	-	50	-	-	-	50
					Volney Station-Repl Disconnect SWs	C098938	-	-	100	1,695	2,100	3,895
					Volney-Marcy 19 Str181 Replacement	C095478	50	50	50	-	-	150
					Volney-Marcy 19 Tower Painting	C096532	-	-	-	-	3,047	3,047
					Warrensburg-Schofield Rd 10 Str Repl	C086755	-	130	390	5,000	19,064	24,584
					Watkins Road - Rplc GCB w VCB	C095692	500	400	1,900	640	-	3,440

				West Adams Radial 115kV Line Tap	C096831	-	141	262	352	1,456	2,211
				Wood Pole Replacement Prgm (PIT)	C011640	769	-	-	-	-	769
				Worst Performing Circuits - NY	C084553	-	1,000	1,000	5,145	5,402	12,547
				Yahnundasis - Chadwicks 1 SW X1-1	C099116	-	50	736	-	-	786
				Yahnundasis: Asset Replacement	C081794	2,665	6,030	6,838	1,012	-	16,545
				Yahnundasis-Chadwicks 1 ACR	C096540	-	-	-	-	110	110
			Component Fatigue/Deterioration Total			**51,305**	**77,382**	**91,723**	**150,706**	**308,036**	**679,152**
			Failure Trend	Gville-Dunkirk Guyed Str Rep/Rplc	C098480	740	-	-	-	-	740
				McIntyre-Battle Hill Reinsulate	C086780	-	-	-	7	740	747
				McIntyre-Colton 8 Rein. 275-359	C086662	-	-	-	-	4,675	4,675
				New College Ave 115 kV Taps	C097886	-	-	-	-	413	413
				Pannell-Border 4-977 Reins 246-303	C098930	1,879	-	-	-	-	1,879
			Failure Trend Total			**2,619**	**-**	**-**	**7**	**5,828**	**8,454**
		Asset Condition Total				**105,966**	**113,961**	**135,534**	**199,739**	**368,190**	**923,390**
		Communications/Control Systems	**Telecom**	Dark Fiber IRU	C087765	45	-	-	-	-	45
				DMX Program NY Central Tran	C098853	353	353	353	1,000	2,000	4,058
				DMX projects	C084525	500	-	-	-	-	500
				DMX Tran Program NY East	C093635	353	353	353	1,000	2,000	4,058
				DMX Tran Program NY West	C093638	353	353	353	1,000	2,000	4,058
				Microwave Radio Network NY Central	C093820	584	1,250	1,350	1,500	1,600	6,284
				Microwave Radio Network NY East	C093818	584	1,250	1,350	1,500	1,600	6,284
				Microwave Radio Network NY West	C093819	672	1,250	1,350	1,500	1,600	6,372
				Nokia 1830PSS LH DWDM Upgrade Cent	C088866	882	882	882	900	1,500	5,046
				Nokia 1830PSS LH DWDM Upgrade East	C088954	882	882	882	900	1,500	5,046
				Nokia 1830PSS LH DWDM Upgrade West	C088135	882	882	882	900	1,500	5,046
				NYCD Trans Verizon Disconnect	C089938	2,000	2,000	2,000	2,000	600	8,600
				NYE Trans Private Fiber	C098421	1,191	-	300	800	2,000	4,291
				NYED Trans Verizon Disconnect	C089943	1,265	1,999	1,999	1,999	600	7,862
				NYW Trans Private Fiber	C098424	5,101	7,494	8,510	14,371	13,026	48,502
				NYWD Trans Verizon Disconnect	C089903	2,000	2,000	2,000	2,000	600	8,600
				Radio Comms Systems T Central	C093841	294	1,235	1,235	1,405	2,000	6,169
				Radio Comms Systems T East	C093840	441	1,235	1,029	1,405	2,000	6,110
				Radio Comms Systems T West	C093842	368	1,029	1,029	1,405	2,000	5,831
				Satellite Project NY Central	C093846	40	353	350	500	750	1,993
				Satellite Project NY East	C093845	40	40	350	500	750	1,680
				Satellite Project NY West	C093849	40	40	350	500	750	1,680
				Substations Trans RTU M9000 Foreign	C099231	200	685	445	20	-	1,350
				Taylorville to Adirondack FO Cable	C086725	6	-	-	-	-	6
				Telecom DS0 Central - FITZPATRICK	C089063	23	-	-	-	-	23
				Telecom DS0 Central - Nine Mile RSC	C089058	5	-	-	-	-	5
				Telecom DS0 Central - Pebble Hill	C090485	3	-	-	-	-	3
				Telecom DS0 East - LEEDS SUB	C089050	10	-	-	-	-	10
				Telecom Migration - NY Central	C083767	2,610	-	1,836	2,058	4,000	10,504
				Telecom Migration - NY East	C083766	2,611	-	1,836	2,058	4,000	10,505
				Telecom Migration - NY West	C083768	2,610	-	1,836	2,058	4,000	10,504
				Telecom T Central Dark Fiber	C091295	2,017	2,250	2,300	3,058	3,161	12,786
				Telecom T East Dark Fiber	C091301	2,000	2,250	2,500	3,058	3,161	12,969
				Telecom T West Dark Fiber	C091294	2,017	2,017	1,960	2,058	2,161	10,213
				Upgrade Comm Equip Verizon Retireme	C069570	570	-	-	-	-	570
				Verizon DS0 Replace-Central	C086772	96	-	-	-	-	96
			Telecom Total			**33,647**	**32,081**	**39,620**	**51,454**	**60,859**	**217,661**
		Communications/Control Systems Total				**33,647**	**32,081**	**39,620**	**51,454**	**60,859**	**217,661**
Joint Propsal		**Customer Requests/Public Requirements**	**Customer Interconnections**	Alle Catt II - Transmission Line	C083612	(234)	-	-	-	-	(234)
				Alle Catt II Wind - Stations	C083615	(0)	-	-	-	-	(0)
				Bald Mountain Solar - Stations	C092529	(3)	-	-	-	-	(3)
				Bald Mountain Solar: T-Line	C092527	(23)	-	-	-	-	(23)
				Bear Ridge Solar - LIne	C098287	10	151	(146)	(21)	-	(5)
				Bear Ridge Solar - Stations	C098285	27	(11)	(16)	-	-	(0)
				Dolan Solar - Stations	C098866	(1)	(3)	-	-	-	(4)
				Dolar Solar - Line	C098867	(4)	(0)	-	-	-	(4)
				EHI Segment A Line	C084708	24	-	-	-	-	24
				EHI Segment A Substation	C084709	3	-	-	-	-	3
				Customer Transmsn Strctr relo	C093492	-	3,624	5	-	-	3,629
				Farmington Sta 168 Interconnection	C087525	482	-	-	-	-	482
				Flat Hill - Stations	C097624	0	(2)	-	-	-	(2)
				Flint Mine Solar - Stations (Trans)	C089045	(4)	-	-	-	-	(4)
				Flint Mine Solar - T Line	C089044	2	-	-	-	-	2
				Grassy Knoll - Line	C097575	0	(0)	-	-	-	0
				Grassy Knoll Solar - Stations	C097574	-	(1)	-	-	-	(1)
				Hawthorn Solar - Line	C098840	(5)	(1)	-	-	-	(6)
				Hawthorn Solar - Stations	C098838	(2)	(2)	-	-	-	(4)
				Heritage Wind - Line	C093885	103	(0)	-	-	-	103
				Heritage Wind-Stations	C093883	32	(21)	(34)	-	-	(23)
				Hills Solar - Line	C091941	0	-	-	-	-	0
				Hills Solar-Stations	C091940	-	(4)	-	-	-	(4)
				Homer Solar - Stations	C094665	-	(4)	-	-	-	(4)
				Horseshoe Solar - Stations	C092784	892	(307)	-	-	-	584
				Horseshoe Solar T-Line	C092783	705	(1,325)	855	138	-	373
				Line tap Bethlehem-Albany Line #18	C089356	17	-	-	-	-	17
				Customer 345 kV Service	C092142	-	20,421	10,471	-	-	30,891
				Customer Clay Sub Interconnection)	C092344	-	13,712	5,211	-	-	18,923
				Customer Trans Line Work	C094246	-	-	660	1,571	-	2,231
				Customer UG 345 kV Service	C094819	-	-	2,926	15,464	-	18,390
				(Customer Clay Interconnect)	C094582	-	-	4,388	23,196	-	27,584
				Niacet Customer	C091196	(2,362)	2,231	417	-	-	286

Local				Q783 South Ripley Solar & BESS	C098634	(0)	(3)	-	-	-	(3)
				Scriba Volney Series Reactor-Line	C093812	(119)	-	-	-	-	(119)
				ScribaVolney Series Reactor-Station	C093816	(1,004)	-	-	-	-	(1,004)
				Sky High Solar T-Line	C087705	(0)	-	-	-	-	(0)
				Sky High Solar T-Stations	C087702	0	(121)	-	-	-	(120)
				South Ripley Solar & BESS-Stations	C098635	130	(143)	-	-	-	(13)
				St 168 Farmington Remote Ends	C091598	(478)	-	-	-	-	(478)
				STAMP 115kV Station	C087952	39	-	-	-	-	39
				Stream Data Center - STAMP Project	C098226	5,534	26	-	-	-	5,560
				Tayandenega Solar - Stations	C087739	(10)	24	-	-	-	13
				Tayandenega Solar T-Line	C087738	(168)	233	-	-	-	65
				Ticonderoga Solar - Stations	C095238	(334)	-	-	-	-	(334)
				Ticonderoga Solar - T Line	C095240	(135)	-	-	-	-	(135)
				Watkins Rd Solar - Line	C091944	(0)	(11)	-	-	-	(11)
				Watkins Rd Solar - Stations	C091942	(1)	-	-	-	-	(1)
				Customer Interconnections Total		**3,114**	**38,464**	**24,735**	**40,347**	**-**	**106,661**
			Public Requirements (additional need)	3807.97 Old Sneller rd exit off 81	C097843	100	(240)	-	-	-	(140)
				Dewitt - 115kV Rebuild CH	C098377	-	-	1,197	1,197	1,197	3,592
				Dewitt Station 115kV Rebuild	C081783	3,224	4,630	4,710	24,468	23,812	60,844
				Edwards Vacuum- Sub Breaker Install	C095018	5	-	-	-	-	5
				FAA Lighting Replacement Program	C095713	50	50	50	50	3,150	3,350
				FAA online monitoring program	C095714	50	50	50	50	1,575	1,775
				Reynolds Rd Short-Term Upgrades	C096212	804	400	-	-	-	1,204
				Rotterdam Asset Replacement and 230 kV upgrades	C034850	312	486	347	356	314	1,814
				Schaghticoke new BAH bay Sta Work Tx PARENT	C096169	-	-	-	-	100	100
				Schaghticoke New BAH Bay T-Line	C096173	-	-	-	-	30	30
			Public Requirements (additional need) Total			**4,545**	**5,376**	**6,354**	**26,121**	**30,177**	**72,574**
		Customer Requests/Public Requirements Total				**7,660**	**43,841**	**31,089**	**66,468**	**30,177**	**179,235**
		Damage/Failure	Damage/Failure	Andover - Transformer DF	C093609	1,023	1,151	-	-	-	2,174
				Curtis - Teall #13 SW X13-2	C094940	-	129	-	1,347	-	1,476
				Dewitt - 345kV CB R220 DF	C098357	-	491	-	-	-	491
				Elm St Replace FOC	C085162	124	-	-	-	-	124
				Gard-5 Mile 151&152 Culvert 40	C087268	-	-	-	-	3,802	3,802
				Gard-5 Mile 151&152 Culvert 42	C099690	2,100	402	-	-	-	2,502
				Glens Falls - Two (2) CB Replacements	C094952	19	-	-	-	-	19
				Huntley to Elm Fiber D/F	C087893	769	-	-	-	-	769
				Leeds Station MEMCO Replacement	C087899	297	-	-	-	-	297
				Ridge - Replacement TB#2	C097171	-	1,708	-	-	-	1,708
				Seneca Terminal - R421 D/F	C097403	7	-	-	-	-	7
				Spier Falls-Lasher Rd: SW 30125 DF	C097912	1,701	-	-	-	-	1,701
				Str# 42 Levitt - Rome Replacement	C083619	519	-	-	-	-	519
				Telecom Elm St Kensington FOC sub	C089354	125	-	-	-	-	125
				Trans Line Failure Reserve	C079452	1,575	1,654	1,736	1,823	1,914	8,702
				Trans Station Damage Failure Blanket	C003792	1,960	1,960	1,960	2,058	2,161	10,099
				Trans Station Failure Reserve	C073870	1,575	1,654	1,736	1,823	1,914	8,702
				TransLine D/F Budget Blanket	C003278	2,450	2,450	2,450	2,573	2,701	12,624
				Transmission D/F Telecom Blanket	C095765	1,050	1,075	2,350	2,468	2,591	9,534
				UG Pumping Plant D/F	C096305	-	-	-	1,000	1,050	2,050
				Upstate NY Trans Verizon Disco FY24	C092760	76	-	-	-	-	76
			Damage/Failure Total			**15,370**	**12,674**	**10,232**	**13,092**	**16,133**	**67,501**
		Damage/Failure Total				**15,370**	**12,674**	**10,232**	**13,092**	**16,133**	**67,501**
		Muti-Value Transmission (MVT)	MVT Asset Condition	Access Rd- Lockport-Batavia 112	C089590	3,342	1,052	-	-	-	4,394
				Ash St. Station 34.5kV Rebuild	C088028	-	-	-	150	700	850
				Ballston Rebuild: Substation	C093946	-	-	105	1,397	504	2,006
				Balmat Station TB 1 & 2	C091767	-	-	110	915	529	1,554
				Bethlehem Xfrm Upgrade 40MVA	C093949	-	-	-	110	1,466	1,576
				Boonville-Rome 3/4 Rebuild	C093585	-	-	-	20	120	140
				Brown Falls Taylorville Rebuild	C093951	-	-	-	20	120	140
				Colton Substation Rebuild	C091862	-	75	600	3,800	1,950	6,425
				Colton-BF 1-2 T3140-T3150 Rebuild	C036164	-	110	330	480	7,121	8,041
				Easement-Lockport-Batavia 112-Rebld	C096884	250	-	-	-	-	250
				Elm St #2 TRF Asset Replacement	C069426	2,097	207	-	-	-	2,303
				Falconer-HH 153/154 Rebuild	C081294	-	-	-	-	10	10
				Gard-Dun 141-142 T1260-70 Rbd Senec	C034193	500	339	1,378	2,645	1,886	6,749
				Geres Lock - CH replacement	C090822	-	50	900	12,000	11,000	23,950
				Greenbush Control House	C091536	-	1,000	3,466	5,000	-	9,466
				Greenbush Station Rebuild (base project)	C079224	1,538	5,257	16,113	24,130	21,463	68,501
				Greenbush T-Line	C091535	250	1,700	5,000	6,250	2,857	16,057
				Greenbush Land	C092621	301	-	-	-	-	301
				Greenbush-Knickerbocker 13/14/15 DCT Rebuild	C069540	-	80	235	470	10,196	10,981
				Higley	C093965	-	-	-	128	1,059	1,187
				Homer Hill - 115kV 34.5kV Asset Rpl	C075942	-	-	-	-	3,756	3,756
				Hoosick - Control House	C081115	210	-	-	-	-	210
				Hoosick - Replace Bank 1 & relays	C053132	4,316	24	-	-	-	4,340
				Inghams-E. Springfield #7 Rebuild	C060209	200	1,810	1,720	22,460	17,600	43,790
				Lake Colby - Asset Replacement	C091042	49	274	623	3,269	2,864	7,079
				Lockport - Rebuild T-line work	C085990	250	150	150	4,346	6,820	11,716
				Lockport Sub - Remote End Work	C095022	25	25	150	450	450	1,100
				Lockport Sub Rebuild CH	C073991	50	20	20	20	180	290
				Lockport-Batavia 107 Rebuild	C086920	-	-	-	-	13	13
				Lockport-Batavia 112 T1510 Rebuild	C003422	22,690	16,763	7,978	-	-	47,432
				LockportSubstationRebuildCo36TxT	C035464	450	450	2,850	12,716	13,064	29,530
				Mohican - Rplc 115kV, 34.5kV assets	C053133	3,626	2,452	533	-	-	6,611
				Moons-Falcnr 175/176 Rebuild	C083216	-	-	-	-	120	120
				Newtonville Area Study: Maplewood	C091024	1,794	1,429	969	93	-	4,284

				North Troy - 34.5kV refurb/rebuild	C079223	-	201	2,503	2,654	5,953	11,310
				Parishville	C093966	-	-	-	128	1,059	1,187
				Reynolds Rd - Asset Replacement CH	C098141	-	-	2,674	5,348	891	8,913
				Reynolds Road - Asset Replacement	C077616	120	1,531	2,640	9,630	9,630	23,551
				S.Oswego-Curtis 10 Rebuild	C091983	-	-	-	-	20	20
				SCHUYLER Sub	C093968	-	-	110	1,466	529	2,105
				Seneca #5 TRF asset Replace	C069427	-	288	376	-	-	664
				South Oswego-Geres Lock 9 Rebuild	C089292	-	-	-	80	120	200
				Spier Falls - Asset Rplc/Sep	C097316	452	2,827	3,736	1,245	-	8,260
				Spier Falls - Asset Rplc/Sep CH LAB	C095029	-	(3,845)	-	-	-	(3,845)
				Spier Falls: Asset Rplc/Separation	C081788	1,507	(6,649)	-	0	-	(5,142)
				Spier-Mohican lines 4/7/18 Rebuild	C089289	-	-	-	-	20	20
				Substation - Tran Spare	C099272	1,141	381	-	-	-	1,522
				Teall Ave - Asset Replacement	C086893	19	291	1,620	5,000	17,000	23,930
				Terminal - Relocation CH	C086695	-	291	-	-	-	291
				Terminal Station Relocation	C076242	2,990	8,108	5,849	264	-	17,212
				Terminal Station Relocation_TLine	C080493	1,641	2,406	-	-	-	4,047
				Tilden - Asset Rplc CH	C095820	-	621	1,243	621	-	2,485
				Tilden: Asset Replacement	C081785	600	2,826	5,360	3,930	1,529	14,245
				Whitman - Transformer Replacement	C091870	-	75	350	1,140	25	1,590
				Woodlawn Transformer Replacement	C051986	3,519	635	-	-	-	4,154
			MVT Asset Condition Total			**53,927**	**43,254**	**69,691**	**132,376**	**142,624**	**441,871**
			MVT Reliability	Access Roads-Mortimer-Pannell 24 25	C093207	-	-	15	6,518	299	6,832
				Easements-Line Rebuild MP 24	C093270	-	4,184	6,393	-	-	10,577
				Mortimer - Pannell 24/25	C047816	1,085	1,076	11,337	45,732	38,000	97,230
				Mortimer Stn Wrk 24 25 Line Rebuild	C086307	76	-	-	-	273	350
			MVT Reliability Total			**1,161**	**5,260**	**17,746**	**52,250**	**38,572**	**114,988**
		Muti-Value Transmission (MVT) Total				**55,088**	**48,514**	**87,437**	**184,625**	**181,196**	**556,860**
	Non-Infrastructure		**General Equipment**	IHC Capital Small Tools 5210-T NY	C054605	100	100	100	103	108	511
				LMR Land Mobile Radio Sys-Trans	C086663	200	200	200	206	216	1,022
			General Equipment Total			**300**	**300**	**300**	**309**	**324**	**1,533**
	Non-Infrastructure Total					**300**	**300**	**300**	**309**	**324**	**1,533**
			NERC/NPCC Standards	Conductor Clearance - NY Program	C048678	85	5,819	-	-	-	5,904
				Conductor Clearance - NYC Program	C093896	-	137	4,318	9,240	13,125	26,820
				Conductor Clearance - NYE Program	C093895	488	137	4,649	12,500	13,125	30,899
				Conductor Clearance - NYW Program	C093879	-	137	4,649	2,547	13,125	20,458
				Dunkirk-Falconer 160 CCR	C086816	-	-	100	11,103	-	11,203
				Gardenville 115kV - PS	C095981	-	2,600	-	-	-	2,600
				Greenbush – Schodack #13 CCR	C096911	1,387	-	-	-	-	1,387
				Greenbush-Stephentown #993 CCR	C098409	5,320	-	-	-	-	5,320
				Inghams-Richfield Springs 7-942 CCR	C098394	1,274	-	-	-	-	1,274
				Johnson Road- Maplewood #12 CCR	C095024	911	-	-	-	-	911
				Leeds - R21 B package wiring	C097947	258	-	-	-	-	258
				Lockport - Mortimer 113/#114 CCR	C095298	100	3,246	-	-	-	3,346
				Porter - 230kV	C097183	2,915	11	-	-	-	2,926
				Rotterdam - Woodlawn #35 CCR	C095699	761	-	-	-	-	761
				Woodlawn-State Campus #12 CCR	C098389	1,876	-	-	-	-	1,876
			NERC/NPCC Standards Total			**15,374**	**12,087**	**13,716**	**35,390**	**39,375**	**115,942**
		Reliability	**Performance**	145 Reinsulating	C090713	-	-	-	173	35	208
				149/150 Reinsulating	C090704	1,125	-	-	-	-	1,125
				345kV LN18 mods for Feuz Rd Station	C093360	-	-	-	225	439	663
				Amsterdam Switches	C096659	-	1,051	-	-	-	1,051
				BR-FD 9 Storm Hardening	C097115	-	-	-	220	560	780
				Calspan Tap In-Line Switch	C098590	50	1,123	-	-	-	1,173
				Cicero Substation T-Line Taps	C093003	34	36	928	413	85	1,495
				Dunkirk Falconer Sw Ring	C093023	15	2,501	-	-	-	2,516
				Feuz Rd - Oak Ridge 345kV 3.3mi line	C093354	-	-	-	685	748	1,433
				Feuz Rd Station - Station Work	C093353	-	-	-	98	490	588
				Gardenville Dunkirk 73/74 SNI ACR	C091979	80	240	530	3,980	8,560	13,390
				Greenbush - Schodack 13 Switches	C086129	-	-	-	-	42	42
				G-ville-Ohio Street 146 reinsulate	C090714	-	-	-	204	41	245
				Gville-Seneca 81/82 Reinsulate	C090820	-	-	-	617	123	740
				Harper - Removal	C085846	-	-	-	-	-	-
				Lasher Rd LN1 first 3 spans rcndctr	C093224	-	250	1,210	-	-	1,460
				Luther Forest - 3rd 115kV Cap Bank	C093225	-	-	-	196	980	1,176
				Luther Forest - Rotterdam SWs	C098854	50	1,521	-	-	-	1,571
				Menands - Riverside 3 Switch	C096966	581	-	-	-	-	581
				New Mobile Tap - Gilbert Mills	C097154	-	30	454	168	-	653
				New Mobile tap for East Pulaski	C098489	180	250	280	1,478	100	2,288
				Osprey Mitigation/Protection NYC	C093922	163	163	198	208	218	949
				Osprey Mitigation/Protection NYE	C093920	164	164	197	207	217	948
				Osprey Mitigation/Protection NYW	C093916	163	163	197	207	217	946
				Packard-Huntley 77 78 Reinsulation	C093019	-	135	196	7,056	-	7,387
				Patroon LN5 Distance Relay Upgrade	C092280	-	-	67	-	187	254
				RC-MOD Packard-Gardenville 181&182	C085238	50	1,790	-	-	-	1,840
				Rosa LN6 Distance Relay Upgrade	C092393	25	-	-	-	-	25
				Rotterdam - Menands corridor upgrds	C093226	-	-	-	490	1,470	1,960
				Rotterdam mods for Oak Ridge lines	C093368	-	-	-	88	441	529
				Rotterdam-Lasher Rd 1 Swagger Tap	C098901	-	-	150	973	-	1,123
				Smart Fault Indicator Program-NY	C082281	25	490	490	515	540	2,060
				Spier- Queensbury LN 5 & 17 Rebuild	C093172	-	120	620	8,605	19,682	29,027
				SpierFalls-Lasher 302 Brook Rd Tap	C098715	50	1,123	-	-	-	1,173
				Sta 33 Supply Sub Sawyer Bkr 32H A1	C090658	-	-	-	383	-	383
				Sta 47 Supply Sub Sawyer Bkr 24H B1	C090657	-	-	-	383	-	383
				State Campus 115kV LN12/15 UG Rplcmnt	C088133	552	1,940	1,993	2,473	-	6,958

				Sugar Hill Station - Line Work	C093170	-	-	-	70	325	395
				Sugar Hill Station - Station Work	C084589	-	-	-	925	1,270	2,195
				SW41&42: H-L 36/37 - Tonawanda Tap	C097781	25	1,486	-	-	-	1,511
			Performance Total			**3,331**	**14,574**	**7,510**	**31,040**	**36,770**	**93,224**
		Reliability Total				**18,705**	**26,661**	**21,226**	**66,430**	**76,145**	**209,166**
				C. Incremental $$ Xtreme Wind CCVS	C094263	70	70	101	70	680	991
				E. Incremental $$ Xtreme Wind CCVS	C094262	70	243	216	600	337	1,466
			Climate Vulnerability	Transmission Sub CCRP XFR Central	C094225	-	-	190	285	657	1,132
				Transmission Sub CCRP XFR East	C094224	-	-	188	374	283	845
				Transmission Sub CCRP XFR West	C094226	-	-	48	48	48	144
				W. Incremental $$ Xtreme Wind CCVS	C094264	546	1,503	2,003	3,452	5,335	12,839
			Climate Vulnerability Total			**686**	**1,816**	**2,746**	**4,829**	**7,340**	**17,417**
			Damage Prevention	Frankhauser OH T-Line Grounding	C098465	55	-	-	-	-	55
			Damage Prevention Total			**55**	**-**	**-**	**-**	**-**	**55**
		Resiliency		Add LN160 bypass around W. Ashville	C091079	421	28	-	-	-	449
				Clay - Dewitt Resiliency (RC-Mod)	C089588	-	237	246	-	-	483
			Survivability	Dunkirk - Falconer Resiliency	C084537	-	-	1,646	3	-	1,649
				Huntley - Lockport (Getzville)	C084538	68	3,914	25	-	-	4,007
				S Oswego - LHH Resiliency	C084544	21	-	-	-	-	21
				Yahnundasis - Porter Resiliency	C084545	564	243	-	-	-	807
			Survivability Total			**1,074**	**4,421**	**1,917**	**3**	**-**	**7,415**
				Obsolete/failed comm proc rplc NY-C	C090757	122	-	-	-	-	122
			System Recovery	Obsolete/failed comm proc rplc NY-E	C090759	55	-	-	-	-	55
				Spare NYE Trans Xfrmrs	C090951	2,374	-	-	-	-	2,374
				Spare NYW Trans Xfrmrs	C090950	1,562	-	-	-	-	1,562
			System Recovery Total			**4,114**	**-**	**-**	**-**	**-**	**4,114**
		Resiliency Total				**5,928**	**6,237**	**4,663**	**4,832**	**7,340**	**29,001**
			ISO Led System Studies	Dewitt - Asset Replacement ST	C096652	1,300	15	-	-	-	1,315
			ISO Led System Studies Total			**1,300**	**15**	**-**	**-**	**-**	**1,315**
				130/133 Stations- Huntley	C084015	739	77	-	-	-	816
				130/133 T-Line Reconductor	C079500	22,697	12,144	11,525	-	-	46,366
				130/133 T-Line Reconductor- Land	C096737	909	-	-	-	-	909
				Battenkill Rebuild: Substation	C093948	-	-	105	872	504	1,481
				Black River 115/23kV bank Upgrade	C096057	-	-	-	130	1,060	1,190
				Capital N AreaStudy Rosa Rd rebuild	C093956	-	-	122	1,009	583	1,714
				E. Golah 2nd 115kV Tap	C051829	-	-	-	450	1,000	1,450
				Eastover 230kV 70 MVAR cap bank	C096187	-	-	-	98	1,960	2,058
				Elbridge - Geres Lock Capacity	C096184	-	-	-	-	49	49
				Elm St Relief_Add 4th Xfer	C049594	585	5	-	-	-	590
				Ephratah Station Rebuild	C093959	-	-	105	1,397	504	2,006
				Katherine St Term L145/146 T-Line	C089018	225	250	3,801	5,340	5,059	14,675
				Land Rights/Acquisition - Tran-NY	CNYT350	74	74	74	77	81	379
		System Capacity - NY		Land-First Ward Terminal Station	C096888	804	-	-	-	-	804
				Lasher Rebuild	C093947	-	-	110	1,466	529	2,105
				Menands Station Rebuild	C093960	-	-	-	-	150	150
				Nile Area Reinforcement	C086234	-	-	-	100	2,500	2,600
				NY LTC Controller - T Sub	C085943	836	250	250	857	270	2,463
				Ogdensburg Station Rebuild	C096059	-	-	-	100	1,330	1,430
				Oneida-Rome LN1 new DCT - Line work	C096178	-	-	-	98	1,078	1,176
				Packard-Gardenville Station Upgrades	C079506	96	99	596	7,127	2,969	10,887
				Pack-Gardenville T-Line Reconfig	C081799	298	187	6,214	26,981	22,299	55,980
				Sawyer Station - New 25H Bkr Pos	C097293	33	325	260	-	-	618
				Smith Bridge Remote End - Ballston	C096780	5	26	6	59	15	112
				Smith Bridge RemoteEnd- Spier Falls	C096782	4	23	5	20	6	59
				Syracuse 115 kV Line Upgrades	C096201	-	-	-	196	98	294
				Tonawanda Area Study-STA74 new tap	C093945	-	-	-	143	551	694
				Trans Study Budgetary Blanket NY	C008376	500	500	500	515	540	2,555
				Watertown 23kV	C093964	-	-	-	128	1,059	1,187
				Whitehall Station Rebuild	C093957	-	-	122	1,617	583	2,322
			TO Led System Studies Total			**27,805**	**13,959**	**23,795**	**48,780**	**44,777**	**159,117**
		System Capacity - NY Total				**29,105**	**13,974**	**23,795**	**48,780**	**44,777**	**160,432**
	Joint Propsal Total					**271,768**	**298,244**	**353,895**	**635,730**	**785,141**	**2,344,778**
				Coffeen - Asset Replace CH	C087772	4,849	48	26	-	-	4,923
				Coffeen - Asset Rplc T-line	C089326	9,880	639	25	-	-	10,545
				Coffeen St. Substation	C081787	15,956	7,060	106	-	-	23,122
				Dewitt Sub Remote End Work	C095481	160	1	-	-	-	162
				Flat Rock Upgrades - Line	C087428	-	999	-	-	-	999
				Gloversville - Marshville #6 Refurb	C081458	5,742	14,967	324	-	-	21,033
				Gulf Rd Sub Remote End - Waters Rd	C096124	805	11	-	-	-	816
				Gulf Road Assc Tline work (Boonville Greenfield)	C082488	5,749	3,625	1,451	9	-	10,834
				Gulf Road Control House (Boonville Greenfield)	C082487	832	6,467	-	-	-	7,299
				Gulf Road Sub Remote End - Porter	C096123	542	4	6	-	-	552
				Gulf Road Sub Remote End - Rome	C096122	1,048	4	10	-	-	1,062
				Gulf Road Substation (Boonville Greenfield)	C049903	29,422	34,255	19,760	772	-	84,209
				Indian River- N Watertown Line	C082190	2,121	-	-	-	-	2,121
				Indian River- N Watertown Station	C082192	549	-	-	-	-	549
				Land-Gulf Road Greenfield	C096655	451	-	-	-	-	451
			CLCPA Dependent	LightHH 115kV CH	C073996	606	-	-	-	-	606
				LightHH 115kV Yard Repl & cntrl hs.	C031662	22,671	1,286	-	-	-	23,957
				LightHH Trans Lines Reconnect	C073997	2,417	15,672	-	-	-	18,089
				Mallory 115kV Breakers	C084074	1,120	-	-	-	-	1,120
				Malone Control House	C097803	596	2,151	-	-	-	2,748
				Malone Station Rebuild_Tline	C059673	49	578	10	-	-	637
				Malone Substation Rebuild_T_Sub	C069306	9,085	5,872	2,188	-	-	17,145
				Mortimer-Golah #110 ACR Rebuild	C060220	10,326	2,438	36,063	2,953	-	51,780

	CLCPA	Policy Initiative		Mortimer-Golah 109-69kV Rebuild	C081474	14,769	10,696	48,253	6,018	-	79,736
				MVT Rott 69kV Rebuild & New TB	C082180	720	-	-	-	-	720
				MVT Scho/Sch Int-Rott 18/4 Rebld	C082182	12,766	244	-	-	-	13,010
				New Manheim - Assoc Line work	C060240	3,271	-	-	-	-	3,271
				New Manheim Greenfield project	C050917	5,304	-	-	-	-	5,304
				Oneida - Sub Rebuild T-line	C084674	1,606	153	-	-	-	1,759
				Oneida Substation Rebuild	C034443	14,012	2,830	-	-	-	16,841
				Recond Cortland Clarks Corners	C053141	48	1,854	69	-	-	1,970
			CLCPA Dependent Total			**177,470**	**111,854**	**108,291**	**9,752**	**-**	**407,367**
			CLCPA Ph1	Dunkirk to Laona 161/162 Rebuild	C088399	24,062	8,198	-	-	-	32,260
				Easement-109-110-119 LN-CLCPA-West	C097443	4,628	450	-	-	-	5,078
				Golah Sub rebuild	C051831	46,874	12,879	833	1,168	-	61,753
				Inghams/Rotterdam Circuit Rebuild	C088402	90,143	81,985	99,609	46,545	424	318,706
				Land/ROW-Dunkirk-Laona CCPA Rebuild	C095978	71	-	-	-	-	71
				Land-Saltsman Substa-Option Agree	C096627	1	1	1	1	-	3
				Marshville 115kV Rebuild	C088329	3,005	540	516	-	-	4,062
				Meco 115kV Rebuild	C088414	4,504	50	206	-	-	4,760
				Mortimer 109 bay 115kV Upgrade	C088632	1,316	5,912	4,099	221	-	11,548
				New Golah 853 and 116 line Reloc	C095869	2,874	329	14,603	430	-	18,237
				New Golah Sub - Control House	C098366	2,283	761	-	-	-	3,043
				North Leroy - 115kV THERMAL UPGRADE	C088428	-	-	139	-	-	139
				Old Golah Sub Retirement	C095871	1,440	326	106	110	-	1,983
				Saltsman Rd New 5 Breaker Ring	C091495	3,471	12,413	12,474	-	-	28,358
				SE Batavia - Golah LN119 Rebuild	C088631	33,979	6,617	25,276	20,376	-	86,247
			CLCPA Ph1 Total			**218,651**	**130,459**	**157,861**	**68,851**	**424**	**576,247**
		Policy Initiative Total				**396,121**	**242,313**	**266,152**	**78,603**	**424**	**983,614**
	CLCPA Total					**396,121**	**242,313**	**266,152**	**78,603**	**424**	**983,614**
Local Total						**667,890**	**540,557**	**620,047**	**714,333**	**785,565**	**3,328,392**
Regional	CLCPA	Interregional Transmission Project	MVT Asset Condition	Interriogonal Transmission	C094532	-	-	-	-	10,000	10,000
			MVT Asset Condition Total			**-**	**-**	**-**	**-**	**10,000**	**10,000**
		Interregional Transmission Project Total				**-**	**-**	**-**	**-**	**10,000**	**10,000**
		Policy Initiative - CLCPA Ph2	CLCPA Ph2	Ames Road Greenfield Substation	C090032	66,932	28,483	6,256	-	-	101,670
				Beaver River Greenfield Substation & Synchronous Condensers	C090053	49,362	39,327	14,898	9,201	-	112,788
				Black River - LHH Rebuild	C089996	28,384	70,843	99,086	61,629	18,064	278,006
				Black River - Taylorville Rebuild	C089997	30,218	68,939	92,225	52,493	341	244,216
				Black River Substation Upgrades	C090000	4,134	485	-	-	-	4,619
				Boonville - Porter Rebuild	C090003	53,992	75,575	65,864	30,608	-	226,040
				Clay Sub CLCPA LN5 Assoc T-Line	C093303	77	1	-	-	-	78
				Clay Substation CLCPA Upgrades	C090006	716	2	-	-	-	718
				Coffeen Synchronous Condensers	C090023	18,885	11,488	14,089	-	-	44,462
				Coffeen-Black River 3 Rebuild	C090008	13,229	33,821	7,721	183	-	54,953
				Coffeen-Staplin Creek 14 Rebuild	C090009	7,001	14,712	24,281	15,180	-	61,175
				Colton - Malone #3 Rebuild	C090024	57,690	27,529	1,251	-	-	86,470
				Duer Street	C090027	13,670	28,164	4,027	-	-	45,861
				Gulf Rd CLCPA Upgrades (Boonville Greenfield)	C090005	4,616	14,273	1,978	32	-	20,899
				Land-CLCPA P2-Colton-Malone Rebuild	C095175	3,438	382	303	317	-	4,441
				Land-CLCPA P2-LHH-S Oswego	C095174	7,786	2,635	555	-	-	10,976
				Land-CLCPA-P2 Black River-Clay	C095172	10,224	6,218	2,447	2,559	-	21,449
				Land-CLCPA-P2 Black River-Porter	C095170	16,843	8,610	3,426	3,519	173	32,572
				Land-Marshville Substation CLCPA	C095755	16	17	-	-	-	33
				Lighthouse Hill - Clay Rebuild	C090028	38,970	86,029	51,995	23,971	16,725	217,690
				Lighthouse Hill - S. Oswego Rebuild	C090029	73,000	119,246	66,546	12,786	-	271,578
				Maiden Lane station - Greenfield	C090031	43,759	7,991	-	-	-	51,750
				McIntyre - Colton DLR	C090047	1,694	-	-	-	-	1,694
				North Watertown-Coffeen 7 Rebuild	C090010	31,643	4,910	618	153	-	37,324
				South Oswego Station Upgrades	C090052	1,637	439	188	-	-	2,264
				Staplin Creek Greenfield Substation	C090051	8,544	15,499	3,994	4,125	-	32,161
				Taylorville - Boonville Rebuild	C090050	32,636	81,133	107,049	74,251	928	295,998
			CLCPA Ph2 Total			**619,097**	**746,753**	**568,797**	**291,008**	**36,230**	**2,261,885**
		Policy Initiative - CLCPA Ph2 Total				**619,097**	**746,753**	**568,797**	**291,008**	**36,230**	**2,261,885**
		Policy Initiative - Priority Transmission Project	Priority Transmission Project	Smart Path Connect - T Line	C088956	9,515	-	-	-	-	9,515
			Priority Transmission Project Total			**9,515**	**-**	**-**	**-**	**-**	**9,515**
		Policy Initiative - Priority Transmission Project Total				**9,515**	**-**	**-**	**-**	**-**	**9,515**
	CLCPA Total					**628,612**	**746,753**	**568,797**	**291,008**	**46,230**	**2,281,400**
Regional Total						**628,612**	**746,753**	**568,797**	**291,008**	**46,230**	**2,281,400**
CoR	Joint Proposal	Cost of Removal	Transmission Cost of Removal		COR	38,402	83,624	49,998	46,654	44,594	263,273
		Transmission Cost of Removal Total				**38,402**	**83,624**	**49,998**	**46,654**	**44,594**	**263,273**
Grand Total						**1,334,904**	**1,370,934**	**1,238,843**	**1,051,995**	**876,389**	**5,873,065**

Exhibit 2 – Sub-Transmission Capital Investment Plan

Spending Rationale	Program Name	Project Description	Project Number	FY27	FY28	FY29	FY30	FY31	Total
	D/SUB T_Asset Replacement	#7Ln from Glens Falls to Bay St ACR	C094077	-	-	25	176	412	613
		11H UG Cable Replacement	C096672	419	-	-	-	-	419
		12S, 10S, 27S, 17S - Rep Phase 1	C098917	-	60	1,623	-	-	1,683
		12S, 10S, 27S, 17S - Rep Phase 2	C098918	-	-	60	1,919	-	1,979
		35E & 7E - Replacement (Phase 1)	C097765	1,769	-	-	-	-	1,769
		35E & 7E - Replacement (Phase 2)	C097782	60	1,507	-	-	-	1,567
		8, 27, 16, 12, 10, 2 H - Rep Phase1	C097769	60	1,909	-	-	-	1,969
		8, 27, 16, 12, 10, 2 H - Rep Phase2	C097773	113	1,184	382	-	-	1,679
		8K & 4K – Cable Replacement Phase 1	C098923	-	-	60	2,047	-	2,107
		8K & 4K – Cable Replacement Phase 2	C098924	-	-	-	60	2,043	2,103
		Ashley - Glens Falls 5 ACR	C094096	-	-	58	136	1,019	1,213
		Attica-Wethersfield 209 ACR	C081705	-	-	80	2,010	140	2,230
		Avenue A - Bethlehem 10 ACR	C094093	-	21	50	372	74	517
		Ballston-Shore Rd 8-34.5 kV	C046457	-	225	-	-	-	225
		Brockport Taps ACR (Sub-T Relo.)	C092339	-	-	-	-	73	73
		Browns Falls - Asst R/S SubT line	C081426	839	-	-	-	-	839
		Browns Fls - Newton Fls 22 Refurb	C094119	16	134	271	51	-	472
		Cable 6E Replacement	C098926	-	-	60	1,888	102	2,050
		Cables 1E & 2E Replacement	C098925	-	60	1,521	461	-	2,041
		Chestertown-Schroon 3 34.5kV Refurb	C084009	-	129	83	-	-	212
		Coffeen Asset Replacement SubT Relo	C089520	1,558	65	25	-	-	1,649
		Colvin Ave - Partridge St 2 ACR	C094089	-	9	21	159	32	221
		Colvin-Partridge #2 Reconductor	C092870	-	-	5	234	342	581
		Cortland 20 refurbish 34.5 kV	C081639	-	-	-	1,070	-	1,070
		Cortland 21 34.5 kv Refurbish	C081646	-	-	-	122	1,460	1,582
		Cortland 23 34.5 kv Refurbish	C081647	-	67	-	1,144	-	1,211
		Deferiet - Herrings 27 Refurb	C094147	-	-	11	25	186	222
		Delaware Ave - Bethlehem 14 ACR	C094087	-	18	41	310	62	431
		East Oswegatchie - Fonda 21 Refurb	C094146	-	-	1	1	9	11
		Fayette Substation SubT relocation	C092019	277	288	241	106	10	922
		Galleria Mall - SWG (PM 4)	C098514	248	-	-	-	-	248
		Gasport-Telegraph 312 34.5kV Refurb	C084019	-	1,136	12	-	-	1,148
		Golah-N Lakeville 217 Str#256 Relo	C097825	176	-	-	-	-	176
		Gulf Road Assc SubT (Boonville Greenfield)	C081425	171	164	82	-	-	417
		Headson - Pebble Hill 26 Refurb	C094122	-	19	45	337	67	468
		Henry St - Glens Falls 3 ACR	C094097	-	-	13	30	221	264
		Latham - Newtonville 11 ACR	C094086	10	26	173	88	11	308
		Mallory - Constantia 31 34.5kV Refurb	C084194	-	64	2,576	-	-	2,640
		McIntyre-Hammond 24 23kV refurb	C084261	-	807	-	-	-	807
		McIntyre-Hammond 24 reloc/refurb	C075852	97	1,025	3,944	1,392	-	6,458
		Mill Street - Black River 21 Refurb	C094148	-	-	30	71	532	633
		Mine Rd - Colony 28 Refurb	C094128	-	-	30	71	529	630
		N Angola-Bagdad 857 Str#1-3 Relo	C099010	4	-	-	-	-	4
		N.Akron-Attica 225 ACR	C084020	-	-	-	-	64	64
		Norfolk - Norwood 21 Refurb	C094144	-	-	28	66	496	590
		North Lakeville-Ridge 218 refurb	C084014	-	-	-	200	1,725	1,925
		NYC Sub-T Tower Footer Program	C097927	407	432	454	467	481	2,241
		NYW Sub-T Tower Coating Program	C097926	515	540	567	584	602	2,808
		NYW Sub-T Tower Footer Program	C097928	407	432	454	467	481	2,241
		Oakfield-Caledonia 201 34.5 Refurb	C083975	861	847	58	-	-	1,766
		Ohio St Duct Bank Interconnetion	C081704	-	700	-	-	-	700
		Pebble Hill-Tilden 32 34.5kV Refurb	C083971	-	-	-	-	49	49
		Ransomville-Phillips 402 refurb	C084189	171	1,061	909	-	-	2,141
		Raquette Lake Padmount Xfmer	C082716	35	-	-	-	-	35

		Rensselaer Area Study: Sub-T	C091818	-	153	709	3,330	8,036	12,229
		Rotterdam-Scotia Road 32 34.5	C046455	780	-	-	-	-	780
		Spier-Saratoga Tap #3 & #12 ACR	C084068	75	757	1,044	-	-	1,876
		Station 79 Sub-T Relocation	C084920	-	-	-	270	322	592
		Sub-T Highway Crossing NYC	C093861	63	126	130	-	-	319
		Sub-T Highway Crossing NYE	C093856	63	126	130	-	-	319
		Sub-T Highway Crossing NYW	C093873	63	126	130	-	-	319
		SubT Line Ins Repl Program West	C078518	1,336	882	926	972	1,021	5,137
		SubT Line Ins. Repl Program Central	C078621	525	551	579	608	638	2,901
		SubT Line Ins. Repl Program East	C078624	-	1,000	-	-	-	1,000
		Taylorville - Int Sol 23 Refurb	C094145	-	29	81	535	352	997
		Teall 23 34.5kV Refurb	C084196	-	-	13	1,528	-	1,541
		Telegraph-Medina 302 &303 34.5 kV	C081634	-	-	20	51	3,715	3,786
		Telegraph-Medina 303 Lvl 2 Str Repl	C094285	273	9	-	-	-	282
		Theresa - S Philadelphia 21 Refurb	C094064	-	-	90	1,788	-	1,878
		W Portland-Hartfield 866 ACR	C081637	-	-	-	92	668	760
		Woodard 24 Refurb	C094066	-	-	62	145	1,090	1,297
		Woodard-Ash27 Partial UG OH portion	C086593	1,773	-	-	-	-	1,773
		Woodard-Ash27 Partial UG UG portion	C086594	1,743	-	-	-	-	1,743
		Woodlawn - Karner 14 ACR	C094082	-	23	52	391	78	544
Asset Condition	**D/SUB T_Asset Replacement Total**			**14,907**	**16,710**	**17,959**	**25,774**	**27,142**	**102,492**
	D/SUB T_Blanket	CNY Sub Trans-Line Asset Replace.	CNC0075	457	494	533	576	622	2,681
		ENY Sub Trans-Line Asset Replace.	CNE0075	283	291	300	309	318	1,501
		WNY Sub Trans-Line Asset Replace.	CNW0075	918	946	974	1,003	1,034	4,875
	D/SUB T_Blanket Total			**1,658**	**1,731**	**1,807**	**1,888**	**1,973**	**9,057**
	D/Sub T_Dist. Overhead Line (Program)	N Akron-Attica #225 Regs Str104	C098580	-	-	15	241	833	1,089
		N Lakeville-Ridge #218 Line Regs	C098577	-	-	25	384	667	1,076
		NYC Sub-T PIT Inspection Prog	C094456	386	392	203	283	368	1,632
		NYC Sub-T Tower Coating Program	C097925	515	540	567	584	602	2,808
		NYE Sub-T PIT Inspection Prog	C094457	386	392	203	283	368	1,632
		NYE Sub-T Tower Coating Program	C094489	515	540	567	584	602	2,808
		NYE Sub-T Tower Footer Program	C094490	407	432	454	467	481	2,241
		NYW Sub-T PIT Inspection Prog	C094458	386	392	203	283	368	1,632
		Oakfield-Caledonia #201 Regs Str518	C098578	-	-	7	156	917	1,079
		Oakfield-Caledonia #201 Regs Str597	C098579	-	-	7	158	917	1,081
		Patroon - Colvin (Cen Av) 4 ACR	C095584	-	-	23	37	317	377
		Sherman - W Ashville 863 Regs Str52	C098687	-	-	7	160	917	1,084
	D/Sub T_Dist. Overhead Line (Program) Total			**2,593**	**2,689**	**2,279**	**3,620**	**7,355**	**18,537**
	D/SUB T_Inspection $ Maintenance	I&M - NC Sub-T Line Work From Insp.	C026166	2,040	2,122	2,200	2,295	2,386	11,042
		I&M - NE Sub-T Line Work From Insp.	C026165	2,029	2,110	2,200	2,282	2,373	10,994
		I&M - NW Sub-T Line Work From Insp.	C026167	2,028	2,110	2,200	2,282	2,373	10,993
	D/SUB T_Inspection $ Maintenance Total			**6,097**	**6,341**	**6,600**	**6,858**	**7,133**	**33,029**
	D/SUB T_Primary UG Cable Replacement	Buffalo 23kV UG Cable replacement	C092587	-	-	-	180	6,893	7,073
	D/SUB T_Primary UG Cable Replacement Total			**-**	**-**	**-**	**180**	**6,893**	**7,073**
	D/SUB T_Sub T UG Cable Replacement	10E Cable Replacement	C081761	868	46	-	-	-	914
		Station 126 34 and 36H UG Taps	C083185	450	-	-	-	-	450
	D/SUB T_Sub T UG Cable Replacement Total			**1,319**	**46**	**-**	**-**	**-**	**1,365**
		34.5kV Scotia Bypass	C093491	8	-	-	-	8	16
		Barker-Lyndonville 301-34.5kV	C052511	-	7	268	1,641	1,750	3,666
		Carthage - Deferiet 24, 27, 28, & 29 ACR	C046435	-	124	151	-	-	275
		Clay Hill - Oak Mitsui 4 ACR	C095508	2	4	27	14	2	48
		Colony - Browns Falls 21 ACR	C095390	-	-	9	109	107	224
		Cottrell Paper Tap 11-34.5kv	C046443	531	-	-	-	-	531
		Golah-N. Lakeville 217 refurb	C084016	463	-	-	-	-	463
		Homer Hill - Ceres 809 ACR	C094127	-	-	92	214	1,604	1,910

	D/SUB T_Sub-T Overhead Line	Homer Hill-Ceres 809 Remove Str1B-6	C098749	20	-	-	-	-	20
		Homer Hill-Nile 811-34.5kV	C050326	18	97	1,527	1,212	-	2,854
		Hoosick - Clay Hill 8 ACR	C095550	4	14	70	127	24	240
		Interface Solutions-Clay Hill 9 ACR	C095582	-	7	11	101	-	119
		Kenmore-Winspear 630/631-ref	C050318	2,219	562	-	-	-	2,781
		LHH-Mallory 22-34.5kv ACR	C046441	-	-	1,796	1,700	-	3,496
		LighthouseHill Sub-TLine Relocation	C074322	27	603	-	-	-	630
		Lowville - Boonville 22 ACR	C095402	-	25	641	4,048	819	5,533
		Maplewood - Liberty Street 2 ACR	C095581	-	-	17	27	241	285
		Maplewood-Menands 17/18 d/c-34.5kv	C046432	-	-	-	1,015	-	1,015
		Menands - Liberty 9 ACR	C095396	-	-	-	92	143	235
		N.Lakeville-Hemlock 224 Line Regs	C094356	-	1,005	-	-	-	1,005
		N.Lakeville-Richmond 226 Line Regs	C094354	1,041	-	-	-	-	1,041
		Nassau - Hudson 9 ACR	C095577	-	-	-	-	338	338
		Oakfield-Caledonia 201 Str#291-294	C097585	355	-	-	-	-	355
		Piercefield - Tupper Lake 39 ACR	C095362	-	31	80	484	525	1,121
		Schenevus - Summit 3 ACR	C095575	-	-	-	268	-	268
		Schuylerville Retirement - Sub-T Rebuild	C050323	-	0	13	2	-	16
		Shaleton-Ridge 610, Station 207 Tap	C046779	-	-	20	1,423	10	1,453
		Solvay/Woodard-Ash st 27&27&28- 34.	C046439	-	-	-	4,366	-	4,366
		South Street Tap #10 & #11 ACR	C096948	83	856	62	-	-	1,001
		Spier - Glens Falls 8 ACR	C095226	-	-	-	120	185	305
		Station 126 taps 34h/36h-23kv	C046450	519	-	-	-	-	519
		Stevens Thompson-Cement Mt 1 ACR	C095489	-	-	-	-	5	5
		Sub-T PIT Wood Pole Repl Program	C093868	100	233	242	250	-	825
		Teall 23 Str#21 Relocation (Sub-T)	C090734	25	40	60	40	10	175
		Tonawanda 601-604, 23kV - T22&T23	C067266	-	-	-	-	1,435	1,435
		Tonawanda Lines 601-604-23kv	C046451	-	-	-	2,175	2,479	4,654
		Tonawanda Lines 622-624-23kv	C046452	-	-	621	496	1,033	2,150
		Townline - Piercefield 32 ACR	C095407	221	416	3,195	1,662	212	5,705
		Trenton-Whitesboro 25, 46kV	C058579	-	-	-	2,153	4,332	6,484
		Union-Ausable Forks 36-46kV ref	C050320	42	666	952	-	-	1,660
		Union-Lake Clear 35-46kV refurb	C050324	-	-	88	1,595	2,083	3,766
		Waterport Hydro - Waterport 311 ACR	C094095	-	1	1	9	2	13
		Willowdale Tap 26H, 33H, 34H ACR	C048911	-	471	-	-	-	471
		Woodard 24 Refurb N.-I90	C060445	-	1,960	-	-	-	1,960
		Woodard 29-34.5kv ACR	C046473	-	-	-	-	3,502	3,502
		Yahnundasis-Clinton 27, 46kV	C055143	230	197	-	-	-	427
		Youngstown - Mountain 401 ACR	C094088	-	-	90	2,129	430	2,649
		Youngstown--Mnt #401 Bronson Dr Relo	C098933	900	-	-	-	-	900
	D/SUB T_Sub-T Overhead Line Total			**6,806**	**7,320**	**10,033**	**27,471**	**21,278**	**72,909**
Asset Condition Total				**33,380**	**34,836**	**38,679**	**65,792**	**71,775**	**244,462**
Communications/Control Systems	**D/SUB T_Telcom**	McIntyre Grid Edge LN Replacement	C096232	306	-	-	-	-	306
	D/SUB T_Telcom Total			**306**	**-**	**-**	**-**	**-**	**306**
Communications/Control Systems Total				**306**	**-**	**-**	**-**	**-**	**306**
	D/SUB T_3rd Party Attachments	NYC SubT Middle Mile Make Ready	C093889	172	-	-	-	-	172
		NYE SubT Middle Mile Make Ready	C093891	4	-	-	-	-	4
		SubT Broadband Expansion	C079603	34	27	-	-	-	62
	D/SUB T_3rd Party Attachments Total			**210**	**27**	**-**	**-**	**-**	**237**
	D/SUB T_Blanket	CNY Sub Trans-Line New Business.	CNC0071	60	61	63	65	67	316
		CNY Sub Trans-Line Public Require.	CNC0072	71	73	76	78	80	378
		ENY Sub Trans-Line New Business.	CNE0071	5	5	6	6	6	28
		ENY Sub Trans-Line Public Require.	CNE0072	29	30	31	32	33	155
		NY Central Sub T Line Third Party.	CNC0078	27	28	29	29	30	143
		NY West Sub T Line Third Party.	CNW0078	(92)	(94)	(97)	(100)	(103)	(486)

Customer Requests/Public Requirements		WNY Sub Trans-Line New Business.	CNW0071	48	50	51	53	55	257
		WNY Sub Trans-Line Public Require.	CNW0072	8	8	8	9	9	42
	D/SUB T_Blanket Total			**157**	**162**	**167**	**172**	**177**	**834**
	D/SUB T_New Business	Auto-Lite new POI Teall No.29	C097870	(10)	-	-	-	-	(10)
		Bethlehem Steel Development ECIDA	C086521	760	28	-	-	-	788
		ChautauquaCountyIDA L867 Extension	C096832	86	163	-	-	-	249
		Heritage Point Spot Network Sub-T	C083838	98	-	-	-	-	98
		Sub-T Saratoga-Ballston CustJob	C099162	36	-	-	-	-	36
		TxD RESERVE for New Business Commer	C046913	-	-	-	-	3,475	3,475
	D/SUB T_New Business Total			**970**	**191**	**-**	**-**	**3,475**	**4,636**
	D/Sub T_Other	Angola Service Plaza East	C095532	-	-	-	783	783	1,566
		Angola Service Plaza West	C095531	-	-	-	850	850	1,700
	D/Sub T_Other Total			**-**	**-**	**-**	**1,633**	**1,633**	**3,266**
	D/SUB T_Public Requirements	3807.97 Old Sneller rd off 81-sub T	C097965	19	(47)	-	-	-	(28)
		Best Street Bridge Replacement	C095920	-	99	392	980	1,275	2,746
		Retire Niacet L620	C092347	31	51	(12)	-	-	69
		Yahnundasis#27 Line Relocation	C099133	91	-	-	-	-	91
	D/SUB T_Public Requirements Total			**141**	**103**	**380**	**980**	**1,275**	**2,878**
Customer Requests/Public Requirements Total				**1,479**	**482**	**546**	**2,785**	**6,560**	**11,852**
Damage/Failure	D/SUB T_Blanket	CNY Sub Trans-Line Damage Failure.	CNC0073	448	461	475	490	504	2,379
		ENY Sub Trans-Line Damage Failure.	CNE0073	411	423	436	449	462	2,181
		WNY Sub Trans-Line Damage Failure.	CNW0073	3,917	4,034	4,155	4,280	4,408	20,794
	D/SUB T_Blanket Total			**4,776**	**4,919**	**5,066**	**5,218**	**5,375**	**25,354**
	D/SUB T_Damage Failure Other	34.5kV Regulator Blanket	C086927	73	75	-	-	-	147
		D/F Akwesasne-Nicholville23 Str#459	C098717	19	-	-	-	-	19
	D/SUB T_Damage Failure Other Total			**92**	**75**	**-**	**-**	**-**	**166**
Damage/Failure Total				**4,867**	**4,993**	**5,066**	**5,218**	**5,375**	**25,520**
Multi Value Distribution (MVD)	MVD_AC_System Capacity	Alder Creek Substation - Sub-T	C093793	27	633	1,596	3	-	2,259
		Bagdad-Dake Hill 815-34.5kV refurb.	C050292	96	1,545	1,315	336	-	3,292
		Bristol Hill-Phoenix 23-34.5kv	C046474	15	56	1,030	721	-	1,821
		Buffalo Station 30 - Rebuild - 23kV	C015755	9	244	76	-	-	329
		Buffalo Station 31 Rebuild - 23 kV	C046942	284	270	-	-	-	554
		Buffalo Station 32 Rebuild - 23 kV	C036460	95	-	-	-	-	95
		Buffalo Station 38 Rebuild - 23 kV	C046935	145	-	-	-	-	145
		Buffalo Station 45 Rebuild -SubT	C090772	6	4	256	76	8	349
		Buffalo Station 51 Rebuild - 23 kV	C046926	6	7	7	5	314	339
		Burt 171 Ph1 Sub-T	C096835	248	-	-	-	-	248
		Burt 171 Ph2 Sub-T	C097120	-	-	-	792	-	792
		Burt 171 Ph3 Sub-T	C097121	-	-	-	792	-	792
		Central Utica Boutique Sub, Sub-T	C093809	497	-	-	-	-	497
		Chestertown-N. Creek 2 Rebuild OH	C093773	-	-	-	-	72	72
		Chestertown-N.Creek #2 Rebuild UG	C093775	-	-	-	-	19	19
		Cleveland Sub-T Tap	C098686	31	50	75	100	25	281
		Constantia Sub-T Tap	C098685	31	50	75	100	25	281
		Dorwin SubT Tap	C093674	0	0	-	-	-	1
		Eagle Bay Sub-T Tap	C093630	-	-	300	-	-	300
		French Mountain TB#1 Repl Sub-T	C098016	248	-	-	-	-	248
		Lyndonville-Medina 301-34.5kV	C052512	-	70	100	880	1,010	2,060
		Manheim 46kV relocation	C074485	45	-	-	-	-	45
		Mexico SubT Tap	C093645	-	-	49	196	-	245
		MV-Clinton Substation Rebuild, Sub-T	C096700	-	3	11	120	96	230
		Phillips-Barker 301-34.5kv	C046465	-	35	393	1,922	2,647	4,997
		Phillips-Telegraph 304-34.5kv	C046466	-	-	-	706	1,650	2,355
		Rotterdam #34 #36 34.5kV Cable Repl	C077065	1,647	-	-	-	-	1,647
		Sherman-Ashville 863-Ref/Rec	C079096	1,498	376	-	-	-	1,874

		Station 34/35 Boutique - SubT	C099198	-	-	-	54	1,610	1,664
		Station 41 Boutique - SubT	C099199	-	-	-	54	1,610	1,664
		W. Milton Tap-34.5kV new line	CD00898	2,623	1,976	-	-	-	4,599
		Waterport tap 301-34.5kV	C052515	-	-	103	1,083	4,149	5,335
		W'burg-Chestertown 6 Reconductor OH	C093770	-	-	-	1,365	4,000	5,365
		W'burg-Chestertown 6 Reconductor UG	C093771	-	95	127	254	3,467	3,943
		White Lake Sub-T Tap	C093610	-	50	250	-	-	300
	MVD_AC_System Capacity Total			**7,553**	**5,464**	**5,763**	**9,558**	**20,701**	**49,038**
Multi Value Distribution (MVD) Total				**7,553**	**5,464**	**5,763**	**9,558**	**20,701**	**49,038**
Policy Initiative	**MVD_AC_Hosting Capacity**	Sub T LIne 213 tap to Golah Station	C095887	58	156	1,164	0	-	1,379
	MVD_AC_Hosting Capacity Total			**58**	**156**	**1,164**	**0**	**-**	**1,379**
Policy Initiative Total				**58**	**156**	**1,164**	**0**	**-**	**1,379**
Reliability	**D/SUB T_Asset Replacement**	Whitesboro-Schuyler 29 Sauq Reconfg	C098344	-	128	2,124	2,383	-	4,635
	D/SUB T_Asset Replacement Total			**-**	**128**	**2,124**	**2,383**	**-**	**4,635**
	D/SUB T_Blanket	CNY Sub Trans-Line Reliability.	CNC0076	336	346	356	367	378	1,783
		ENY Sub Trans-Line Reliability.	CNE0076	85	87	90	93	95	450
		WNY Sub Trans-Line Reliability.	CNW0076	338	386	440	501	571	2,236
	D/SUB T_Blanket Total			**759**	**819**	**886**	**961**	**1,045**	**4,469**
	D/Sub T_Conductor Clearance	Mallory - Constantia 31 Clearance	C097945	79	-	-	-	-	79
	D/Sub T_Conductor Clearance Total			**79**	**-**	**-**	**-**	**-**	**79**
	D/SUB T_Reliability	34.5kV #862 Line - F8361 Tie F9262	C097762	275	-	-	-	-	275
		Akwesasne Line 26 Energy Storage	C093829	-	-	-	100	250	350
		Burt Street Ductbank & Cable	C097767	628	-	-	-	-	628
		Corliss Park Tap Work for Station	C083661	1	-	-	-	-	1
		Greenbush Rebuild: Sub-T	C097549	40	30	20	74	81	245
		L301 34.5kV Sub-T Line Regulators	C095090	462	-	-	-	-	462
		Ludwig-Gardenville 704 34.5kV reloc	C085043	45	96	109	198	297	745
		Mallory#31 Line Regulator	C095649	206	-	-	-	-	206
		Minoa Sub-T Switch replacement	C095337	24	291	94	-	-	409
		Mumford 5053 Boutique Sub-T	C098158	-	-	180	480	1,095	1,755
		Newtonville Area Study: Sub-T	C091460	-	-	5	437	437	880
		North Lakeville L218 Energy Storage	C093807	-	-	-	100	250	350
		Sherman L863 Energy Storage	C093833	-	-	-	100	250	350
		Solvay#27 MOD installation	C095817	30	31	186	34	-	281
		Sta 33 Supply Line: Transfer Cable 9H to a Sawyer Bus A1	C090668	-	-	14	-	-	14
		Sta 47 Supply Line: Transfer Cable 36H to Sawyer Bus B1	C090678	-	-	14	-	-	14
		Sub-T Osprey Mitigation Program NYC	C093876	148	101	104	107	110	570
		Sub-T Osprey Mitigation Program NYE	C098375	79	101	104	107	110	501
		Sub-T Osprey Mitigation Program NYW	C098376	5	101	104	107	110	427
		SubT Smart Fault Indicator Prog NYC	C093976	80	230	230	230	-	770
		SubT Smart Fault Indicator Prog NYE	C093974	80	230	230	230	-	770
		SubT Smart Fault Indicator Prog NYW	C093977	80	230	230	230	-	770
	D/SUB T_Reliability Total			**2,184**	**1,440**	**1,625**	**2,535**	**2,991**	**10,774**
	D/SUB T_Substaion Flood Mitigation	Hawkeye Station Sub - SubT	C097562	-	17	536	1,017	23	1,593
	D/SUB T_Substaion Flood Mitigation Total			**-**	**17**	**536**	**1,017**	**23**	**1,593**
Reliability Total				**3,022**	**2,403**	**5,170**	**6,895**	**4,059**	**21,550**
Resiliency	**D/SUB T_Sub-T Automation**	Sub-T Automation Program NYC	C090712	125	475	5,339	5,248	5,510	16,697
		Sub-Transmission Automation Program East	C089150	2,125	2,475	5,339	5,248	5,510	20,697
		Sub-Transmission Automation Program West	C084935	2,125	2,475	5,339	5,248	5,510	20,697
	D/SUB T_Sub-T Automation Total			**4,375**	**5,425**	**16,017**	**15,744**	**16,530**	**58,091**
	D/Sub T_Targeted Feeder Tie Enhancements	Targeted fdr ti Cuyler-Delphi SubT	C094341	-	-	-	1,000	-	1,000
		Valley-Middleville 46kV Tie	C095738	960	1,428	3,144	3,700	3,700	12,933
	D/Sub T_Targeted Feeder Tie Enhancements Total			**960**	**1,428**	**3,144**	**4,700**	**3,700**	**13,933**
	D_Climate Vulnerability	Sub-T Line CCRP Projects - NYC	C094136	-	1,000	1,033	1,033	1,033	4,100
		Sub-T Line CCRP Projects - NYE	C094135	-	1,000	1,033	1,033	1,033	4,100

	Sub-T Line CCRP Projects - NYW	C094134	-	1,000	1,033	1,033	1,033	4,100
D_Climate Vulnerability Total			**-**	**3,000**	**3,100**	**3,100**	**3,100**	**12,300**
Resiliency Total			**5,336**	**9,853**	**22,261**	**23,544**	**23,330**	**84,324**
System Capacity - NY	**D/SUB T_Load Relief**	25H Cable- New UG 23kV Cable	C097197	-	50	2,922	-	-	2,972
		Akwesasne-Nichol Area Enhancements	C098084	0	0	-	-	-	0
		Cleveland Sub-T	C093654	-	300	-	-	-	300
		Constantia Sub-T	C093652	-	-	-	294	-	294
		Delmar 34.5kV Reconfiguration	C083917	461	198	25	-	-	684
		Genesee Station Retirement	C098115	63	63	233	49	-	409
		Malone Area Study Sub-T Line	C085514	543	-	-	-	-	543
		School St - N. Troy #19 Reconductor	C099660	200	5,000	2,000	2,500	-	9,700
		Smith Bridge Sub-T	C098079	-	-	46	33	79	158
		South Eden Greenfield Sub-T	C052023	358	1	-	-	-	359
		W Chautauqua 34.5/4.8kV Mini Sub	C091269	-	525	-	-	-	525
		W. Wellsville Boutique sub - Sub-T	C093788	-	11	50	200	100	362
		Wellsville Boutique sub - Sub-T	C093786	-	-	-	-	14	14
	D/SUB T_Load Relief Total			**1,625**	**6,148**	**5,276**	**3,077**	**193**	**16,320**
System Capacity - NY Total				**1,625**	**6,148**	**5,276**	**3,077**	**193**	**16,320**
Approved Proactive Planning	**D/SUB T_Load Relief**	Colosse 2nd bank for EV Charging	C093619	163	-	-	-	-	163
		SubT pole work for CNY Bus Depot	C098156	365	-	-	-	-	365
		Wilton Sub-T Double Circuit	C099128	240	1,770	1,140	-	-	3,150
	D/SUB T_Load Relief Total			**768**	**1,770**	**1,140**	**-**	**-**	**3,678**
	D/SUB T_New Business	Hancock #2 SubT Tap	C098317	166	-	-	-	-	166
		Marine Drive Ph1 - Cables 35E & 9E	C095803	1,715	388	-	-	-	2,104
		Sand Rd #2 SubT tap	C098319	198	40	-	-	-	238
	D/SUB T_New Business Total			**2,079**	**429**	**-**	**-**	**-**	**2,507**
	D/SUB T_Public Requirements	Cortland OVS Truck chargers	C097372	-	300	1,000	293	-	1,593
	D/SUB T_Public Requirements Total			**-**	**300**	**1,000**	**293**	**-**	**1,593**
Approved Proactive Planning Total				**2,846**	**2,499**	**2,140**	**293**	**-**	**7,778**
Policy Initiative - CLCPA Ph2	**D/SUB T_Load Relief**	N Carthage Sub-Transmission Wk.	C095995	225	-	-	-	-	225
	D/SUB T_Load Relief Total			**225**	**-**	**-**	**-**	**-**	**225**
	MVD_AC_Hosting Capacity	CLCPA Black River-LHH (Sub-T Work)	C097578	27	7	7	6	1	48
		CLCPA LHH - Clay (Sub-T Work)	C097603	91	92	92	81	12	368
	MVD_AC_Hosting Capacity Total			**118**	**99**	**99**	**87**	**13**	**416**
Policy Initiative - CLCPA Ph2 Total				**343**	**99**	**99**	**87**	**13**	**641**
Cost of Removal	**Cost of Removal**	SubT Cost of Removal	CoR	4,820	6,693	10,592	11,305	12,147	45,557
				4,820	6,693	10,592	11,305	12,147	45,557
Cost of Removal Total				**4,820**	**6,693**	**10,592**	**11,305**	**12,147**	**45,557**
Grand Total				**65,635**	**73,628**	**96,757**	**128,554**	**144,154**	**508,727**

Exhibit 3 – Distribution Capital Investment Plan

Spending Rationale	Program Name	Project Description	Project Number	FY27	FY28	FY29	FY30	FY31	Total
Asset Condition	D/SUB T_Asset Replacement	*NR-81452-Lake of the Isles-Upgrade	C049782	137	-	-	-	-	137
		Attica-Wethersfield 209 DLINE Trans	C098254	-	-	80	300	20	400
		Avenue A 13.2 kV Distribution	C092747	77	98	173	547	1,460	2,355
		Avenue A Getaways	C092920	80	99	480	1,601	980	3,240
		Caledonia sub 44 - Line Relay Rep	C052444	-	-	-	50	240	290
		Cazenovia Area Enhancements	C098086	0	0	-	-	-	0
		Circuit Switcher Pgm- Central	C093851	500	500	500	500	1,637	3,637
		Cortland 23 ACR (D-Line)	C097832	-	-	-	7	-	7
		Dexter Retirement	C084107	-	27	5	0	0	32
		Dist RE43 Switch Program NYCD	C095897	382	125	125	-	-	632
		Dist RE43 Switch Program NYED	C095896	164	125	125	-	-	414
		Dist RE43 Switch Program NYWD	C095898	351	125	125	-	-	601
		DLine for Curtis-Teall 13 ACR	C092464	-	-	-	210	-	210
		DLINE trf for Woodard 24	C084776	-	24	-	-	-	24
		DLINE trf for Woodard-Ash 27/28	C084566	-	-	-	1,045	-	1,045
		Genesee Station Demo	C098163	65	65	186	31	-	347
		Golah-N Lakeville 217 DLINETransfer	C097794	35	-	-	-	-	35
		Line 301 DLine Underbuilt Transfer	C084600	16	30	18	-	-	64
		Line 811 D Line Transfer	C084585	7	29	110	34	-	179
		N.Akron-Attica 225 DLINE Transfer	C097921	-	-	-	-	17	17
		Network Protector Replacement NYC	C091709	50	495	495	520	546	2,106
		Network Protector Replacement NYE	C091739	50	495	495	520	546	2,106
		Network Protector Replacement NYW	C091740	263	276	289	304	319	1,450
		Network Transformer Replacement NYC	C091680	50	500	495	520	546	2,111
		Network Transformer Replacement NYE	C091741	50	495	495	520	546	2,106
		Network Transformer Replacement NYW	C091742	495	495	495	520	546	2,551
		Northern Cortland Area Enhancements	C098085	0	0	-	-	-	0
		Padmount Switchgear Rpl Program NYC	C094099	240	140	140	140	140	800
		Padmount Switchgear Rpl Program NYE	C094098	396	120	120	120	120	876
		Padmount Switchgear Rpl Program NYW	C094100	120	120	120	120	120	600
		Patroon Feeder Getaways	C092740	-	-	37	67	143	248
		Ransomville-Phillips402 DLINE Trans	C098013	13	7	7	-	-	26
		Raquette Lake Sub - Recloser & Regs	C080904	1	-	-	-	-	1
		Retire Park St Substation	C090579	7	10	26	81	58	181
		Schuylerville Retirement - Dist.	C084726	-	51	202	2,730	2,730	5,713
		Station 121 Clinton - Rebuild	C097014	-	-	119	469	1,869	2,457
		Station 61 Distribution Relocation	C084919	115	100	677	1,502	7,091	9,485
		Summit Station 347 Rebuild	C095623	-	-	83	1,330	480	1,893
		Teall 23 Str#21 Relocation (D-Line)	C090735	5	6	6	5	5	27
		Terminal Station Relocation_DLine	C059671	459	6,164	693	-	-	7,316
		Theresa - S Phil 21 ACR (D-Line)	C097851	50	113	-	-	-	163
		Tuller Hill Control house	C088612	865	-	-	-	-	865
		UG for Pine Grove rebuild	C089334	17	412	304	27	-	760
		Union-Ausable #36 D-line transfers	C087252	39	176	-	-	-	215
		URD/UCD Cable Replacement NYCD	C094137	1,485	1,485	1,485	1,559	1,637	7,651
		URD/UCD Cable Replacement NYED	C094116	280	560	560	560	560	2,520
		URD/UCD Cable Replacement NYWD	C094139	280	1,485	1,485	1,733	1,784	6,767
		Yahnundasis Rebuild, D-line	C093627	79	2,173	174	5	-	2,431
		Youngstwn–Mnt401 BronsonDr (DLine)	C099203	33	5	-	-	-	38
	D/SUB T_Asset Replacement Total			**7,255**	**17,129**	**10,929**	**17,676**	**24,141**	**77,131**
	D/SUB T_Blanket	Cent NY-Dist-Asset Replace Blanket.	CNC0017	2,358	2,429	2,502	2,577	2,654	12,520
		East NY-Dist-Asset Replace Blanket.	CNE0017	1,683	1,733	1,785	1,839	1,894	8,933
		West NY-Dist-Asset Replace Blanket.	CNW0017	3,476	3,580	3,687	3,798	3,912	18,452
	D/SUB T_Blanket Total			**7,516**	**7,742**	**7,974**	**8,213**	**8,460**	**39,905**
	D/SUB T_Buffalo St Light Cable Repl	Buffalo Street Lt Cable Replacement	CD00851	2,544	2,620	2,699	2,780	2,863	13,507
	D/SUB T_Buffalo St Light Cable Repl Total			**2,544**	**2,620**	**2,699**	**2,780**	**2,863**	**13,507**
	D/Sub T_Conductor Clearance	Station 79 D-Line Relocation	C084921	-	-	-	262	3,401	3,663
	D/Sub T_Conductor Clearance Total			**-**	**-**	**-**	**262**	**3,401**	**3,663**
	D/Sub T_Dist. Overhead Line (Program)	Deerfield Sub Rebuild, D-Line	C094317	50	840	898	14	-	1,802
		Phillips-Barker D-Line Transfer	C084449	-	20	15	25	2	62
	D/Sub T_Dist. Overhead Line (Program) Total			**50**	**860**	**913**	**39**	**2**	**1,864**
	D/SUB T_Inspection $ Maintenance	I&M - NC D-Line OH Work From Insp.	C026160	7,950	8,268	8,800	8,943	9,300	43,261
		I&M - NC D-Line UG Work From Insp.	C026163	510	530	552	574	597	2,763
		I&M - NE D-Line OH Work From Insp.	C026159	7,519	7,819	8,300	8,457	8,796	40,891
		I&M - NE D-Line UG Work From Insp.	C026162	406	422	439	457	475	2,198
		I&M - NW D-Line OH Work From Insp.	C026161	8,809	9,161	9,800	9,909	10,305	47,984
		I&M - NW D-Line UG Work From Insp.	C026164	812	844	878	913	950	4,397
	D/SUB T_Inspection $ Maintenance Total			**26,005**	**27,045**	**28,769**	**29,252**	**30,422**	**141,493**
	D/SUB T_Load Relief	Demo Delmar Station	C088901	46	69	-	-	-	115
	D/SUB T_Load Relief Total			**46**	**69**	**-**	**-**	**-**	**115**
	D/SUB T_Ntwk Secondary UG Cable Repl	Cable Replacement - Ntwk Sec NYC	C091744	-	1,485	2,970	3,119	3,274	10,849
		Cable Replacement - Ntwk Sec NYE	C078270	1,582	1,662	1,745	1,832	1,924	8,744
		Cable Replacement - Ntwk Sec NYW	C077338	1,650	1,733	1,819	1,910	2,006	9,117

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D/SUB T_Ntwk Secondary UG Cable Repl Total			**3,232**	**4,879**	**6,534**	**6,861**	**7,204**	**28,711**
D/SUB T_Outdoor Light-Discretionary	OL Steel Pole Replacement NYC	C095701	272	294	803	-	-	1,369
	OL Steel Pole Replacement NYE	C095702	294	318	868	-	-	1,480
	OL Steel Pole Replacement NYW	C095703	246	264	717	-	-	1,226
D/SUB T_Outdoor Light-Discretionary Total			**811**	**876**	**2,388**	**-**	**-**	**4,075**
D/SUB T_Primary UG Cable Replacement	MV Island XFMR repl. - Central Div	C026977	317	396	495	495	520	2,223
	MV-Camp KillKare/Lake Kora-Cable	C088822	1,553	-	-	-	-	1,553
	Utica, NY 5kV UG System Elimination	C090618	1,336	-	-	-	-	1,336
D/SUB T_Primary UG Cable Replacement Total			**3,205**	**396**	**495**	**495**	**520**	**5,111**
D/SUB T_Sta Metal-Clad Switchgear	Blue Stores - Replace IMCS	C081611	2,624	4,080	1,231	-	-	7,936
	Metal Clad Replacement Program	C084936	-	2,000	4,450	4,678	4,912	16,039
	Pine Grove Metalclad Replacement	C056614	5,463	5,686	957	-	-	12,106
	Riverside IMCS A and B ACR replace	C098097	164	243	721	5,254	5,928	12,310
	Saratoga Substation Retirement	C083487	29	39	11	11	11	101
	Station 61 - Station Rebuild	C051707	200	1,486	3,479	6,108	10,083	21,356
	Sycaway - Metalclad Replacement	C081630	4,655	2,467	179	3	-	7,305
	Tuller Hill 246 Unit Metalclad Repl	C056611	2,809	3,100	11	-	-	5,919
D/SUB T_Sta Metal-Clad Switchgear Total			**15,944**	**19,100**	**11,039**	**16,054**	**20,934**	**83,072**
D/SUB T_Substat Instrument Xformer	Everett Rd Sta 420 -115kV U Bushing	C098488	240	-	-	-	-	240
D/SUB T_Substat Instrument Xformer Total			**240**	**-**	**-**	**-**	**-**	**240**
D/SUB T_Substation Battery&Related	Batts/Charg- NY Central	C032013	302	300	300	-	-	902
	Batts/Charg- NY West	C032014	300	300	300	300	300	1,500
	Batts/Charg--NY East	C032012	840	300	300	300	300	2,040
D/SUB T_Substation Battery&Related Total			**1,442**	**900**	**900**	**600**	**600**	**4,442**
D/SUB T_Substation Breaker	Baker St Station 150 -R550, R560	C094670	235	519	-	-	-	754
	Belmont Sta 260- R550, R560, R570	C094486	371	865	-	-	-	1,235
	Cobleskill Station 214- R5 Rplc	C094512	-	73	288	169	-	530
	Colvin Station 313- OCB R4 Rpl	C094291	-	-	-	120	632	752
	D Spare Circuit Switcher Funding	C095115	480	-	-	-	-	480
	Emmet St Station 256- R9, R10, R13	C094474	-	-	150	587	-	737
	NC ARP Breakers & Reclosers	C032253	59	1,600	1,600	1,600	1,600	6,459
	NE ARP Breakers & Reclosers	C032252	-	1,600	1,600	1,600	1,600	6,400
	NW ARP Breakers & Reclosers	C032261	-	1,600	1,600	1,600	1,600	6,400
D/SUB T_Substation Breaker Total			**1,145**	**6,257**	**5,238**	**5,676**	**5,432**	**23,748**
D/SUB T_Substation Indoor	Substation Roof Program (NYWD)	C093850	990	1,485	1,485	1,559	1,637	7,156
D/SUB T_Substation Indoor Total			**990**	**1,485**	**1,485**	**1,559**	**1,637**	**7,156**
D/SUB T_Substation Mobile	Mobile 4C -Mobile Sub Replacement	C089181	2,435	2,044	-	-	-	4,479
	Mobile 9C -Mobile Sub Replacement	C089184	600	1,400	2,000	-	-	4,000
	NY Mobile Substation Program	C051744	-	2,970	2,970	2,970	2,970	11,880
D/SUB T_Substation Mobile Total			**3,035**	**6,414**	**4,970**	**2,970**	**2,970**	**20,359**
D/SUB T_Substation Power Transformer	Lewiston Heights 086 Rpl TB1	C083225	-	-	-	50	248	297
	NY ARP Spare Substation Transformer	C026055	1,812	4,714	11,364	9,644	1,200	28,734
	NY ARP Transformers	C097733	900	1,800	1,800	1,800	1,800	8,100
	Trinity TB4 and TB6 XFMRs and Bus	C086717	1,958	4,326	13,596	1,767	-	21,647
D/SUB T_Substation Power Transformer Total			**4,670**	**10,840**	**26,760**	**13,260**	**3,248**	**58,778**
D/SUB T_Substation Relay	NYC Dist Sub Obsolete Relay Prog	C093893	408	545	544	572	600	2,669
	NYE Dist Sub Obsolete Relay Program	C093822	396	545	544	642	600	2,728
	NYW Dist Sub Obsolete Relay Program	C093894	396	545	544	572	600	2,657
	Peterboro Station 514-Relay Upgrade	C098472	390	-	-	-	-	390
D/SUB T_Substation Relay Total			**1,590**	**1,634**	**1,633**	**1,786**	**1,801**	**8,443**
D/SUB T_Substation Voltage Regulator	Station Regulator Rpl Program- NYE	C094117	750	1,000	1,000	1,030	1,061	4,841
D/SUB T_Substation Voltage Regulator Total			**750**	**1,000**	**1,000**	**1,030**	**1,061**	**4,841**
D/SUB T_Sub-T Overhead Line	Transf Dist Fdrs-Phillips-Tel-L304	C084842	-	-	-	13	484	496
D/SUB T_Sub-T Overhead Line Total			**-**	**-**	**-**	**13**	**484**	**496**
Asset Condition Total			**80,472**	**109,246**	**113,727**	**108,527**	**115,179**	**527,151**
D/Sub T_ Advanced Metering	NY Landline Meter Replacement	C083651	423	291	-	-	-	714
D/Sub T_ Advanced Metering Total			**423**	**291**	**-**	**-**	**-**	**714**
D/Sub T_ Radios	AMI - Field Area Networks (FANs), E	C084958	69	213	30	30	30	372
	D-Line Comms Redundancy	C084931	-	-	-	321	29	350
D/Sub T_ Radios Total			**69**	**213**	**30**	**351**	**59**	**722**
D/Sub T_Meter Installations	AMI - Field Area Networks (FANs), C	C087157	69	213	30	30	30	372
	AMI - Field Area Networks (FANs), W	C087158	401	996	30	30	30	1,487
D/Sub T_Meter Installations Total			**469**	**1,209**	**60**	**60**	**60**	**1,859**
D/SUB T_Substation RTU	EMS/RTU for DSCADA	C077972	1,500	3,000	3,000	3,000	3,000	13,500
	EMS/RTU INSTALLS - NY CENTRAL	C076124	2,015	2,600	2,600	4,000	4,000	15,215
	EMS/RTU INSTALLS - NY EAST	C076123	1,300	2,730	2,418	2,031	3,720	12,199
	EMS/RTU INSTALLS - NY WEST	C076125	2,574	2,574	2,574	4,158	4,366	16,246
D/SUB T_Substation RTU Total			**7,389**	**10,904**	**10,592**	**13,189**	**15,086**	**57,160**
	Dark Fiber IRU Distribution	C090332	35	-	-	-	-	35
	Dist Comms - Clean Inno. Proj.	C084928	6	-	-	-	-	6
	DMX Projects - Central	C088464	1,069	1,203	1,337	1,403	1,473	6,485
	DMX Projects - East	C084927	1,069	1,203	1,337	1,403	1,473	6,485
	DMX Projects - West	C088470	1,069	1,203	1,337	1,403	1,473	6,485
	EMS/RTU TELECOM - DLINE NY CENT	C076112	100	100	100	100	100	500

Communications/Control Systems	D/SUB T_Telcom	EMS/RTU TELECOM - DLINE NY EAST	C076111	100	100	100	100	100	500
		EMS/RTU TELECOM - DLINE NY WEST	C076122	100	100	100	100	100	500
		EMS/RTU TELECOM - STATIONS NY CENT	C076108	1,200	1,200	1,200	1,200	1,200	6,000
		EMS/RTU TELECOM - STATIONS NY EAST	C076107	1,188	1,188	1,188	1,247	1,310	6,121
		EMS/RTU TELECOM - STATIONS NY WEST	C076110	1,188	1,188	1,188	1,200	1,200	5,964
		NYC Dist Telecom DC Battery Repl Prog	C094318	67	67	67	-	-	202
		NYCD Dist Microwave Network	C094104	594	1,188	1,188	1,247	1,310	5,527
		NYCD Dist Private Fiber	C094107	400	400	400	500	-	1,700
		NYCD Dist Satellite Network	C094110	297	1,287	1,287	1,351	1,419	5,641
		NYE Dist Telecom DC Battery Repl Prog	C094319	67	67	67	-	-	202
		NYED Dist Microwave Network	C094105	594	1,188	1,188	1,247	1,310	5,527
		NYED Dist Private Fiber	C094108	400	400	400	500	-	1,700
		NYED Dist Satellite Network	C094111	297	1,287	1,287	1,351	1,419	5,641
		NYED Dist Verizon Disconnect FY23	C090007	5	-	-	-	-	5
		NYW Dist Telecom DC Battery Repl Prog	C094320	67	67	67	-	-	202
		NYWD Dist Microwave Network	C094106	704	990	990	1,040	1,091	4,815
		NYWD Dist Private Fiber	C094109	400	400	400	500	-	1,700
		NYWD Dist Satellite Network	C094112	297	1,287	1,287	1,351	1,419	5,641
		OpTel - DWDM - Central	C088717	1,069	1,069	1,337	1,403	1,473	6,351
		OpTel - DWDM - East	C088747	1,069	1,069	1,337	1,403	1,473	6,351
		OpTel - DWDM - West	C088718	1,069	1,069	1,337	1,403	1,473	6,351
		Telecom and Radio Equipment	C004157	990	990	990	1,020	1,050	5,040
		Telecom D Central Dark Fiber	C091330	2,450	2,896	2,945	3,093	3,247	14,631
		Telecom D East Dark Fiber	C091326	2,450	2,896	2,945	3,093	3,247	14,631
		Telecom D West Dark Fiber	C091331	2,450	2,896	2,945	3,093	3,247	14,631
		Upstate NYE Dist Verizon Disco FY24	C093061	536	-	-	-	-	536
		Verizon DS0 Repl. (D-SCADA) Central	C084926	2,673	1,667	1,667	1,667	1,667	9,340
		Verizon DS0 Repl. (D-SCADA) East	C084929	3,916	1,667	1,667	1,667	1,667	10,582
		Verizon DS0 Repl. (D-SCADA) West	C088463	2,673	1,667	1,667	1,667	1,667	9,340
	D/SUB T_Telcom Total			**32,657**	**33,999**	**35,352**	**36,752**	**36,607**	**175,366**
Communications/Control Systems Total				**41,008**	**46,617**	**46,034**	**50,351**	**51,812**	**235,822**
Customer Requests/Public Requiremen	D/Sub T_ Solar	Sky High Solar D-Stations	C087708	(6)	-	-	-	-	(6)
	D/Sub T_ Solar Total			**(6)**	**-**	**-**	**-**	**-**	**(6)**
	D/SUB T_3rd Party Attachments	Flat Hill Solar - D Stations	C097671	0	(1)	-	-	-	(1)
		Homer Solar - Dist Stations	C094998	(0)	-	-	-	-	(0)
		NYC Dist Middle Mile Make Ready	C093886	3,602	-	-	-	-	3,602
		NYE Dist Middle Mile Make Ready	C093888	1,964	-	-	-	-	1,964
		NYS Broadband Expansion	C075964	2,625	1,491	-	-	-	4,116
	D/SUB T_3rd Party Attachments Total			**8,192**	**1,490**	**-**	**-**	**-**	**9,681**
	D/SUB T_Blanket	Cent NY-Dist-3rd Party Attch Blnkt	CNC0022	1,045	1,076	1,108	1,141	1,176	5,546
		Cent NY-Dist-Meter Blanket	CNC0004	425	437	451	464	478	2,255
		Cent NY-Dist-New Bus-Comm Blanket.	CNC0011	7,626	8,389	9,228	9,689	10,174	45,106
		Cent NY-Dist-New Bus-Resid Blanket	CNC0010	16,117	17,729	19,502	20,477	21,501	95,326
		Cent NY-Dist-Public Require Blankt	CNC0013	2,305	2,513	2,739	2,985	3,254	13,795
		Cent NY-Dist-St Light Blanket.	CNC0012	1,311	1,350	1,391	1,432	1,475	6,959
		East NY-Dist-3rd Party Attch Blnkt	CNE0022	1,892	1,948	2,007	2,067	2,129	10,043
		East NY-Dist-Meter Blanket	CNE0004	2,646	2,725	2,807	2,891	2,978	14,046
		East NY-Dist-New Bus-Comm Blanket.	CNE0011	7,631	8,395	9,234	9,696	10,180	45,136
		East NY-Dist-New Bus-Resid Blanket.	CNE0010	15,213	16,734	18,408	19,328	20,294	89,977
		East NY-Dist-Public Require Blankt	CNE0013	1,919	1,976	2,036	2,097	2,160	10,187
		East NY-Dist-St Light Blanket.	CNE0012	1,324	1,363	1,404	1,446	1,490	7,028
		NiMo Meter Purchases	CN03604	4,120	4,244	4,371	4,502	4,637	21,874
		NiMo Transformer Purchases	CN03620	86,994	89,604	92,292	95,060	97,912	461,862
		West NY-Dist-3rd Party Attch Blnkt	CNW0022	1,999	2,059	2,121	2,184	2,250	10,613
		West NY-Dist-Meter Blanket	CNW0004	1,007	1,037	1,069	1,101	1,134	5,347
		West NY-Dist-New Bus-Comm Blanket.	CNW0011	7,810	8,591	9,451	9,923	10,419	46,195
		West NY-Dist-New Bus-Resid Blanket.	CNW0010	14,535	15,988	17,587	18,466	19,390	85,966
		West NY-Dist-Public Require Blankt	CNW0013	1,856	1,911	1,969	2,028	2,089	9,852
		West NY-Dist-St Light Blanket.	CNW0012	5,541	5,707	5,878	6,055	6,236	29,417
	D/SUB T_Blanket Total			**183,314**	**193,777**	**205,049**	**213,033**	**221,355**	**1,016,530**
	D/Sub T_Meter Installations	AMI - NY Electric, Central	C087167	8,394	854	92	92	92	9,525
		AMI - NY Electric, East	C083340	8,394	854	92	92	92	9,525
		AMI - NY Electric, West	C087168	4,903	854	92	92	92	6,034
	D/Sub T_Meter Installations Total			**21,691**	**2,561**	**277**	**277**	**277**	**25,084**
	D/SUB T_New Business	20ForbesAveRensselaerNY	C097573	86	-	-	-	-	86
		AlbanyAirportRelocation_AlbanyNY	C094923	285	-	-	-	-	285
		F14271 Recon/Transf new Subt Poles	C087926	13	67	-	-	-	79
		F2765, 2772, 2766 - E. Morris Dev's	C099037	834	-	-	-	-	834
		F4973, 3062, 3068 - 1440 Main St	C098928	397	-	-	-	-	397
		Heritage Point Spot Network Dist	C083840	809	-	-	-	-	809
		New LED Central NY	C069886	280	312	874	-	-	1,466
		New LED East NY	C069947	280	312	873	-	-	1,465
		New LED West NY	C069927	280	312	874	-	-	1,466
		Northtown_NewComDev_AmherstNY	C082820	249	-	-	-	-	249

nationalgrid

		NYSDMNA_SCOTIA_NY	C086923	66	-	-	-	-	66
		Reserve for New Business Commercial	C046920	1,444	3,702	3,849	3,712	3,992	16,698
		Reserve for New Business Residentia	C046921	2,519	5,202	5,424	5,535	5,728	24,408
		SriVidyaTempleRushNY	C094197	34	-	-	-	-	34
		Starr rd 53 - 362 Virgil Rd	C097852	5	-	-	-	-	5
		Village of Cape Vincent EV Chargers	C097842	880	-	-	-	-	880
	D/SUB T_New Business Total			**8,459**	**9,906**	**11,894**	**9,247**	**9,720**	**49,227**
	D/SUB T_Public Requirements	3807.97 Old Sneller rd off 81-dist	C097966	36	(83)	-	-	-	(47)
		I-81 Viaduct Project DOT Contract 3 Distribution	C091245	528	-	-	-	-	528
		LASELLE_PARK_RELOCATION	C086922	635	-	-	-	-	635
		MileblockFarmNorthCollinsNY MRW	C098598	114	-	-	-	-	114
		PIN#2047.07 North Genesee St Utica	C097847	450	-	-	-	-	450
		PIN#3501.60 I-81 Contract 6	C099135	3,645	-	-	-	-	3,645
		PIN#3501.60 I-81 Contract 6A	C099136	3,645	-	-	-	-	3,645
		PIN#3501.60 I-81 Contract 7	C099137	450	3,195	-	-	-	3,645
		PIN#3501.60 I-81 Contract 8	C091451	50	3,645	-	-	-	3,695
		PROCTORS_SCHENECTADY	C089381	137	-	-	-	-	137
		Reserve for Public Requirements Uni	C046922	-	2,702	2,799	2,778	2,834	11,113
		ZoarValleyRdLineRelGowandaNY	C095847	50	-	-	-	-	50
	D/SUB T_Public Requirements Total			**9,740**	**9,458**	**2,799**	**2,778**	**2,834**	**27,610**
	Land & Land Rights	ROW Land Rights Blanket UNY Central	CNC1013	1,670	1,720	1,772	1,825	1,880	8,867
		ROW Land Rights Blanket UNY East	CNE1013	1,342	1,382	1,423	1,466	1,510	7,122
		ROW Land Rights Blanket UNY West	CNW1013	908	936	964	993	1,022	4,822
	Land & Land Rights Total			**3,920**	**4,038**	**4,159**	**4,283**	**4,412**	**20,812**
Customer Requests/Public Requirements Total				**235,310**	**221,230**	**224,179**	**229,619**	**238,598**	**1,148,937**
Damage/Failure	**D/SUB T_Blanket**	Cent NY-Dist-Damage/Failure Blankt	CNC0014	38,996	40,166	41,371	42,612	43,890	207,035
		Cent NY-Dist-Subs D/F Blanket.	CNC0002	1,885	1,942	2,000	2,060	2,122	10,009
		East NY-Dist-Damage/Failure Blankt	CNE0014	39,115	40,288	41,497	42,742	44,024	207,667
		East NY-Dist-Subs D/F Blanket.	CNE0002	2,638	2,717	2,799	2,883	2,969	14,005
		Minor Storm NY-Central Blanket	C088053	5,827	6,002	6,182	6,367	6,558	30,936
		Minor Storm NY-East Blanket	C088049	4,584	4,721	4,863	5,009	5,159	24,337
		Minor Storm NY-West Blanket	C088056	5,647	5,816	5,991	6,171	6,356	29,980
		West NY-Dist-Damage/Failure Blankt	CNW0014	21,905	22,562	23,239	23,936	24,654	116,298
		West NY-Dist-Subs D/F Blanket.	CNW0002	3,192	3,287	3,386	3,488	3,592	16,945
	D/SUB T_Blanket Total			**123,789**	**127,502**	**131,328**	**135,267**	**139,325**	**657,211**
	D/SUB T_Damage Failure Other	Barclay Damon Vault Rebuild	C093526	363	-	-	-	-	363
		DF- Little River Station - RTU Fail	C095819	34	-	-	-	-	34
		DF- Riverside Sta 288- TB4 Failed	C091468	2,935	-	-	-	-	2,935
		DF-Station 205 - TRF3 Failure	C091523	1,334	-	-	-	-	1,334
		DF-Station 26- R914 R924 Cbl Tie Sw	C091232	203	-	-	-	-	203
		DF-Station 54- TB2 Replacement	C091518	267	-	-	-	-	267
		DF-Station 68- TRF1 Failure	C097157	838	-	-	-	-	838
		DF-Station205 - R205 Failure	C090095	142	-	-	-	-	142
		F22653 -UG Cable (D/F)-Millgrove Rd	C090187	325	-	-	-	-	325
		Hague Rd 53 - Submarine Cable.	C050522	-	-	-	85	2,277	2,362
		Hotel Syracuse vault rebuilt	C093579	421	-	-	-	-	421
		NY Mobile 2E - Replacement	C086808	-	600	1,800	2,600	-	5,000
		Oneida Count bldg vault rebuild	C093582	406	-	-	-	-	406
		Reserve for Damage/Failure Unidenti	C046918	-	1,783	2,250	2,118	2,099	8,249
		Reserve for Damage/Failure Unidenti	C046948	1,059	2,202	2,274	2,227	2,255	10,017
	D/SUB T_Damage Failure Other Total			**8,327**	**4,584**	**6,324**	**7,030**	**6,631**	**32,896**
Damage/Failure Total				**132,115**	**132,087**	**137,652**	**142,297**	**145,956**	**690,108**
	MVD_AC_Hosting Capacity	CLCPA Black River-LHH (D-Line Work)	C097605	30	11	11	9	1	62
	MVD_AC_Hosting Capacity Total			**30**	**11**	**11**	**9**	**1**	**62**
		*NR-81452-Jolly Island Grp-Upgrade	C049780	353	-	-	-	-	353
		07856 Phillips Rd Conversion	C092251	755	-	-	-	-	755
		Alder Creek Substation Rebuild	C093792	815	1,558	3,532	2,390	81	8,377
		Alder Creek Substation Removal	C098154	2	2	2	-	-	7
		Arnold Upgrade, D-line	C095364	-	-	-	270	1,030	1,300
		Arnold Upgrade, Sub	C095361	-	-	-	170	810	980
		Avenue A Station Rebuild/Retirement	C056609	155	1,339	1,963	5,903	5,092	14,453
		Avon 43, 10 Mile Voltage Conversion	C096408	-	-	670	670	1,340	2,680
		Ballston Rebuild: D-Line	C093744	-	-	-	-	752	752
		Battenkill Rebuild: D-Line	C093747	-	-	-	-	790	790
		Beech Ave Substation Retirement	C097428	2	10	10	11	22	55
		Birch Ave Station Retirement	C093764	-	-	-	-	110	110
		Black Rock Area Enhancement - DLine	C099004	80	80	150	150	7,000	7,460
		Black Rock Area Enhancement Station	C098382	80	150	150	3,500	5,950	9,830
		Black Rock Dx Station Land	C099001	-	-	2,684	2,684	-	5,368
		Bloomingdale/Gabriels D-Line	C093906	-	184	735	735	735	2,389
		Bloomingdale/Gabriels Rebuild	C093900	-	191	766	766	766	2,489
		Bolton Station Rebuild	C093761	-	-	105	872	1,302	2,279
		Brook Road Rebuild	C093748	-	96	1,305	884	3,317	5,602
		Buckley Corners D-Line	C093772	-	50	2,028	3,836	3,815	9,729

Multi Value Distribution (MVD)	MVD_AC_System Capacity	Buckley Corners Station Rebuild	C093768	-	50	104	1,383	499	2,035
		Buffalo Station 30 - Rebuild - Fdrs	C015754	273	78	56	-	-	407
		Buffalo Station 30 Rebuild - Sta	C046519	2,972	6,691	6,224	3,170	-	19,056
		Buffalo Station 31 Rebuild - Line	C046943	305	114	-	-	-	420
		Buffalo Station 31 Rebuild - Sub	C046952	7,252	4,896	452	-	-	12,600
		Buffalo Station 32 Rebuild - Line	C036461	48	-	-	-	-	48
		Buffalo Station 32 Rebuild - Sta	C036459	638	-	-	-	-	638
		Buffalo Station 38 Rebuild - Line	C046936	397	-	-	-	-	397
		Buffalo Station 38 Rebuild - Sub	C046955	4,837	-	-	-	-	4,837
		Buffalo Station 45 Rebuild -Line	C090726	8	1,038	190	170	-	1,406
		Buffalo Station 45 Rebuild -Sub	C090725	1,684	1,716	8,036	5,656	1,491	18,584
		Buffalo Station 51 Rebuild - Line	C046927	8	8	9	716	202	942
		Buffalo Station 51 Rebuild - Sub	C046958	1,033	334	1,838	3,397	8,453	15,055
		Burt 171 Ph1 D-Line Boutique	C095805	585	-	-	-	-	585
		Burt 171 Ph2 D-Line Boutique	C095807	-	-	-	166	638	804
		Cavanaugh Rd Station	C096431	-	121	1,756	6,154	3,994	12,026
		Central Utica Boutique Sub - D-Line	C093808	1,834	-	-	-	-	1,834
		Chadwicks Expansion - D-line	C093804	-	188	703	1,228	-	2,119
		Chadwicks Expansion - Sub	C093803	68	848	575	835	5,105	7,430
		Cobleskill D-Line 4.8 to 13.2 kV Conversion	C091671	3,883	5,734	3,609	7	-	13,233
		Cobleskill Station 4.8 to 13.2 kV Conversion	C086902	2,256	1,303	11	-	-	3,570
		Corliss Park TB2	C081991	98	-	-	-	-	98
		Cortland Area-enchantment d-line work	C090298	244	300	5,064	4,481	1,716	11,805
		Cortland Area-Enhancements Substation work	C090284	1,215	1,312	6,775	3,476	1,060	13,839
		County Hwy 138 OL Ratio Broadalbin	C092061	207	-	-	-	-	207
		Debalso Expansion - D-Line	C093802	-	-	248	703	827	1,777
		Delaware D-Line	C091776	-	35	1,000	1,000	1,000	3,035
		Dorwin D-lines	C093699	273	1,187	4,710	2,360	134	8,663
		Dorwin Station - switching station	C091197	1	139	69	-	-	210
		Eagle Bay Pad, D-line	C093628	-	-	158	608	2,422	3,188
		East Pulaski Station Rebuild	C099114	632	692	1,587	6,119	1,030	10,061
		Edwards Station	C091761	-	-	-	50	247	297
		Eighth St 80 - Indoor Substation Re	C046585	5,834	-	-	-	-	5,834
		Eighth St 80 - Sub Refurb D-Line.	C046586	62	49	-	-	-	112
		Eleventh St Substation Retirement	C097430	2	10	10	11	22	55
		Elm St 89865 Conversion 2nd Phase	C098031	354	-	-	-	-	354
		Elnora Station Rebuild	C093680	-	-	104	1,397	504	2,005
		Everett Station Rebuild	C093704	-	-	110	1,466	529	2,106
		Fayette St Line	C081980	2,850	2,669	2,915	948	139	9,521
		Fayette St Substation	C081981	6,790	6,059	4,049	1,849	-	18,747
		Firehouse Rebuild: D-Line	C096101	-	-	698	2,683	10,406	13,787
		Firehouse Rebuild: Substation	C093657	-	-	154	1,288	745	2,186
		French Mountain TB#1 Repl D-Line	C098014	459	-	-	-	-	459
		Galeville 71,72&73 fdrs conversion	C050749	3,309	236	3,496	5	-	7,046
		Galeville Station Rebuild	C050746	1,264	2,597	355	5	-	4,222
		Gloversville D-Line	C091775	-	-	35	1,000	1,000	2,035
		Gloversville Station	C091755	-	-	-	35	350	385
		Gloversville Station Rebuild	C093731	-	-	105	1,397	504	2,006
		Granby Center Expansion	C093650	-	128	1,059	613	5,370	7,170
		Grand Island Station Build	C081485	-	-	-	236	4,116	4,352
		Grand St Rebuild	C093693	-	-	116	1,540	556	2,212
		Jewett Rebuild	C093719	-	-	-	-	134	134
		Karner 4.16 kV Feeder Conversions	C049958	-	3,267	1,602	833	-	5,701
		Karner Station Retirement	C052309	-	-	-	-	439	439
		Katherine St New 115/13.2kV Sub	C098695	3,500	3,000	3,000	3,000	14,663	27,163
		Katherine St. Dx Line	C098998	-	-	-	-	784	784
		Knapp Road D-Line	C096279	-	-	50	2,000	4,000	6,050
		Knapp Road Station	C093760	-	-	105	1,397	1,750	3,252
		Lake George D-Line work	C093759	-	-	-	990	9,900	10,890
		Lake George Station	C093767	-	-	105	1,397	1,750	3,252
		Lasher Road - 53 Feeder OH	C068348	-	-	1,676	-	-	1,676
		Latham 28251 load relief	C099211	100	137	-	-	-	237
		LEVITT D-Line	C093702	-	-	-	2,881	11,081	13,962
		LEVITT Sub	C093701	-	-	-	128	1,697	1,825
		Liberty Street TB5	C081420	1,590	5,358	4,276	1,509	-	12,732
		LighthouseHill Relocation-Dist Line	C074342	38	2,341	-	-	-	2,379
		Little River 95555 Conversion	C098075	473	-	-	-	-	473
		Livonia 37 Substation Rebuild	C096426	-	-	553	1,334	988	2,874
		Livonia, 10 Mile Voltage Conversion	C096429	-	-	2,335	2,694	4,501	9,530
		Manheim Distribution	C074489	1,788	-	-	-	-	1,788
		McClellan Station Rebuild	C093728	-	-	122	1,617	583	2,322
		McCrea Station Retirement	C046790	21	-	-	-	-	21
		Menands Station D-Getaways	C096253	-	-	-	-	50	50
		Menands Station D-Line 10158	C096262	579	871	-	-	-	1,450

Menands Station D-Line Conversions	C096257	-	-	-	70	100	170
Mexico Dline	C093643	-	-	149	4,224	3,964	8,337
Middleburgh 51 - Route 145 Extend/C	CD01010	-	-	10	890	-	900
Middleville Boutique, D-line	C095741	-	-	-	1,292	3,952	5,244
Mill St D-Line	C097755	-	188	315	498	586	1,587
MV-Clinton Substation Rebuild, Control House	C096907	-	-	661	661	661	1,984
MV-Clinton Substation Rebuild, DLine	C094222	-	28	109	775	1,008	1,920
MV-Clinton Substation Rebuild, Station	C086880	-	174	1,041	2,166	5,957	9,338
New College Ave Substation	C097427	180	360	720	6,137	8,532	15,929
New Haven Bank Upgrade	C099105	-	-	-	-	7,449	7,449
Newtonville Area Study: D-Line	C091022	180	3,639	1,958	5,229	3,210	14,216
Newtonville Area Study: Forts Ferry	C091026	1	1	1	17	17	35
Newtonville Area Study: Johnson	C091023	2,186	2,469	3,669	3,516	545	12,385
Newtonville Area Study: Newtonville	C091025	5	5	5	113	113	241
Northern Niagara Falls D-line	C097431	5	28	75	758	3,417	4,282
Old Forge D-line	C096437	-	-	-	3,948	4,781	8,729
Old Forge Station	C096436	-	-	198	2,635	951	3,785
Partridge 12868 Conversion	C098522	-	243	182	-	-	425
Port Henry Rebuild	C093742	-	105	872	504	798	2,279
Pottersville Station- 34.5kV R424 Regulator	C097298	-	108	135	108	108	459
Raquette Lake Transformer Upgrade	CD01139	4	-	-	-	-	4
Rebuild Ash 4160	C082032	187	515	2,597	1,718	-	5,018
Rebuild Lockport Rd Substation	C097432	45	225	450	923	1,564	3,206
Rensselaer Area Study: D-Line	C091127	127	709	848	3,309	8,660	13,654
Replace Delameter F9352 UG Cable	C098244	760	-	-	-	-	760
Riverside - 34.5 kV Line Reactors	C096729	-	-	5	300	419	724
Roberts Rd Sta-Replace TB1	C086985	-	-	336	2,100	2	2,438
Rock Cut Metalclad	C083445	115	226	603	1,253	6,997	9,195
Rock Cut Station 286 - D-Line	C097164	5	7	7	7	158	183
Ruth Road Rebuild Distribution Work	C052304	3,380	3,981	1,533	-	-	8,894
Ruth Road Station Rebuild	C081613	8,093	8,809	677	-	-	17,579
S Washington Boutique D-line	C096439	-	-	396	1,523	6,066	7,985
Sand Creek 54 Distribution	C052306	2,756	1,521	-	-	-	4,277
Schenevus 26127 13.2 kV Rebuild	C093667	-	-	1,013	217	17	1,246
Schenevus Rebuild	C093665	-	-	84	1,506	828	2,418
Schroon 51 US-9 Mainline Relocation	C093776	149	-	-	-	-	149
Schroon Lake Getaway Rebuild	C097275	-	192	262	222	449	1,126
Schroon Lake Station Rebuild	C093740	-	162	192	192	192	738
Scofield 3rd Breaker Installation	C093777	50	472	-	-	-	522
Seventh Ave North Feeder Conversion	C080476	93	-	297	3,418	8,856	12,664
Seventh Ave South Feeder Conversion	C080475	93	-	277	2,184	4,274	6,828
Seventh Ave TB1	C080474	138	-	468	532	2,670	3,808
Sharon 36352 D-line Extension	C093697	-	-	-	20	2,000	2,020
Shawnee Rd 76- TRF1 AC D-Line	C097277	44	46	805	418	-	1,314
Shawnee Rd Station 76- TRF1 AC	C097155	1,174	1,284	3,381	2,190	-	8,030
Smith Bridge - New TB2 Getaways	C083483	-	50	112	2,856	1,183	4,201
Smith Bridge 2nd Bank & Metalclad	C081418	1,387	1,501	1,499	5,681	1,778	11,847
Smith Bridge 56 & 57 -Build Feeders	C083485	40	128	129	2,756	2,652	5,705
Southern Adirondack D-Line Work	C095254	-	-	990	2,700	15,300	18,990
Station 140- D-Line Work	C093018	246	1,753	631	20	4	2,655
Station 140 Station Rebuild	C056616	5,059	7,356	6,693	2,994	860	22,961
Station 154 Dx Line	C099018	-	-	510	6,903	6,453	13,866
Station 154 Dx Station	C099017	110	1,331	1,469	2,411	9,665	14,986
Station 34/35 Boutique - DLine	C099195	-	-	36	2,408	10,601	13,045
Station 41 Boutique - DLine	C099196	-	-	18	704	5,801	6,522
Station 79 Rebuild	C082713	-	158	2,918	3,048	11,208	17,332
Stittville Station	C091745	-	-	504	1,670	2,901	5,075
Stittville Station, D-line	C093785	-	-	-	515	3,094	3,609
Swagertown Station Upgrades	C091754	873	1,127	1,970	3,432	2,928	10,331
Swaggertown 54 and Scotia Conversion	C091774	190	225	1,928	2,484	5,732	10,559
Sycaway D-Line Getaway	C092376	148	-	-	-	-	148
Syr_HCB UCD Rework	C083237	37	590	-	-	-	626
Syr-Genant Dr MH 3 to 4 Duct Line	C088114	548	-	-	-	-	548
Third St. Retirement D-Line	C093651	-	-	-	-	50	50
Tuller Hill DLine-13kV Getaway	C064446	16	202	1	-	-	219
UG for Temple Rebuild	C079532	306	-	-	-	-	306
Unionville 27651 D Line Conversion	C099047	-	37	444	444	407	1,333
Upgrade 139 Dx Line	C099197	-	-	-	784	5,654	6,438
Upgrade 139 Dx Station	C099200	-	-	95	1,257	454	1,805
Valkin 52 Delta Conversion Phase 2	C094344	-	-	-	-	366	366
VM52 Honeywell Corners Rd OL Ratio	C092056	119	-	-	-	-	119
Voorheesville Station Rebuild	C093711	-	-	110	1,466	529	2,106
Warrensburg Rebuild	C093763	-	-	110	915	1,367	2,392
Waterport Asset Condition	C091751	30	1,650	1,566	3,828	4,927	12,001

		Welch 83 - Sub Refurb D-Line	C046584	498	-	-	-	-	498
		West Adams 2nd Bank	C084111	8	1,102	4,751	1,473	13,376	20,710
		West Adams Control House	C097476	-	631	631	631	210	2,102
		White Lake Pad D-Line	C093608	-	26	233	910	2,044	3,214
		Whitesboro Rebuild, D-Line	C095366	-	-	-	1,150	5,572	6,722
		Whitesboro Rebuild, Sub	C095365	-	-	-	164	796	960
		Wolf Road Getaway Replacement	C093700	-	137	525	4,100	1,755	6,516
	MVD_AC_System Capacity Total			**91,393**	**100,667**	**136,509**	**212,048**	**345,258**	**885,875**
Multi Value Distribution (MVD) Total				**91,423**	**100,678**	**136,520**	**212,057**	**345,259**	**885,937**
Non-Infrastructure	**D/Sub T_ Radios**	LMR Land Mobile Radio Sys	C086110	495	495	495	495	495	2,475
	D/Sub T_ Radios Total			**495**	**495**	**495**	**495**	**495**	**2,475**
	D/SUB T_Blanket	Cent NY-General-Genl Equip Blanket	CNC0070	1,690	1,741	1,793	1,847	1,902	8,974
		East NY-Genl Equip Budgetary Reserv	CNE0070	1,304	1,343	1,383	1,424	1,467	6,921
		West NY-General-Genl Equip Blanket	CNW0070	1,328	1,367	1,408	1,451	1,494	7,048
	D/SUB T_Blanket Total			**4,321**	**4,451**	**4,585**	**4,722**	**4,864**	**22,943**
Non-Infrastructure Total				**4,816**	**4,946**	**5,080**	**5,217**	**5,359**	**25,418**
Policy Initiative	**D/SUB T_Load Relief**	Clinton Sta - LN 12,15 THERM UPG	C088449	411	-	-	-	-	411
		Cortland Sta- LN1,3,18 THERM UPG	C088450	28	-	-	-	-	28
		North Leroy 04 115kV THERMAL UPGR	C091521	-	-	689	-	-	689
		Vail Mills 51 - County Hwy 107	C049793	350	-	-	-	-	350
	D/SUB T_Load Relief Total			**789**	**-**	**689**	**-**	**-**	**1,478**
	D/SUB T_Reliability	East Golah 55 Golah Road UG Dip	C098232	580	957	-	-	-	1,537
		Indian River - Install 115kV Brkr	C089578	5	-	-	-	-	5
	D/SUB T_Reliability Total			**585**	**957**	**-**	**-**	**-**	**1,542**
	MVD_AC_Reliability	CLCPA Golah Remote end upgrades	C098303	54	1,619	-	-	-	1,673
		Clinton 52 - CLCPA 115 kV UG Dip	C098365	30	310	-	-	-	340
	MVD_AC_Reliability Total			**84**	**1,929**	**-**	**-**	**-**	**2,013**
	MVD_AC_System Capacity	Coffeen Station Rebuild D-Line	C095230	4,851	24	24	-	-	4,899
	MVD_AC_System Capacity Total			**4,851**	**24**	**24**	**-**	**-**	**4,899**
Policy Initiative Total				**6,309**	**2,910**	**713**	**-**	**-**	**9,932**
	D/SUB T_Blanket	Cent NY-Dist-Reliability Blanket.	CNC0015	1,063	1,095	1,128	1,162	1,197	5,645
		East NY-Dist-Reliability Blanket.	CNE0015	4,332	4,722	5,147	5,610	6,115	25,925
		West NY-Dist-Reliability Blanket.	CNW0015	2,755	2,837	2,923	3,010	3,101	14,626
	D/SUB T_Blanket Total			**8,150**	**8,654**	**9,197**	**9,782**	**10,412**	**46,196**
	D/Sub T_Conductor Clearance	NF Casino Transformer Relocation	C099141	228	-	-	-	-	228
	D/Sub T_Conductor Clearance Total			**228**	**-**	**-**	**-**	**-**	**228**
	D/SUB T_ERR_Eng Reliability Review	*Church St 53 - Cnty Hwy 132 Convrt	C049652	-	10	1,440	-	-	1,450
		*Grooms Rd 34556 - Rte 146 Reconduc	C050105	-	-	15	595	-	610
		*Union St 54-Lincoln Hill Rd Ph 2	C056627	14	307	-	-	-	321
		Center St 52 - Hickory Hill Rd Conv	C056808	517	-	-	-	-	517
		Chrisler Ave 25735 Conversion	C057133	1,685	5	-	-	-	1,690
		Vail Mills 52 - County Hwy 16 Convt	C055530	213	-	-	-	-	213
	D/SUB T_ERR_Eng Reliability Review Total			**2,428**	**322**	**1,455**	**595**	**-**	**4,800**
	D/SUB T_Load Relief	Battenkill 57 Bald Mt Rd Conversion	C095993	-	374	-	-	-	374
		Inman 58 Cornelious Ave Conversion	C089653	181	-	-	-	-	181
		Lasher Rd 51 Cook Rd. Conversion	C089572	129	-	-	-	-	129
		Lynn St 57 Guilderland Ave Convert	C089679	-	472	-	-	-	472
		Rosa Rd 13756 West Ally Conversion	C089605	229	-	-	-	-	229
	D/SUB T_Load Relief Total			**539**	**847**	**-**	**-**	**-**	**1,385**
		01251 Church Ave. Conversion	C092818	211	-	-	-	-	211
		01253 Greenfield Ave. Tie	C094539	221	-	-	-	-	221
		08751 State HWY 23 Conversion	C090923	-	558	-	-	-	558
		08753 Michael Court Conversion	C090305	161	-	-	-	-	161
		12351 Fogarty Rd. Conversion	C090868	-	-	840	-	-	840
		12351 Valley Falls Rd. Conversion	C091071	445	-	-	-	-	445
		12352 NY-40 Conversion	C098656	20	859	-	-	-	879
		12353 Gypsy Ln. Extension	C091091	210	-	-	-	-	210
		12353 Middleburgh St. Conversion	C092618	2,568	-	-	-	-	2,568
		22151 NY-66 Conversion	C096962	15	-	1,120	-	-	1,135
		26452 Averill Park Rd. Conversion	C092769	432	-	-	-	-	432
		26452 White Church Rd. Conversion	C092770	225	301	-	-	-	526
		26453 NY-351 Conversion	C098636	-	10	992	982	-	1,983
		26453 Tamarac Rd. Conversion	C092718	-	-	398	-	-	398
		26453 White Church Rd. Conversion	C090459	338	-	-	-	-	338
		28551 Miner Rd. Conversion	C092827	-	763	-	-	-	763
		30057 NY-32 Conversion	C098566	20	919	-	-	-	939
		30351 County HWY 19 Conversion	C091345	476	-	-	-	-	476
		30353 Bells Pond Road Conversion	C090627	29	788	-	-	-	817
		30353 CTY RTE 27 3-Phase Extension	C091807	15	71	238	-	-	324
		30353 US HWY 9 Back Lot Relocation	C091819	-	15	143	-	-	158
		32851 Farm to Market Rd. Extension	C091069	287	-	-	-	-	287
		36654 Wheelock Street Conversion	C090245	-	236	-	-	-	236
		36955 S Greenfield Rd. Conversion	C092821	-	1,041	-	-	-	1,041
		37653 Mc Millan Rd. Conversion	C090094	114	-	-	-	-	114

Reliability	D/SUB T_Reliability	39253 Union Street Ratio Relief	C092343	143	-	-	-	-	143
		41352 NY-32 Conversion	C098576	20	1,161	-	-	-	1,181
		42753 County Road 21 Conversion	C091595	-	-	-	-	15	15
		95757 Co Rte 27 Conversion	C094929	353	528	-	-	-	881
		Bagdad-Dake Hill refurb Dline Xfer	C087243	3	47	11	17	-	78
		Baker St - Install 2nd xfmr	C046553	-	-	149	1,782	3,208	5,138
		Bartell 32554 - Convert 4.8kV areas	C094191	260	980	1,129	-	-	2,369
		Bartell 55 Conversion (Ladd Rd)	C094187	257	980	1,139	-	-	2,376
		Blue Stores 52 Rear Lot Relocation	C081571	474	-	-	-	-	474
		Burgoyne 52 - Eldridge Rd Rebuild	C091948	1,680	-	-	-	-	1,680
		Caledonia Sub 44 - Add a 34.5 Bker	C052446	-	-	-	250	432	682
		Caughdenoy Rd tie	C082301	-	649	-	-	-	649
		Cell Tower Line Rd Relocation 84661	C078048	-	660	-	-	-	660
		Chasm Falls -HWY 30 Relocation	C094925	570	-	-	-	-	570
		Chestertown 52 - Hayesburg Road Conversion	C081460	-	15	-	174	-	189
		Chestertown 52 - Rebuild US Hwy 9	C081455	-	-	263	-	-	263
		Clay Hill Relay Upgrade	C093394	15	172	-	-	-	187
		Cleveland-Lehigh Tie Part 2	C081847	-	418	-	-	-	418
		Corliss Park East Feeder Conversion	C081415	257	-	-	-	-	257
		Corliss Park South Feeder Conversio	C081414	1,571	523	1,621	719	-	4,434
		CSP Transformer Program NYCD	C094159	100	100	100	100	-	400
		CSP Transformer Program NYED	C094158	100	100	100	100	-	400
		CSP Transformer Program NYWD	C094160	100	100	100	100	-	400
		Curry Rd. 53 Fort Hunter Rd Rebuild	C088645	222	-	-	-	-	222
		D5D Porcelain Replacement NYC	C082233	273	273	273	273	273	1,365
		D5D Porcelain Replacement NYW	C082232	273	273	273	273	273	1,365
		Delanson 52 Sloansville Rd Recloser Install	C090709	133	-	-	-	-	133
		Duguid to Ridge rd tie - Ridge work	C097011	382	-	-	-	-	382
		Duguid to Ridge rd tie -Duguid work	C097010	305	-	-	-	-	305
		E Leroy F0456 Feeder Getaway	C098150	100	262	75	-	-	437
		East Golah F5151 Feeder Getaway, Mumford F5153 Tie Suppo	C097459	55	169	21	-	-	245
		Elnora 57 6IVS recloser and fusing	C090064	114	-	-	-	-	114
		Emmet St Station - Dx Retirement	C080418	-	-	665	181	10	856
		Fayette Rd Conversion #2 85251	C081826	-	21	-	561	-	582
		Fayette Rd Conversion 85251	C081825	753	-	-	-	-	753
		Ft Gage 54 - Bloody Pond Rd Tie	C098231	-	-	25	840	-	865
		FY20 D5D Porcelain Replacement NYE	C082234	247	247	247	247	247	1,233
		G&W Viper Replacement Program (West	C081839	50	-	-	-	-	50
		Gilmantown 51 - Lake Pleasant 5kV	C082694	616	-	-	-	-	616
		Hague Rd - 4th Breaker Installation	C095399	151	-	-	-	-	151
		Hague Rd - 4th Feeder Distribution	C095404	394	803	-	-	-	1,197
		Inman 58- Eastern Pkwy Conversion	C088738	-	-	854	-	-	854
		Juniper Station Retirement	C092486	52	6	-	-	-	58
		Liberty St 13.2 kV Getaways	C081421	101	-	6	-	-	107
		Lockport Road 216 - Install TB#2	C036057	-	-	-	150	1,800	1,950
		Lockport Road 216 - Install TB#2 -	CD01252	-	-	10	300	-	310
		Long Rd 209 - New F20955	CD00964	-	-	-	1,006	-	1,006
		Long Road 209 - Install TB2	CD00977	-	-	-	1,614	1,737	3,351
		Lyme 73351-NYS RTE 12E Conversion	C094919	837	-	-	-	-	837
		Mcgraw Wildman Rd Pole correction	C097226	551	-	-	-	-	551
		McIntyre-Hammond #24 Dist. Taps	C083853	51	38	1,936	176	-	2,200
		Menands 10158 4.8kV Conversion	C092865	371	-	-	-	-	371
		Mill St_LVAC_2014 Upgrades-N-2	C053903	50	348	-	-	-	398
		Mohican Distribution	C081399	1,291	1,729	181	-	-	3,201
		Mount Arab Lake Submarine Cable	C087232	50	732	178	-	-	960
		Mumford F5051 Feeder Getaway	C098171	22	73	23	-	-	118
		N Leroy F0455 - Linwood Road PIW	C056629	15	167	-	-	-	182
		NY - East 1 ph cutout mounted Reclosers	C053928	126	126	126	126	126	630
		NY Central 1ph Cutout Mounted Reclosers	C096674	95	95	95	95	95	475
		NY West 1 ph Cutout Mounted Reclosers	C095357	126	126	126	126	126	630
		PAL LED Conversion Program NYC	C095686	184	149	271	251	251	1,106
		PAL LED Conversion Program NYE	C095700	150	122	221	205	205	903
		PAL LED Conversion Program NYW	C095698	228	185	335	311	311	1,370
		Paloma 55 Delta Conversion Phase 2	C094235	-	100	1,755	100	-	1,955
		Paloma 55 Delta Conversion Phase 3	C094236	101	590	1,226	902	-	2,819
		Patroon Construct New Feeders	C081583	-	-	18	48	96	162
		Port Henry 52 - Broad St Conversion.	C081530	-	-	875	-	-	875
		Quail Hollow Station Demolition	C092487	5	20	-	-	-	25
		Queensbury 52 - Convert Montray Rd	C092240	181	-	-	-	-	181
		Queensbury 55 - Convert Jerome Ave	C092243	295	-	-	-	-	295
		Riverside LN4 A relaying and Telco	C098260	-	-	-	323	27	350
		Schroon Lake 51 Submarine Cable	C096687	-	-	25	1,975	-	2,000
		Sharon 51 Rearlot Removal Hoose Rd	C092362	-	200	-	-	-	200
		Sherman Ashville 863 D Transfer	C084806	462	67	-	-	-	530

		Sorrell Hill Rebuild	C077170	1,128	321	4,066	3,069	310	8,894
		Sorrell Hill Rebuild - Control House FP	C094883	-	472	472	584	-	1,529
		Sorrell Hill Rebuild DLine	C094698	189	351	3,469	663	-	4,672
		Station 26- R954, R944, R974 Bkrs.	C091230	558	-	-	-	-	558
		Stuyvesant 51 Hudson 52 Loop Scheme	C091673	137	137	-	-	-	274
		Swaggertown 52 - Charlton Rd Conver	C084210	-	-	108	-	-	108
		Targeted UG - Grooms Rd Tie	C093862	-	2	128	1,203	-	1,333
		Transf Dist Fdrs -Tona L622-624	C084807	-	85	135	-	-	220
		Truxton 27-Cuyle 25 new tie	C095612	-	-	192	694	945	1,832
		Union St 52 - Greene/King Rd Conver	C056649	-	964	-	-	-	964
		Vail Mills 52 - Crooked St Rebuild	C092244	5	288	537	-	-	830
		Valkin 53-Kinderhook St Conversion	C083943	56	-	-	-	-	56
		Wetzel 55 - Convert Caughdenoy	C094192	238	980	1,079	-	-	2,297
		Wilton 51 - Route 50 Rebuild/Conversion	C089187	512	-	-	-	-	512
	D/SUB T_Reliability Total			**23,924**	**22,515**	**28,366**	**20,521**	**10,487**	**105,813**
	D/SUB T_Side Tap Fusing	IE - NW Side Tap Fusing	C015509	63	66	69	73	77	348
	D/SUB T_Side Tap Fusing Total			**63**	**66**	**69**	**73**	**77**	**348**
	D/SUB T_Storm Hardening	Scofield 53 - FY16 Storm Hardening	C057289	366	-	-	-	-	366
	D/SUB T_Storm Hardening Total			**366**	**-**	**-**	**-**	**-**	**366**
	D/SUB T_Substaion Flood Mitigation	Hawkeye Station - Dline	C095048	-	8	122	211	-	342
		Hawkeye Station Sub	C097560	-	33	397	1,749	3,498	5,677
	D/SUB T_Substaion Flood Mitigation Total			**-**	**42**	**519**	**1,960**	**3,498**	**6,019**
	D/SUB T_Substation Power Transformer	Spare Transformer - Station 205	C098903	355	-	-	-	-	355
	D/SUB T_Substation Power Transformer Total			**355**	**-**	**-**	**-**	**-**	**355**
	D/Sub T_Targeted Feeder Tie Enhancements	Ashley 51 - Cedar 51 Tie	C092239	549	-	-	-	-	549
		Emmet Street 08 and 09 Conversion	C092270	505	-	-	-	-	505
	D/Sub T_Targeted Feeder Tie Enhancements Total			**1,054**	**-**	**-**	**-**	**-**	**1,054**
Reliability Total				**37,108**	**32,446**	**39,606**	**32,931**	**24,474**	**166,565**
	D/Sub T_FLISR	NY FLISR Central - D-line	C080088	10,454	11,761	10,296	10,811	11,351	54,673
		NY FLISR East - D-line	C080089	10,554	11,761	10,296	10,811	11,351	54,773
		NY FLISR West - D-line	C080090	10,545	11,761	10,296	10,811	11,351	54,764
	D/Sub T_FLISR Total			**31,553**	**35,283**	**30,888**	**32,433**	**34,053**	**164,210**
	D/Sub T_Other	L160 Resiliency - Baker St Sub	C092290	-	-	118	323	-	441
		L160 Resiliency - Berry Rd Sub	C092291	-	-	468	6	-	474
	D/Sub T_Other Total			**-**	**-**	**586**	**329**	**-**	**915**
	D/SUB T_Reliability	Trinity 16458 underground	C094372	166	-	-	-	-	166
	D/SUB T_Reliability Total			**166**	**-**	**-**	**-**	**-**	**166**
	D/SUB T_Sub-T Automation	South Oswego- Whitaker Resiliency	C090776	29	-	-	-	-	29
	D/SUB T_Sub-T Automation Total			**29**	**-**	**-**	**-**	**-**	**29**
	D/Sub T_Targeted Feeder Tie Enhancements	*McClellan 51 - Union ST Conversion	C050085	834	-	-	-	-	834
		*Rbld/Conv to Create tie F7652-7651	C049802	72	-	-	-	-	72
		*Rebuild Darien F1662 Limited Tie	C049634	-	-	-	15	489	504
		*Selkirk 14951 -Thatcher/River Conv	C049985	-	-	15	1,193	-	1,208
		31451 High St. Conversion	C050082	-	145	-	-	-	145
		45151 CR-2 42754 Tie	C094377	844	493	35	-	-	1,372
		Antwerp Feeder Tie Part 2	C081807	583	-	-	-	-	583
		ARBP- Salisbury 53 to 56 Tie Part 1	C092580	775	-	-	-	-	775
		ARBP- Salisbury 53 to 56 Tie Part 2	C092583	568	-	-	-	-	568
		Chasm Falls Internal Tie Part 1	C081808	-	295	-	-	-	295
		Chasm Falls Internal Tie Part 2	C081810	-	745	-	-	-	745
		Clinton 36653-54 Conversion Tie	C053628	-	470	-	-	-	470
		Delanson 51-Burdeck 54 Tie	C083540	-	-	666	-	-	666
		Delphi 51 - Duguid 52 tie part 1	C098909	946	-	-	-	-	946
		Delphi 51 - Duguid 52 tie part 2	C098910	0	1	0	-	-	1
		East Springfield 51 Feeder Tie	C094408	-	-	-	-	495	495
		East Worcester 21 Feeder Tie	C094409	-	-	495	1,980	-	2,475
		Emmet 25605 - Stuben St Conversion	C088350	194	-	-	-	-	194
		F07_18151 Tie with F07_9354	C094413	-	50	602	2,409	-	3,061
		Fdr tie G.Mills-New Haven Phase 2	C097370	30	720	700	-	-	1,450
		fdr tie Gilbert Mills - New Haven PH1	C094367	510	285	-	-	-	795
		fdr tie Sandy Creek - East Pulaski	C094371	1,658	-	-	-	-	1,658
		Feeder 03_7161 Tie with Feeder 9363	C094342	-	-	100	3,057	-	3,157
		Feeder 04_0456 Tie with Feeder 5053	C094406	80	520	690	1,802	303	3,395
		Feeder 06_9561 Tie With 06_7863	C094382	-	660	1,650	1,980	1,980	6,270
		Feeder 15054 Tie to 6861 Co RTE 328	C094414	297	297	-	-	-	594
		Feeder 15351 Tie with 15353 Swede R	C094407	-	-	46	814	1,011	1,871
		Florida 51 - Fort Hunter Road	C050693	852	-	-	-	-	852
Resiliency		HWY 812 Rebuild 93851	C094370	4	171	1,397	-	-	1,572
		Lehigh 53/Rome 54 Tie Recon. P2	C094423	-	-	99	1,683	-	1,782
		Lorings-Truxton tie phase 1	C092638	-	-	343	-	-	343
		Lorings-Truxton tie phase 2	C092639	36	644	-	-	-	680
		Lorings-Truxton tie phase 3	C092640	-	15	235	-	-	250
		McAdoo 91453 Reconductoring	C097804	1,694	-	-	-	-	1,694
		Milton Ave DLine	C046643	4,415	2,306	-	-	-	6,722

		MSH Create tie F215452 to F21258	C087703	300	-	-	-	-	300
		MSH Upgrade Limited Tie to F7656	C082089	351	-	-	-	-	351
		MSH-Collins 8361 Tie N Collins 9262	C082083	519	-	-	-	-	519
		MSH-Remove N Angola from 07-9352	C082082	517	-	-	-	-	517
		New Thousand Islands 81457 Feeder	C081805	89	267	495	1,144	1,695	3,691
		Rock City 73/Salisbury 53 Tie	C094375	-	-	650	-	-	650
		Rock City Station - 13.2kV Rebuild	C046671	436	4,842	-	-	-	5,278
		Rock City Sub - Distribution Line	C082291	199	793	5	-	-	997
		Rome 54 12kV Conversion	C094421	450	-	-	-	-	450
		Shore Rd 28186 - Elnora 55 Transfer	C067867	1,065	-	-	-	-	1,065
		Targeted fdr ti Cuyler-Delphi Dline	C094340	280	799	925	120	-	2,124
		Targeted fdr tie Truxton -Mcgraw	C094337	280	87	1,155	715	223	2,461
		Turin 57/58 Tie	C096509	-	-	821	3,158	4,038	8,017
		Warrensburg 51 - Birch Ave 52 Tie	C094402	-	-	-	-	974	974
		Warrensburg 52 - Chestertown 51 Tie	C094376	-	-	-	1,400	880	2,280
		Weaver St 51 - Chrisler 51 Tie	C094373	-	-	2	175	1,729	1,906
		Weibel 56 Wall Street Rebuild	C051325	-	9	848	1,683	-	2,540
		Create Full tie F18251 to F18254	C049882	-	-	17	1,241	248	1,505
		Middleport F7765 Tie w/Shelby 7656	C049711	752	1,040	-	-	-	1,791
	D/Sub T_Targeted Feeder Tie Enhancements Total			**19,630**	**15,654**	**11,991**	**24,570**	**14,064**	**85,908**
D_Climate Vulnerability		CCRP (Ambient Temp) Station Central	C094208	-	468	459	301	441	1,669
		CCRP (Ambient Temp) Station East	C094217	-	468	459	301	441	1,669
		CCRP (Ambient Temp) Station West	C094216	-	468	459	301	441	1,669
		CCRP (Flood) Front St Station	C094040	500	-	-	-	-	500
		CCRP (Flood) Riverside Station 288	C093553	-	-	700	2,000	2,000	4,700
		CCRP(Flood)Gloversville Station 72	C093814	-	-	-	675	750	1,425
		CCRP(Flood)Peterboro 514-Flood Wall	C093813	-	-	-	825	225	1,050
		Dist Line CCRP Projects - NYC	C094130	-	3,332	9,108	9,667	9,526	31,633
		Dist Line CCRP Projects - NYE	C094132	-	3,332	9,108	9,667	9,526	31,633
		Dist Line CCRP Projects - NYW	C094133	-	3,332	9,108	9,667	9,526	31,633
		Targeted UG CCRP Projects - NYC	C094138	-	-	-	3,750	3,750	7,500
		Targeted UG CCRP Projects - NYE	C094140	-	-	-	3,750	3,750	7,500
		Targeted UG CCRP Projects - NYW	C094141	-	-	-	3,750	3,750	7,500
	D_Climate Vulnerability Total			**500**	**11,400**	**29,403**	**44,652**	**44,125**	**130,081**
Resiliency Total				**51,878**	**62,337**	**72,868**	**101,984**	**92,242**	**381,309**
	D/SUB T_Blanket	Cent NY-Dist-Load Relief Blanket.	CNC0016	690	710	732	754	776	3,662
		East NY-Dist-Load Relief Blanket.	CNE0016	861	887	914	941	969	4,573
		West NY-Dist-Load Relief Blanket.	CNW0016	181	186	192	198	203	960
	D/SUB T_Blanket Total			**1,732**	**1,784**	**1,837**	**1,893**	**1,949**	**9,195**
	D/SUB T_Dist Transformer Repl	IE- NC Dist Transformer Upgrades	C014846	500	1,000	2,000	2,000	2,000	7,500
		IE- NE Dist Transformer Upgrades	C015828	500	1,000	2,000	2,000	2,000	7,500
		IE- NW Dist Transformer Upgrades	C010967	495	990	1,386	1,455	1,528	5,854
		Lord'sHill 67 fdr 13.2kV conversion	C093933	629	177	-	-	-	807
	D/SUB T_Dist Transformer Repl Total			**2,124**	**3,167**	**5,386**	**5,455**	**5,528**	**21,661**
		*Hague Rd 52 - Convert Delta Route 22	C050717	1,421	-	-	-	-	1,421
		26453 South Rd. Conversion	C045696	271	-	-	-	-	271
		30057 Park Ave. Conversion	C096834	-	-	-	938	-	938
		33452 NY-43 Conversion	C081968	-	-	1,071	-	-	1,071
		37253 Congress St. Conversion	C096877	-	-	-	639	-	639
		44953 Dunsbach Rd. Conversion	C049864	501	-	-	-	-	501
		87554 County RTE 189 & 95 - Rebuild	C052367	274	-	-	-	-	274
		BakerSt 56 Delta Conversion Phase 1	C093874	1,103	1,498	912	289	-	3,802
		BakerSt 56 Delta Conversion Phase 2	C093875	-	250	1,300	2,610	950	5,110
		Belmont upgrade, Sub	C095379	-	-	-	-	127	127
		Birch Ave 51 - Route 9N Conversion	C053127	406	-	-	-	-	406
		Birch Ave 51 Route 9 Double Circuit	C093535	1	31	190	-	-	222
		Birch Ave 51 Route 9N Extension	C093530	2	103	885	-	-	990
		Boyntonville Rebuild: D-Line	C093661	-	-	495	1,980	1,980	4,455
		Boyntonville Rebuild: Substation	C093660	-	-	122	1,617	583	2,322
		Bridgeport Upgrade, Sub	C095380	-	-	-	-	127	127
		Burgoyne 52- 336 TS Conductor Pilot	C097628	29	-	-	-	-	29
		Butler 51 - Mountain Rd Conversion	C092242	210	-	-	-	-	210
		Caroga D-Line	C093737	-	-	-	1,233	5,250	6,483
		Cicero D-Line	C091779	67	41	5,679	7,166	315	13,269
		Cicero sub Control House	C097043	898	908	1,304	-	-	3,111
		Cicero Substation	C091713	417	4,395	14,807	5,774	669	26,062
		Cleveland D-Line Boutique Sub	C093655	140	480	750	830	50	2,250
		Coffeen 55 Upgrade, I-81 EV Fleets	C097421	-	47	293	748	983	2,072
		Coffeen 56 Delta Conversion	C094206	-	140	648	1,028	454	2,270
		Commerce D Line	C091528	188	142	229	2,313	1,543	4,415
		Commerce Station	C091533	792	901	330	7,125	491	9,638
		Constantia D-Line Boutique Sub	C093653	140	480	970	1,290	50	2,930
		Crown Pt 51 - Route 9N Conversion	C081834	-	5	339	657	-	1,001
		Curry 51 Carmen Rd Cable Repl	C093266	15	95	-	-	-	110

System Capacity - NY	D/SUB T_Load Relief	Curry 51 E Lydius Reconductor	C093259	15	410	-	-	-	425
		Curry Rd 57 Fiero Ave Conversion	C089748	-	-	389	-	-	389
		Debalso Expansion - Sub	C091746	50	584	218	554	3,713	5,119
		DeLaet's Landing DxD	CD00893	7	-	-	-	-	7
		Delanson 51_3P Conv_E Esp. Braman	C087932	35	-	-	-	-	35
		Delanson TB1 40 MVA Rebuild	C092947	-	-	-	55	1,100	1,155
		Delmar Feeders Rebuild and Convert	C083926	1,902	3,167	1,459	192	-	6,720
		East Batavia 55 Delta Conversion	C093854	-	-	-	248	1,130	1,379
		East Golah 52 Delta Conversion	C093853	146	1,172	1,842	1,366	425	4,950
		East Golah 55 Delta Conversion	C093852	-	-	-	248	1,130	1,379
		EJ West 51 - Convert South Shore Rd	C098361	28	2,449	-	-	-	2,477
		Elnora 44256 - Diamond Rd 3phs Ext	C092841	4	-	-	410	-	414
		Elsmere - Feeder Getaways	C083920	734	20	-	-	-	754
		Elsmere Substation Rebuild	C083916	4,856	1,480	-	-	-	6,336
		Firehouse 44951	C050081	12	1,500	1,050	-	-	2,562
		Florida 52 - Route 30 Ratio Relief	C090613	407	-	-	-	-	407
		Forbes Ave - New Substation	C053137	8	-	-	-	-	8
		Front St 36051 - Glen Ave 13.2 Conv	C092682	7	150	768	-	-	925
		Ft Gage 54 - Convert Cleverdale Rd	C096846	-	-	861	-	-	861
		Gilbert Mills Rebuild-Control House	C098005	500	500	666	-	-	1,665
		Gilbert Mills upgrade DLine work	C096805	25	38	448	108	-	619
		Gilbert Mills Xfmr Upgrade-Xfmr	C046563	653	766	5,240	5,699	-	12,358
		Gloversville 53 D-Line	C096331	-	-	-	1,742	2,233	3,975
		Greenbush 07857	C091131	2	2,170	-	-	-	2,172
		Greenbush Getaways	C097545	100	100	1,800	2,850	1,900	6,750
		Grooms Rd upgrade to 55MVA Banks	C093685	-	-	-	-	134	134
		Hague Rd 53 - Alexandria Ave	C081836	722	-	-	-	-	722
		Hudson 53 Getaway Replacement	C093240	83	-	-	-	-	83
		Install New UG Feeder 16071	C092685	-	-	-	696	-	696
		Johnstown 25 - O'Neill Ave Transfer	C094989	111	139	-	-	-	250
		Kenmore Station 22 Energy Storage	C093917	-	-	-	10	40	50
		Lakeville Substation Retirement	C046588	291	-	-	-	-	291
		Liberty Street D-Line	C083844	726	2,133	2,627	1,746	2,333	9,563
		Lowville 54 Conversion	C094215	-	-	1,089	2,198	2,080	5,367
		Lyndonville Tr Replace	C091756	-	-	-	-	35	35
		Malone 2nd Bank Feeders (D-Line)	C082332	1,033	4,869	7,869	6,738	-	20,509
		McClellan 51 Central Pkwy Convert	C089942	-	135	-	-	-	135
		MITS D-Line	C093714	-	-	75	365	725	1,164
		N Leroy 56 Delta Conversion Phase 1	C093880	124	1,519	1,835	1,116	-	4,594
		N Leroy 56 Delta Conversion Phase 2	C093882	-	125	1,595	2,462	458	4,640
		New Krumkill - Feeder Getaways	C083927	143	800	2,555	3,725	700	7,923
		New Krumkill 52 Feeders	C083928	-	1,035	-	-	-	1,035
		New Krumkill Station	C091748	3,392	4,548	4,383	6,322	2,280	20,925
		New Krumkill/Ave A Line	C091773	1,534	6,916	7,921	8,364	1,246	25,982
		New Machias Station (Land Purchase)	C093642	-	-	-	-	1,980	1,980
		New Machias Substation (Station Wk)	C093639	-	-	-	105	1,397	1,502
		North Creek Station Rebuild	C095798	-	-	-	-	110	110
		Ogden Brook 54 - Clendon Brook Rd	C092241	245	-	-	-	-	245
		OgdenBrook 56 - Convert Big Boom Rd	C094858	554	-	-	-	-	554
		Otten 3 Phase Extension	C093754	-	17	1,315	653	-	1,985
		Peat St rebuild, Sub	C095378	-	-	-	128	1,059	1,187
		Port Henry 51 - Convert Port Henry	C081529	672	-	-	-	-	672
		PS&I Activity - New York	C008153	421	434	447	460	474	2,236
		Rome 52 Delta Conversion	C094212	69	267	307	-	-	644
		Rome 52 Delta Conversion	C094213	-	-	-	70	268	338
		Rome 55 Delta Conversion Phase 1	C094210	200	1,312	2,102	-	-	3,614
		Rome 55 Delta Conversion Phase 2	C094211	-	390	2,000	1,250	-	3,640
		Rome 56 Delta Conversion	C094214	69	267	307	-	-	644
		RR-Menands 10157-Getaway Replacemen	C053966	1,345	-	-	-	-	1,345
		Russell Road 22851 Conversion	C097566	841	-	-	-	-	841
		Salisbury Station - D-line	C093800	-	683	2,625	3,052	-	6,360
		Salisbury Station - Sub Rebuild	C093794	-	105	1,397	504	1,410	3,416
		Schroon 51 - US9 Conversion	C096720	-	-	20	601	-	621
		Scofield Rd 51 Feeder	C093525	2	53	380	-	-	434
		Selkirk 14952 Overloaded ratio	C080204	194	-	-	-	-	194
		Sharon 51 - Route 20 Ratio Relief - 4.8kV Conversion	C090689	811	-	-	-	-	811
		Sharon 52 - Route 20 Ratio Relief	C090702	567	-	-	-	-	567
		Sodeman Rd 51 Feeder Construction	C076785	780	1,186	-	-	-	1,966
		Sodeman Rd 52 - Sodeman Road	C076794	462	-	-	-	-	462
		Sodeman Road 52 - Barney Rd. Rebuild	C047978	505	-	-	-	-	505
		South Eden Greenfield New Feeder 1	C048015	143	-	-	-	-	143
		South Eden Greenfield New Feeder 2	C048016	925	31	-	-	-	956
		South Eden Greenfield Substation	C046538	8,616	3,528	6	-	-	12,151
		South Street Rebuild	C093745	-	-	105	1,397	504	2,006

		Summer Prep - Busti Load Relief	C092375	-	122	-	-	-	122
		Sunny Side - Substation	C097312	-	56	741	268	661	1,726
		Swaggertown 52 Beechwood Dr Conver	C088977	141	-	-	-	-	141
		UG for E Pulaski rebuild	C097013	150	150	220	370	101	990
		Union St 52 - County Hwy 59	C056632	1	-	-	1,271	-	1,272
		Unionville D-Line Work	C093713	135	487	520	500	7,420	9,062
		Upgrade and Convert STA 129 SUB	C093566	-	-	-	-	134	134
		Upgrade and Convert STA 214 SUB	C093592	-	-	-	-	134	134
		Upgrade and Convert STA 74 SUB	C093600	-	-	-	105	1,397	1,502
		Vail Mills 52 - Centerline Rd Ratio	C090717	25	225	-	-	-	250
		Van Hoesen Greenfield: D-Line	C097297	-	-	-	-	500	500
		Van Hoesen Greenfield: Substation	C097296	-	-	-	-	120	120
		W. Wellsville Boutique sub - D-Line	C093790	-	348	1,299	3,381	1,523	6,552
		W.Chautauqua Dline Work	C055265	-	-	-	1,500	-	1,500
		Warrensburg 51 - Co Rt10 Conversion	C096719	-	4	161	698	-	863
		Warrensburg 52 - Glen Athol Road	C081457	-	-	1,184	-	-	1,184
		Wellsville Boutique sub - D-Line	C093741	-	-	-	411	1,575	1,986
		West Adams New Feeders TB2	C084110	8	235	982	2,671	8,737	12,632
		West Cleveland D-line	C097940	140	480	950	1,260	50	2,880
		West Monroe D-line	C097939	75	120	260	366	50	871
		Woodard Road Greenfield: Station	C097429	-	-	152	532	734	1,418
	D/SUB T_Load Relief Total			**42,619**	**56,741**	**92,491**	**105,001**	**65,572**	**362,425**
	D/SUB T_Reliability	New Krumkill 42154	C091181	19	-	-	-	-	19
	D/SUB T_Reliability Total			**19**	**-**	**-**	**-**	**-**	**19**
	D/SUB T_Safety	Cortland LVAC_Disassemble	C087469	73	115	2,131	1,800	982	5,100
	D/SUB T_Safety Total			**73**	**115**	**2,131**	**1,800**	**982**	**5,100**
	D/Sub T_Volt Var Optimization/Conservation Voltage Reduction (VVO/CVR)	NY LTC Controller - D Sub	C085942	500	750	1,000	1,996	2,096	6,342
		Switched Source Program NYC	C094898	950	1,266	2,284	-	-	4,500
		Switched Source Program NYE	C094897	950	1,266	2,284	-	-	4,500
		Switched Source Program NYW	C094899	950	1,266	2,284	-	-	4,500
	D/Sub T_Volt Var Optimization/Conservation Voltage Reduction (VVO/CVR) Total			**3,350**	**4,549**	**7,851**	**1,996**	**2,096**	**19,842**
	D_Non-REP LINE OTHER	Lasher Road Feeder #52 Conversions	C086787	18	810	-	-	-	828
	D_Non-REP LINE OTHER Total			**18**	**810**	**-**	**-**	**-**	**828**
System Capacity - NY Total				**49,935**	**67,166**	**109,696**	**116,145**	**76,127**	**419,069**
Approved Proactive Planning	**D/SUB T_Load Relief**	Colosse feeder work for EV Charging	C093499	1,697	-	-	-	-	1,697
		Electric Vehicle Upgrades 81458	C092948	235	-	-	-	-	235
		Electric Vehicle Upgrades 86942	C092951	188	-	-	-	-	188
		Electric Vehicle Upgrades 89553	C092949	235	-	-	-	-	235
		Electric Vehicle Upgrades 93662	C092952	188	-	-	-	-	188
		Grooms Rd 51 Getaway Replacement	C098868	266	-	-	-	-	266
		Hancock 2 DLine upgrade	C093668	1,133	-	-	-	-	1,133
		Mobile Storage at Angola	C094583	2,880	2,880	-	-	-	5,760
		Mobile Storage at Chittenango	C094585	2,880	2,880	-	-	-	5,760
		Mobile Storage at Guilderland	C094584	2,880	2,880	-	-	-	5,760
		Sand Road 2 DLine upgrade	C093669	1,133	-	-	-	-	1,133
		Station 3012 D-Line, Part 2	C085610	290	-	-	-	-	290
		Station 3012 Substation	C074909	2,034	-	-	-	-	2,034
		Teall 55 upgrades for CNY Bus Depot	C098155	1,693	-	-	-	-	1,693
		Wilton 13.2kV Double Circuit	C097302	150	700	360	-	-	1,210
		Wilton 3rd Breaker Installation	C097300	20	500	330	-	-	850
	D/SUB T_Load Relief Total			**17,903**	**9,840**	**690**	**-**	**-**	**28,433**
	D/SUB T_New Business	EV-Barker CSD Incremental	C092845	-	-	425	-	-	425
		Marine Drive Ph1 - Distribution	C095804	505	148	-	-	-	653
	D/SUB T_New Business Total			**505**	**148**	**425**	**-**	**-**	**1,078**
	D/SUB T_Reliability	Delameter Substation Rebuild	C046536	3,352	13,051	2,484	122	-	19,010
	D/SUB T_Reliability Total			**3,352**	**13,051**	**2,484**	**122**	**-**	**19,010**
	D/Sub T_Targeted Feeder Tie Enhancements	Delameter F9356-express& rebuild	C047877	1,190	1,907	96	-	-	3,192
		Delameter new F9355 - express..	C047885	22	1,750	3	-	-	1,774
	D/Sub T_Targeted Feeder Tie Enhancements Total			**1,212**	**3,657**	**98**	**-**	**-**	**4,967**
Approved Proactive Planning Total				**22,972**	**26,696**	**3,697**	**122**	**-**	**53,487**
Cost Share 2.0	**D/SUB T_Load Relief**	Cost Share 2.0 Reserve - NYC	C091880	6,564	7,342	8,036	8,605	9,074	39,622
		Cost Share 2.0 Reserve - NYW	C091882	6,564	7,342	8,036	8,605	9,074	39,622
		Cost Share 2.0 Reserve -NYE	C091879	6,564	7,342	8,036	8,605	9,074	39,622
	D/SUB T_Load Relief Total			**19,692**	**22,027**	**24,107**	**25,816**	**27,223**	**118,866**
Cost Share 2.0 Total				**19,692**	**22,027**	**24,107**	**25,816**	**27,223**	**118,866**
EV MRP	**D/SUB T_New Business**	Electric Transp. Initiative-FTM NYC	C086719	2,896	3,611	3,847	5,293	6,717	22,364
		Electric Transp. Initiative-FTM NYE	C085240	2,896	3,612	3,847	5,293	6,717	22,364
		Electric Transp. Initiative-FTM NYW	C086718	2,896	3,612	3,847	5,293	6,717	22,364
	D/SUB T_New Business Total			**8,687**	**10,834**	**11,540**	**15,880**	**20,150**	**67,092**
EV MRP Total				**8,687**	**10,834**	**11,540**	**15,880**	**20,150**	**67,092**
Policy Initiative - CLCPA Ph2	**D/SUB T_Load Relief**	N Carthage Sta 816-CNTRL Bldg	C099377	265	-	-	-	-	265
		North Carthage Substation Upgrades	C090054	4,141	1,808	15	-	-	5,964
	D/SUB T_Load Relief Total			**4,406**	**1,808**	**15**	**-**	**-**	**6,229**
Policy Initiative - CLCPA Ph2 Total				**4,406**	**1,808**	**15**	**-**	**-**	**6,229**

Cost of Removal	**Cost of Removal**	Distribution Cost of Removal	COR	46,469	62,904	64,809	71,237	72,043	317,462
				46,469	**62,904**	**64,809**	**71,237**	**72,043**	**317,462**
Cost of Removal Total				**46,469**	**62,904**	**64,809**	**71,237**	**72,043**	**317,462**
Grand Total				**832,601**	**903,934**	**990,241**	**1,112,186**	**1,214,423**	**5,053,385**

Exhibit 4: Non-Wires Alternative Update

National Grid has adopted guidelines for the review and consideration of NWAs in its planning processes. The guidelines outline two stages of review: the first is to identify potential areas of need where an NWA may be feasible, and the second is to determine NWA feasibility and design. The first stage is completed by Transmission and Distribution Planners as they review potential capital investment needs. The second stage is completed by Project Managers in the Company's NWA Team who coordinate procuring solutions for the identified areas.

NWA Suitability Review
The initial review for projects with NWA potential takes place when the Company's Transmission and Distribution Planning groups conduct their annual capital needs assessment. During the CIP development, the Company screens for potential NWA opportunities according to the criteria in the table below.

Criteria	Potential Elements Addressed
Project Type Suitability	Project types include Load Relief and Reliability. Other types have minimal suitability and will be reviewed as suitability changes due to State policy or technological changes.
Timeline Suitability	18 months minimum prior to the date of the system need
Cost Suitability	Greater than or equal to $1M

NWA RFP Development
The Company begins the RFP development process after completion of the NWA suitability review and confirmation that feasibility for a specific project has been determined.

The RFP development process involves compiling information that best describes the area's electric system requirements. Information provided in the RFP includes historical electric load data, aggregated customer information, detailed description of equipment and stresses on equipment, geographic data, circuitry, load forecasts (daily and yearly), project economics in the form of the value of the deferred traditional solution, and other information that may help vendors understand the project scope. The team also considers pairing NWA need statements with internal programs such as Energy Efficiency ("EE"), DR, and other similar targeted distribution programs.

Once the circumstances and load drivers are developed, the RFP is filed and released to potential bidders through the Company's procurement partner, Piclo (the procurement team has been running a pilot since 2025 using the Piclo Flex platform to release RFPs. The intent of the pilot is to move away from a closed RFP model to a more open market-based model as part of the Company's DSO transition plan). The RFP is also available on the Company's NWA website. The Company then holds a pre-bid teleconference during which the Company presents an overview of the NWA opportunity and requests potential bidders to ask questions. Answers and information for questions are compiled by the procurement team with the input of the appropriate subject

matter experts and then posted on the procurement site. Potential bidders develop proposals and submit them into Piclo. Proposals are reviewed and ranked by the NWA review team which includes Company representatives from procurement, NWA, legal, operations, control center, permitting, transmission/distribution planning, Information Technology ("IT") & Cyber Security, and other subject matter experts, as appropriate.

Those projects that are most affordable and viable, *i.e.*, those that can solve the electrical problem described in the RFP, may be contacted for additional details and clarifications. A preliminary BCA score is calculated and revised with additional information and/or adjustments to the proposed solution. The NWA team then chooses the preferred bidder(s) who offer the Non-Wires Solution that maintains electrical system reliability, delivery standards, and safety, and scores a 1.0 or higher according to the BCA calculation. If an award is made to the preferred bidder(s), then contract negotiations and terms are discussed; if contract terms are reached, then the NWA solution may be implemented.

Projects Reviewed

In response to the "Order Adopting Regulatory Policy Framework and Implementation Plan" issued by the Commission in Case 14-M-0101 and in consideration of NWA discussions with Staff, as of December 2025, the Company has developed and issued 14 RFPs.

The current list of projects being considered for an NWA opportunity is provided in the table below. In 2025, the Company reviewed all capital projects and created NWA opportunities for those that satisfied the criteria for potential NWA solutions described in the table above. Many of the projects reviewed did not pass the NWA suitability criteria. Though they were driven by asset condition issues or resiliency needs, the projects had need dates that were too immediate or cost estimates that did not meet the criteria.

The table below lists currently active NWA projects and their status:

Project Name	Project Type	Status	Voltage Type	Estimated RFP Timing (CY)
Gilbert Mills	Load Relief	RFP Development	Distribution	RFP In Development
Pine Grove (New Cicero) Substation DSUB & D-LINE	Reliability	Operational	Distribution	RFP Closed
Sawyer 11H Sub-T Line *Former Buffalo 23KV*	Load Relief	Planner Review	Sub-Transmission	RFP Closed
New Krumkill	Load Relief	Evaluation Underway	Distribution	RFP Closed
Watertown New 115/13.2 KV Substation	Reliability	Operational	Distribution	RFP Closed

Lessons Learned

National Grid has evolved its process to incorporate lessons learned and to improve NWA evaluation. The Company provides improved information about project needs in the problem statement and the value of the deferred traditional solution to better compare with NWA solution costs. Improvements to the RFP process include:

- Inclusion of details on telemetry and communication protocol and expectations
- Providing greater clarity for NWA contract terms and performance expectations for third party ownership
- Discussing contract structure and performance expectations in the RFP and evaluation process with the active bidders

- Inclusion of contract template with the RFP and on the NWA National Grid website
- Updates to the RFP template so that bidders have a clearer understanding of the project
- Use of a standard template to provide a common format across all RFPs
- Property acquisition responsibility
- Development of a template for the pricing structure of proposals
- Additional electrical system information to help bidders develop more complete proposals
- Continued improvements to the BCA tool to ensure NWA benefits are appropriately considered
- Incorporating checklists of the items needed for the Company to thoroughly review proposed solutions
- Better aligning the proposal content requested with the needs of the internal reviewers
- Providing an approximate value of a potential NWA solution so potential bidders can determine if their NWA solution is cost-competitive when compared to the traditional wires solution
- Greater collaboration between the DR programs and the EE Programs. The Company has worked to optimize the locational offerings between NWA procurements and any applicable DR Programs, including the new Term and Auto DLM programs which require coordination on locational offerings. In addition, a kicker was introduced within the Energy Efficiency portfolio in 2020 which is focused on an NWA location for peak reduction benefits. The Company is in the process of evaluating this offering for additional opportunities
- Expanding NWA services terms to include real time and scheduled service
- Expanding the customer demographic for the EE kicker to go beyond large commercial and industrial customers and include further customers like small business. The Company is working on ensuring there are internal processes to be able to pair the NWA program with internal programs such as EE
- Evaluating opportunities to introduce incremental incentives within DR programs for NWA locations, similar to approaches used in other demand-side programs, to enhance locational value, peak reduction benefits, and customer adaptation
- The Company continues to evaluate NWA potential opportunities for constrained areas including using interim solutions that could apply near-term load relief and benefit customers in a safe and reliable service

Conclusion

NWA projects and processes are under continuous improvement to incorporate lessons learned and industry best practices. The Company will continue to evaluate projects according to the suitability criteria to identify potential NWA projects for 2026 and beyond. The Company will also continue to work in conjunction with the JU to incorporate lessons learned from the JU group, as appropriate. Additionally, the Company is coordinating with internal programs such as DLM and EE programs to optimize NWA offerings and better integrate and leverage customer DERs as “demand-side” NWA solutions to targeted distribution system needs.

Exhibit 5: Overhead Line Refurbishment and Rebuild Projects

Border City-Elbridge #10/#5 Crossings (C075723 - $4.8M)

The overhead line details:

- Total length: 21.11 miles
- Conductor: 336.4 ACSR
- Total number of structures: 198
- Types of structures: Steel lattice, wood poles
- Typical Installation date: 1907

This project will replace structures and conductor at seventeen (17) significant road crossings to ensure public safety and reliability. The existing suspension structures will be replaced with direct embedded steel poles with guy wires and the conductor will be replaced across the road as well as all insulators and hardware. The Border City (Geneva) - Elbridge #15 & Mortimer-Solvay#5 (RIP) lines have asset condition issues related to its age. Inspections have revealed conductor and structure deterioration.

Coffeen – W. Adams 2 ACR (C091986 - $9.2M)

The overhead line details:

- Total length: 14.12 Miles
- Conductor: 795 ACSR
- Total number of structures: 123
- Types of structures: Primarily Wood H-Frame
- Typical Installation date: 1982

This ACR type project involves the targeted asset refurbishment between structure 38 to the West Adams Station in Adams, NY for a total of 12 Miles. This line is a certified Article VII line under case 70073. From the Coffeen station to Structure 38, this section of line will be rebuilt as part of CLCPA Phase Two, where its adjacent circuit will be replaced. At this stage of the project, we are using standard ACR assumptions. It is assumed that 40% of the wood pole structures and structural components will need to be replaced. The scope will be refined as the project moves through the complex capital delivery process.

Colton-BF 1-2 T3140-T3150 Rebuild (C036164 - $8.0M)

The overhead line details:

- Total length: 30.46 miles

- Conductor: 336.4 ACSR 26/7 “Linnet”
- Total number of structures: 272
- Number of wood structure units: 25
- Number of steel structure units: 247
- Types of structures: Predominantly narrow steel flex, sq. base steel dead-ends. Any replacements were wood.
- Typical Installation date: Earliest structures installed 1912, majority in 1926

This project is an ACR type project. The structures will be evaluated as well as the ACSR conductor. As part of the ACR, transmission planning will be consulted to determine if there are any limiting elements on the circuit that should be replaced.

Colton-Townline 9 Replacements (C091987 - $8.3M)

The overhead line details:

- Total length: 16.20 miles
- Conductor: 795 ACSR 26/7, and 397.5 ACSR 26/7
- Total number of structures: 182
- Number of wood structure units: 176
- Number of lattice structure units: 6
- Types of structures: Steel lattice structures and wood structures
- Typical Installation date: 1954

The Colton – Townline # 9, 115kV line was originally constructed 1954, and structures are showing signs of deterioration. This project focuses on targeted asset refurbishment along the 16-mile line between Colton Station and Townline Station.

Curtis St - Teall #13 ACR (C084496 - $3.0M)

The overhead line details:

- Total length: 28.83 miles
- Conductor: 636 ACSR 18/1, 636 ACSR 26/7, 795 ACSR 26/7, and 795 ACSR 36/1
- Total number of structures: 203
- Number of wood structure units: 201
- Number of lattice structure units: 183
- Types of structures: Square based lattice dead-ends, steel channels for flex, and single and wood H-frame
- Typical Installation date: 1945

Based upon an engineering field evaluation (aerial comprehensive as well as ground-based inspections), lattice steel tower and wood pole

Elbridge-Gears Lock 3 Woodard 4 ACR (C084521 - $6.0M)

The overhead line details:

- Total length: 11.4 miles
- Conductor: 477 ACSR
- Total number of Structures: 205
- Types of structures: Primarily Double-Circuit steel lattice towers
- Typical Installation date: 1926

This life extension - targeted refurbishment project is for the segments where Elbridge – Geres Lock 3 and Elbridge – Woodard 4 are double circuited. It will involve replacing all flashed and damaged insulators on 56 structures, as well as 16 structures, conductor and shield wire at critical road or railroad crossings.

Elbridge-Gears Lock 18/19 ACR (C084522 - $5.4M)

The overhead line details:

- Total length: 8.10 miles
- Conductor: 795 ACSR, 397.5 ACSR, 350 Copper, 1250 Copper
- Total Number of Structures :80
- Types of structures: Steel lattice, wood poles
- Typical Installation date: 1920

This project aims to address the conductor and insulator deterioration found on the Elbridge – Geres Locke 18/19 lines. The Elbridge – Geres Locke 18/19 lines serve a large population of customers in central New York, and previous inspections have found that the insulators were flashed and the conductor was in poor condition.

Feura Bush - N. Catskill 2 ACR (C083073 - $2.7M)

The overhead line details:

- Total Length: 23.19
- Conductor Types: 4/0 CU, 336 ACSR
- Type of Structures: Lattice, Steel Pole, Wood Pole
- Total number of structures: 211
- Installation Date: Powerplant records date back to the 1920s and 1930s for the corridor

North Catskill – Churchtown #5

The overhead line details:

- Total Length: 6.7
- Conductor Types: 605 ACSR, 336 ACSR
- Types of Structures: Lattice

- Total number of structures: 49
- Installation Date: Powerplant records date back to the 1920s and 1930s for the corridor.

This project will replace shield wire with OPGW and replace insulators in kind on the 115kV Feura Bush – North Catskill #2 line and the portions of the Long Lane – Lafarge #6 and Lafarge Pleasant Valley #8 lines that are on the same towers. In addition, this project will continue the replacements in the corridor an additional 6.7 miles to Churchtown substation on the North Catskill to Churchtown #5. The shield wire in this corridor is in poor shape and failed testing. Additionally, the insulators need replacement with many found to be flashed over and/or broken/chipped.

Gardenville-Dunkirk 141-142 Southern Phase ACR (C034193 - $6.7M)

The overhead line details:

- Total length: 25 miles
- Conductor: 4/0 ACSR, 795 ACSR, 336.4 ACSR, and 636 Al
- Total number of structures: 326
- Number of wood structure units: 18
- Number of steel structure units: 308
- Types of structures: Steel square base lattice for dead-ends and steel channels for flex
- Typical Installation date: 1920

This project is the second half of the 141/142 ACR project. It will address the southern portion from the North Angola Station (T#249) to the Dunkirk Station (T#581). The Northern Phase from Gardenville to North Angola Station has completed construction and the Southern Phase rebuild is currently being developed.

Gard - Five Mile 151-152 & 167 North Rebuild (C027425 - $4.3M)

The overhead line details:

- Total length: 37.25 miles
- Conductor: 795 ACSR, 336.4 ACSR, 4/0 Copper
- Total number of structures: 68 (L151), 572 (L152), 249 (L167)
- Types of structures: Flex and Square Base Steel Lattice Structures
- Typical Installation date: 1922

This project addresses asset condition related issues on the 115kV Gardenville-Arcade #151 (T6440), Gardenville-Five Mile Rd #152 (T6830), and Arcade-Five Mile Rd #167 (T6850) lines. Previous inspections conducted on the lines have revealed deteriorating insulators, hardware, and conductor. The line will be rebuilt using steel structures and new conductor from structure 200 to the Ischua Switch Station (North). This work will address the remainder of the line that was not covered by C04718.

Gard-5 Mile Culvert 24 26 31.2 41.2 (C087617 - $3.0M)

The overhead line details:

- Total length: N/A
- Conductor: N/A
- Total number of structures: N/A
- Types of structures: N/A
- Typical Installation date: 1880

Twenty (20) culverts in the Gardenville – Five Mile 151/152 ROW have been identified for replacement due to their deteriorated condition. Due to the slope instability risk in the ROW, several 115 kV double circuit structures cannot be accessed because of the deteriorated culverts. This project specifically targets replacement of culverts 24, 26, 31.2 and 41.2.

Golah-NLakeville#116 Priority 2 Str. (C086697 - $1.2M)

The overhead line details:

- Total length: 13.92 Miles
- Conductor: 795 ACSR
- Total number of structures: 120 Structures
- Types of structures: Wood H-Frames
- Typical Installation date: 1973

The structures on this line have exhibited signs of deterioration caused by woodpeckers and weather conditions. A comprehensive aerial inspection conducted in 2022 identified 14 structures that are deteriorating and require replacement. This project will replace the suspension structures with in-kind steel structures, the deadends will be replaced in a separate project due to outage conflicts.

Greenbush – N Troy Corridor ACR (C094479 - $20.5M)

The overhead line details:

- Total length: 15.36 miles
- Conductor Types: 795 MCM ACSR, 605 MCM ACSR
- Number of structures: 175
- Total Steel: 117
- Total Wood: 58
- Types of structures: Steel Lattice (57), Steel Other (60), Wood (58)
- Lines:
    - T5570 Reynolds Rd. to Greenbush 9 (Includes bussed section in scope doc)
    - T5930 Wynantskill to Reynolds Rd. 13
    - T5540 North Troy to Reynolds Rd. 16
    - T5550 North Troy to Wynantskill 14
    - T5550-1 Sycaway Tap

  - T5540-1 Sycaway Tap
- Installation Date: 1923 to 1931

This will be 1 of 2 projects that address asset condition related issues on the 115kV corridor from Greenbush Station to Battenkill Station. These assets were installed under the original line from Thompson to Greenbush from 1923 to 1931. They have since been segmented into individual lines as new substations have been energized over the years. This project will replace all insulators with toughened glass and replace 35 structures.

Greenbush 993 Road Crossings (C096411 - $4.2M)

The overhead line details:

- Total length: 19.49 Miles (0.04 Miles NYSEG)
- Conductor: 4/0 CU, 336.4 ACSR, 1192.5 ACSR
- Number of structures: 255
- Total Steel: 8
- Total Wood: 247
- Types of structures: H-Frame, Wood Pull off, Steel Pole
- Typical Installation date: Various

This project addresses asset condition related issues on the 115kV Greenbush – Stephentown 993 in Eastern NY. This is a life extension project focused on deteriorated road crossing structures. 18 wood structures will be replaced during this project.

Greenbush 993 I-90 (C098716 - $2.0M)

The overhead line details:

- Total length: 19.49 Miles (0.04 Miles NYSEG)
- Conductor: 4/0 CU, 336.4 ACSR, 1192.5 ACSR
- Number of structures: 255
- Total Steel: 8
- Total Wood: 247
- Types of structures: H-Frame, Wood Pull off, Steel Pole
- Typical Installation date: Various

This project addresses asset condition related issues on the 115kV Greenbush – Stephentown 993 in Eastern NY. This is a life extension project focused on deteriorated road crossing structures. 6 wood structures will be replaced during this project. This project specifically focuses on the I90 crossing structures and the adjacent structures in the ROW.

Greenbush-Knickerbocker 13/14/15 DCT Rebuild (C069540 - $11.0M)

The overhead line details:

- Total length: 7.85 Miles
- Conductor: 795 ACSR, 605 ACSR
- Total number of structures: 59
- Types of structures: Lattice, Wood pole
- Typical Installation date: 1932

This project addresses asset condition related issues on the 115kV Greenbush – Knickerbocker 15, Greenbush – Schodack 13, and Schodack – Valkin 14 lines in Eastern NY. These lines are on double circuit structures from the Greenbush substation to structure 56 where Energy Highway Segment B takes over.

Huntley-Lockport 36/37 Ayer Rd ACR (C081670 - $11.8M)

The overhead line details:

- Total length: 1.17 miles (T1440-3) and 1.34 miles (T1450-3)
- Conductor Types: 636 ACSR
- Number of structures: 27
- Total Steel: 26
- Total Wood: 1
- Typical Installation date: 1929

This project addresses the asset condition related issues on the Huntley-Lockport 36/37 Taps to Ayer Rd. The Huntley-Lockport 36/37 Taps to Ayer Rd are built overhead for 1.17 miles before transitioning underground for 2.5 miles to the Ayer Rd Station. The taps are operating on steel lattice towers from the retired 92E and 92W circuits. These towers are in poor condition and need replacement. The foundations are in crumbling condition, and the steel shows significant oxidation. The preferred option to resolve the condition issue is to rebuild the overhead sections of the taps using direct embedded steel poles. Conductor, shield wire and insulators will also be replaced.

Inghams-E. Springfield #7 Rebuild (C060209 - $43.8M)

The overhead line details:

- Total length: 13.93 Miles
- Conductor: 4/0 CU
- Number of structures: 173
- Total Steel: 32
- Total Wood: 141
- Types of structures: H-Frame, Wood Pull off, Flex Towers, Steel Flex Towers, Steel Box Towers
- Typical Installation date: 1924

This project addresses asset condition related issues on the 115kV Inghams – Richfield Springs 7-942 line in Eastern NY. Based on preliminary inspections, this line will be re-built from Str. 28 (near Beardslee Hydro) to the South to Str. 170 where ownership switches to NYSEG. The remainder of this line is part of CLCPA phase 1 and will be re-built under that project. The preliminary inspections have shown deteriorated wood structures and worn vangs. Insulators on this line also show signs of flashing.

L. Colby-L. Placid 3 ACR (C091989 - $6.5M)

The overhead line details:

- Total length: 10.47 Miles
- Conductor: 336.4 ACSR
- Total number of structures: 164
- Types of structures: Wood pole
- Typical Installation date: 1979

This project is in the development stage and will address the asset condition-related issues on L. Colby – L. Placid #3 circuit. This ACR-type project will include targeted replacements of deteriorated assets, and it is expected that the line will require re-insulation with new hardware and wood pole structure replacements.

Lockport-Batavia 112 (C003422 - $47.4M, C089590 - $4.4M, C096884 – $0.3M)

The overhead line details:

- Total length: Approximately 34 miles
- Conductor: Varies - 250 BSCU 19-Strand, 795 ACSR 36/1 “Coot”, 336.4 ACSR 26/7 “Linnet”, 428 AAC 19-Strand, and 636 AAC “Orchid”
- Total number of structures: 369
- Number of wood structure units: 156
- Number of steel structure units: 213
- Types of structures: Steel towers (178 of which are tri-leg towers) and wood pole (111 of which are single-pole with davit arms).
- Typical Installation date: 1907

The project is a 20-mile rebuilding of the Lockport-Batavia 112 line, from the Lockport Station to structure 211. Due to age and general wear, the structures on this line are deteriorating and require replacement, specifically the 1907 vintage steel tri-leg structures and 428 kcmil ACC conductor spans. The section of the line through the Tonawanda Nature Preserve will also be relocated to remove it from wetlands. This project will require Article VII filing and the reconductoring scope will address Transmission Planning needs in the area.

Lockport-Mortimer 113/114 ACR (C081664 - $6.0M)

The overhead line details:

- Total length: 56.22
- Conductor: 795 ACSR, 397.5 ACSR, 350 Copper, 1250 Copper
- Total number of structures: 531
- Types of structures: Steel lattice and wood pole structures
- Typical Installation date: 1920s

An aerial inspection conducted on the Lockport - Mortimer 113/114 lines identified 21 structures with heavy woodpecker damage and overall deterioration. In addition, the insulators on the line are showing signs of aging and wear. This line supports approximately 30,000 customers combined on National Grid's Worst Performing Circuits ("WPC") list as of June 2019. This project will reinsulate and replace damaged wood structures.

New Scotland-Feura Bush #9/Long Lane #7 ACR (C084554 - $30.0M)

The overhead line details:

- Total length: 4.16 miles (T5470) and 4.03 (T5500)
- Conductor Types: 795 MCM ACSR, 4/0 7S CU, and 336.4 MCM
- Total number of structures: 68
- Total Steel: 25
- Total Wood: 43
- Types of structures: Wood pole standoff (18), Wood pole H-Frame (4), Wood pole various (21), Steel lattice (20), and Steel pole (5)
- Installation Date: 1923

This ACR-type project will address asset condition related issues on the 115kv New Scotland-Feura Bush 9 (T5500) and The New Scotland-Long Lane 7 (T5470). These two circuits are primarily run on joint steel structures and wood poles. The inspections discovered tracking and broken glass on many of the insulators and large sections of deteriorated shield wire. Testing on the shield wire showed 50% or less remaining strength on these sections. Additionally, several deteriorated wood poles were found that will need replacement. Under this project all insulators will be replaced with toughened glass to include shield wire and 42 wood pole structures with steel.

NS – Knickerbocker #2 I/B/G (C096415 - $6.3M)

The overhead line details:

- Total length: 13 Miles
- Conductor: 2-1192.5 ACSR, 3-1590 ACSR
- Number of structures: 77
- Total Steel: 75
- Total Wood: 2
- Types of structures: Steel 3 pole, Steel 2 pole, Wood H-frame

- Typical Installation date: 1971

The New Scotland–Knickerbocker 2 line is built to 765kV standards but is operated at 345kV. The #2 line was originally part of the legacy New Scotland–Alps 2 line, which has since been split into the Knickerbocker–Alps 6 line and the aforementioned #2 line. On 5/30/23, there was a structure fire on the Knickerbocker–Alps 6 line that caused the line to lockout. As part of the investigation, the entire legacy New Scotland–Alps 2 line was inspected. Deficiencies were found on both the #2 and #6 lines. The bonding and grounding repairs on the #6 line were completed in FY25, while the repairs on the #2 are included in this project. This project will replace the insulators and repair deteriorated bonding and grounding systems on 35 structures on the 345kV New Scotland–Knickerbocker 2 line.

Pannell-Border 4-977 Reins 246-303 (C098930 - $1.9M)

The overhead line details:

- Total length: Approximately 25 miles
- Conductor: 795 ACSR, 336.4 ACSR
- Total number of structures: 265
- Types of structures: Steel Lattice (Aeromotor Towers)
- Typical Installation date: 1906

In a 12-month period, 13 unknown fault events occurred on the Pannell – Border 4-977 line. Most of the faults were found between structures 246-303 and aerial inspections identified many flashed insulators in this span. This project will reinsulate the sixty (60) structure span to address the deteriorating insulators.

Pannell – Geneva 4-977 (C030889 - $18.9M)

The overhead line details:

- Total length: Approximately 25 miles
- Conductor: 795 ACSR “Coot” and 336.4 ACSR 30/7 “Oriole” (installed in 1922)
- Number of wood structure: 8
- Number of steel structure: 265
- Types of structures: Primarily 1906 Aeromotor towers
- Typical Installation date: Originally constructed in 1906 and operated at 66kv 25 cycle until upgraded to current 115kV 60 cycle in 1948.

This is a life extension project involving the targeted replacement of deteriorated structures, insulators, fittings, conductor and shield wire as well as tower painting and footer repairs. Conductor testing on the Mortimer-Pannell 25 line, which is the same vintage and conductor type as the Pannell-Geneva 4-977 lines which has had multiple conductor failures in recent years, shows significant loss of the zinc protective coating.

This project will replace structures and conductor at 14 road crossings to maintain public safety and reliability. The existing suspension structures will be replaced with direct embedded steel poles with guy wires. The conductor will be replaced across the road as well as all insulators and hardware.

Rotterdam - New Scotland 19 ACR (C084588 – $21.5M)

The overhead line details:

- Total length: 17.05 miles
- Conductor: 4/0 CU
- Total number of structures: 277
- Number of wood structure units: 82
- Number of steel structure units: 195
- Types of structures: Steel lattice, steel pole, and wood pole
- Typical Installation date: 1923

This project will address asset condition related issues on the 115kV Rotterdam-New Scotland 19 line (T5690) along with the Rotterdam-Altamont 17 (T5620) and the Altamont to New Scotland 20 (T5040) which run on the same double circuit towers as the #19 line. From the inspections preformed, the insulators on these lines show signs of deterioration/flashing, and the shieldwire is in a deteriorated state. Under this project all insulators will be replaced with toughened glass, the shieldwire will be replaced, and 7 structures will be replaced.

S Oswego-Clay #4 T334 ACR (C075544 - $1.1M)

The overhead line details:

- Total length: 34.05 miles
- Conductor: 336.4 ACSR 26/7, 336.4 ACSR 18/1, and 795 ACSR 36/1,
- Total number of structures: 382
- Number of wood structure units: 298
- Number of steel structure units: 84
- Types of structures: Steel square base lattice, steel channel flex, and wood H-frames
- Typical Installation date: Between 1914-1938

This circuit consists of essentially the below four segments:

South Oswego substation to T#62 - On double circuit steel lattice towers with the South Oswego-Curtis St. #10, these structures date back to the late 1930's early 1940's.

Str. 63 to Str. 259 - Single circuit wood H-frames. Original structures have bayonet for shield wire

T#260 to T#293 - This segment of the circuit dates back to 1914 (T-411). On primarily double circuit steel lattice towers with the retired in place 69kV Bennett's Bridge-Geres Lock #6

Str. 294 to Str. 319 Clay substation - On single circuit wood H-frames.

The project will be an ACR-type project to evaluate each of the four segments and recommend a refurbishment type option for each.

Teall-Carr 6 ACR (C091985 - $7.6M)

The overhead line details:

- Total Length: 3.63 Miles
- Conductor Type: Primarily 636 ACSR, with a small section with 795 ACSR
- Number of Structures: 64 Structures
- Types of Structures: Primarily wood H-Frames with some sections of lines supported by lattice steel towers.
- Age: This line was constructed in 1957.

This project involves the targeted asset refurbishment of the 115kV Teall–Carr 6, 115kV line. Originally built in the 1950s, this line extends 3.63 miles from the Teall Substation in Salina, NY, to the Carr Station in East Syracuse, NY. The project will maintain the safe, efficient, and reliable operation of the transmission network while continuing to serve its six large industrial customers.

Thompson-N Troy Corridor ACR (C081667 - $15.3M)

The overhead line details:

- Total length: 23.13
- Conductor Types: 795 MCM ACSR, 605 MCM ACSR
- Number of structures: 184
- Total Steel: 180
- Total Wood: 4
- Types of structures: Steel Lattice (85), Steel Other (95), Wood (4)
- Lines:
    - T6550 Eastover Rd. to North Troy 307
    - T6540 Eastover Rd. to North Troy 306
    - T6820 Luther Forest – Eastover Rd 308
    - T7000 Schaghticoke – Luther Forest 3
    - T7020 Schaghticoke – Eastover 10
    - T6990 Mohican – Schaghticoke 309
    - T7010 Battenkill – Schaghticoke 310
    - Installation Date: 1923 to 1931

This will be 1 of 2 projects that address asset condition related issues on the 115kV corridor from Greenbush Station to Battenkill Station. These assets were installed under the original line from Thompson to Greenbush from 1923 to 1931. They have since been segmented into individual lines as new substations have been energized over the years. This project will replace all insulators with toughened glass, replace 1.53 miles of shieldwire that failed testing and replace 33 structures.

Volney-Marcy 19 Tower Painting (C096532 - $3.0M)

The overhead line details:

- Total length: 65.56 Miles
- Conductor: 1192.5 ACSR 45/7, 1351.5 ACSR 45/7, and 1431 ACSR 45/7
- Total number of structures: 235
- Total Steel: 5
- Total Lattice: 223
- Total Wood: 7
- Types of structures: Steel Lattice (223), Steel Other (5), Wood (7)
- Typical Installation date: 1986

The corten lattice towers on the line are exhibiting accelerated corrosion, leading to significant steel section loss and accumulation of corrosion byproducts at the connection points. Applying a protective coating to these joints will mitigate further deterioration by providing a barrier against moisture and environmental exposure.

Warrensburg-Schofield Rd 10 Str Repl (C086755 - $24.6M)

The overhead line details:

Warrensburg – Scofield Road 10 (T5880) line:
- Total length: 10.36 miles
- Conductor: 795 ACSR
- Total number of structures: 88
- Number of wood structures: 88
- Number of steel structures: 0
- Types of structures: Wood Davit Arm
- Typical Installation date: Late 1970s

Spier – West #9 (T5770) – Scofield Road Tap:
- Total length: 4.52 miles
- Conductor: 795 ACSR
- Total number of structures: 58
- Number of wood structures: 58
- Number of steel structures: 0
- Types of structures: Wood Davit Arm
- Typical Installation date: Late 1970s

Following a crossarm failure in 2020, an aerial comprehensive inspection and a field walk down were performed, and numerous defects were found. A large portion of the wood structures were found to need replacement. Due to the large number of structures needing replacement, the scope of this project will be a full rebuild.

Worst Performing Circuits (C084553 - $12.5M)

The Worst Performing Circuit program specifically addresses the cause of the circuit being on the Worst Performing Circuit list, which is calculated yearly. These are typically short turnaround projects that have the potential to improve the circuits' reliability. Projects typically include targeted reinsulating, grounding/bonding improvements, and upgrading disconnect switches with RC-MOD's. These RC-MOD's would be operated remotely from the Transmission Control Center. RC-MOD's avoid the need for a Switch Person to operate it physically. The key driver of this project is step change improvement to both CAIDI and SAIFI. This program will improve both the short-term and long-term reliability of the system by focusing on the primary causes of transmission events.

The FY27 workplan will consist of the completion of C097341: Grooms Road - Inman Road 15 Structure Replacement. This job will replace four structures on Grooms Road–Inman Road 15 line (wooden poles to steel structures) after the line was noted on the FY24 Worst Performing Circuits list.

The FY28 workplan will consist of C098715: Spier Falls - Lasher Road 302 Brook Road Tap. This job will replace a transmission disconnect switch on Spier Falls–Lasher Road 302 – Brook Road Tap with a newer model (one three–way switch design to three single switches (2000A)).

The FY29 and FY30 workplans will be determined by future years' Worst Performing Circuit lists.

Exhibit 6: Capital Project Deferral List

Exhibit 6 shows a list of capital projects greater than $500K that were actively considered, but not included in the current year's budget during the annual budget build cycle.
Note: Since the prior CIP was just filed on September 29, 2025; the number of projects on this list is minimal.

Project Number	Project Description	Project Type	System	Spending Rationale	Division	FY27	FY28	FY29	FY30	FY31	Total
C046439	Solvay/Woodard -Ash st 27&27&28- 34.	Sub-T Line	Sub-Transmission	Asset Condition	Central	-	-	-	4,366	-	**4,366**
C084566	DLINE trf for Woodard-Ash 27/28	Dist Line	Distribution	Asset Condition	Central	-	-	-	1,045	-	**1,045**

Exhibit 7: Cost Sharing 2.0

National Grid considers utility-initiated upgrade opportunities, as defined in the Standardized Interconnection Requirements, in its planning processes. For CS2.0 Multi-Value Distribution projects: “In the course of its planning process, at the time when the utility identifies the need to install or replace a bank due to asset condition, reliability, safety, resiliency, or capacity requirements, the utility shall consider options for designing the new bank equipment to create greater DG/ESS Hosting Capacity than the baseline installation would create. If the bank can be upgraded to increase Hosting Capacity while solving a pre-existing asset condition, reliability, safety, resiliency, or capacity issue, and if there is market interest that indicates DG/ESS growth above the capacity of the baseline equipment, the utility will identify the enhanced installation or replacement in the next published CIP as a MVD project. The utility will fund the cost of the baseline project. Participating projects will fund the difference between the baseline and the MVD project cost.” The Company also considers proactive 3V0 opportunities to create additional hosting capacity.

CS2.0 MVD Candidacy Review
The initial review for projects with CS2.0 MVD potential takes place when the Company’s Distribution Planning groups conduct their annual capital needs assessment. During the CIP development, the Company screens for potential CS2.0 MVD opportunities by reviewing substation transformer projects in the capital plan. Projects that can be feasibly upgraded from the baseline scope to a new scope that creates additional hosting capacity and are at a stage in the planning process that allows for scope changes, will be considered for CS2.0 MVD candidacy.

Projects Reviewed
In response to the “Order Approving Compliance Filings, with Clarifications” issued by the Commission in Case 20-E-0543, as of January 2026, the Company has identified utility-driven CS2.0 projects.

The current list of projects being considered for utility-driven CS2.0 opportunities is provided in the table below. In 2025, the Company reviewed capital substation projects for CS2.0 opportunities. Many of the projects reviewed did not pass the scope or timing criteria. Though they were driven by asset condition issues reliability, safety, resiliency, or capacity, the projects had need dates that were too immediate or there were not opportunities to install a larger substation transformer bank.

The table below lists prospective utility-driven CS2.0 projects and their status:

Project Name	Project Type	Status	Voltage Type	Mechanism
Buckley Corners Station Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Firehouse Rebuild: Substation	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Livonia 37 Substation Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Old Forge Station	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD

Boyntonville Rebuild: Substation	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Elnora Station Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Everett Station Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Grand St Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Knapp Road Station	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Lake George Station	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Port Henry Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Salisbury Station - Sub Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Stittville Station	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Summit Station 347 Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Voorheesville Station Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Warrensburg Rebuild	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD
Woodard Road Greenfield: Station	Asset Replacement	Preliminary Engineering	Distribution	CS2.0 MVD

Lessons Learned

National Grid will evolve its process to incorporate lessons learned and improve the MVD process. This is the second year of the MVD process implementation, with lessons learned to follow in subsequent CIPs.

Market-Initiated Upgrades

In addition to the Utility-Initiated Upgrades, the CS2.0 Order also provides mechanisms for cost sharing for Market-Initiated Upgrades, including substation transformer projects, other substation projects, and shared line upgrades. Market-Initiated substation upgrades set thresholds of upgrade costs to be collected from participating projects to trigger utility work. Utilities continue to collect from additional participating projects until the full cost of the upgrade is collected. Unrecovered costs are capped at 2% of the utility's Distribution/Sub-Transmission capital plan based on a five-year forward-looking average. The Company's FY27 cap will be $19,700,000.

Conclusion

The Company anticipates that CS2.0 experience will drive continuous improvement to incorporate lessons learned and industry best practices. The Company will continue to evaluate projects to identify potential Multi-Value Distribution projects for 2026 and beyond. The Company will also continue to work in conjunction with the JU to incorporate lessons learned from the JU group, as appropriate. Additionally, the Company will continue to process and develop market-driven projects in accordance with the SIR.

Exhibit 8: New York Transmission Reimbursable Projects

Exhibit 8 shows a list of NY Transmission Capital reimbursable projects, whose impact to the financial five-year plan is assumed to be cost neutral. These projects are not included in Exhibits 1-3, or the narratives provided in the above chapters.

Project Number	Project Description	Project Type	Division	Region	Spending Rationale	Capex Program Name	FY27	FY28	FY29	FY30	FY31
C087500	Scriba - Line 10 Relay Rplc	Tran Sub	Substation - NY Central	Syracuse Oswego Cortland	Customer Requests/Public Requirements	Customer Interconnections	-	343	-	-	-
C087500R	Scriba - Line 10 Relay Rplc Reimb	Tran Sub	Substation - NY Central	Syracuse Oswego Cortland	Customer Requests/Public Requirements	Customer Interconnections	-	(343)	-	-	-
C094666	Customer Solar - T-Line	Tran Line	Transmission - NY Central	Syracuse Oswego Cortland	Customer Requests/Public Requirements	Customer Interconnections	2,838	379	-	-	-
C094666R	Customer Solar - T-Line Reimb	Tran Line	Transmission - NY Central	Syracuse Oswego Cortland	Customer Requests/Public Requirements	Customer Interconnections	(2,838)	(379)	-	-	-
C099570	Customer Solar - Line	Tran Line	Transmission - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	1,443	1,442	-	-	-
C099570R	Customer Solar - Line Reimb	Tran Line	Transmission - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	(1,443)	(1,442)	-	-	-
C099572	Customer Solar - Stations	Tran Sub	Substation - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	511	463	-	-	-
C099572R	Customer Solar - Stations Reimb	Tran Sub	Substation - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	(511)	(463)	-	-	-
C099573	Customer\ Solar - Line	Tran Line	Transmission - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	1,926	2,325	-	-	-
C099573R	Customer Solar - Line Reimb	Tran Line	Transmission - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	(1,926)	(2,325)	-	-	-
C099574	Customer Solar - Stations	Tran Sub	Substation - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	560	859	-	-	-
C099574R	Customer Solar - Stations Reimb	Tran Sub	Substation - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	(560)	(859)	-	-	-
C099777	Customer Solar Stations	Tran Sub	Substation - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	730	726	-	-	-
C099777R	Customer Solar Stations Reimb	Tran Sub	Substation - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	(730)	(726)	-	-	-
C099784	Customer Solar - Line	Tran Line	Transmission - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	1,228	1,228	-	-	-
C099784R	Customer Solar - Line Reimb	Tran Line	Transmission - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	(1,228)	(1,228)	-	-	-

C099785	Customer Solar Stations	Tran Sub	Substation - NY West	Southwest	Customer Requests/Public Requirements	Customer Interconnections	1,210	1,210	-	-	-
C099785R	Customer Solar Stations Reimb	Tran Sub	Substation - NY West	Southwest	Customer Requests/Public Requirements	Customer Interconnections	(1,210)	(1,210)	-	-	-
C099787	Customer Solar Line	Tran Line	Transmission - NY West	Southwest	Customer Requests/Public Requirements	Customer Interconnections	1,146	1,146	-	-	-
C099787R	Customer Solar Line Reimb	Tran Line	Transmission - NY West	Southwest	Customer Requests/Public Requirements	Customer Interconnections	(1,146)	(1,146)	-	-	-
CNYCS26	Customer Solar Project Stations	Tran Sub	Substation - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	200	862	861	-	-
CNYCS26R	Customer Solar Project Stations Reimb	Tran Sub	Substation - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	(200)	(862)	(861)	-	-
CNYCS27	Customer Solar Project Line	Tran Line	Transmission - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	200	1,501	1,501	-	-
CNYCS27R	Customer Solar Project Line Reimb	Tran Line	Transmission - NY East	Capital Hudson Valley	Customer Requests/Public Requirements	Customer Interconnections	(200)	(1,501)	(1,501)	-	-
CNYCS78	Customer Project Stations	Tran Sub	Substation - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	100	487	147	-	-
CNYCS78R	Customer Project Stations Reimb	Tran Sub	Substation - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	(100)	(487)	(147)	-	-
CNYCS79	Customer Project Line	Tran Line	Transmission - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	100	1,156	838	-	-
CNYCS79R	Customer Project Line Reimb	Tran Line	Transmission - NY East	Northeast	Customer Requests/Public Requirements	Customer Interconnections	(100)	(1,156)	(838)	-	-
CNYCS82	Customer Solar Project Stations	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	225	401	626	-
CNYCS82R	Customer Solar Project Stations Reimb	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	(225)	(401)	(626)	-
CNYCS83	Customer Solar Project Line	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	373	1,267	1,094	-
CNYCS83R	Customer Solar Project Line Reimb	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	(373)	(1,267)	(1,094)	-
CSS0008	Customer Solar Project Stations	Tran Sub	Substation - NY Central	Syracuse Oswego Cortland	Customer Requests/Public Requirements	Customer Interconnections	100	1,377	1,000	-	-
CSS0008R	Customer Solar Project Stations Reimb	Tran Sub	Substation - NY Central	Syracuse Oswego Cortland	Customer Requests/Public Requirements	Customer Interconnections	(100)	(1,377)	(1,000)	-	-
CSS0009	Customer (NY38) Solar Project Stations	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	200	2,122	2,322	-	-
CSS0009R	Customer (NY38) Solar Project Stations Reimb	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	(200)	(2,122)	(2,322)	-	-
CSS0010	Customer (NY38) Solar Project Line	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	200	1,251	1,451	-	-

CSS0010R	Customer (NY38) Solar Project Line Reimb	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	(200)	(1,251)	(1,451)	-	-
CSS0015	Customer Solar Project Stations	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	4,005	3,904	-	-
CSS0015R	Customer Solar Project Stations Reimb	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	(4,005)	(3,904)	-	-
CSS0016	Customer Solar Project Line	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	2,759	2,659	-	-
CSS0016R	Customer Solar Project Line Reimb	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	-	(2,759)	(2,659)	-	-
CSS0023	Customer Solar Project Stations	Tran Sub	Substation - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	2,606	2,085	522	-	-
CSS0023R	Customer Solar Project Stations Reimb	Tran Sub	Substation - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	(2,606)	(2,085)	(522)	-	-
CSS0024	Customer Solar Project Line	Tran Line	Transmission - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	3,800	3,040	759	-	-
CSS0024R	Customer Solar Project Line Reimb	Tran Line	Transmission - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	(3,800)	(3,040)	(759)	-	-
CSS0027	Customer Solar Project Stations	Tran Sub	Substation - NY West	Genesee	Customer Requests/Public Requirements	Customer Interconnections	261	2,614	2,091	261	-
CSS0027R	Customer Solar Project Stations Reimb	Tran Sub	Substation - NY West	Genesee	Customer Requests/Public Requirements	Customer Interconnections	(261)	(2,614)	(2,091)	(261)	-
CSS0028	Customer Solar Project Line	Tran Line	Transmission - NY West	Genesee	Customer Requests/Public Requirements	Customer Interconnections	152	1,524	1,219	152	-
CSS0028R	Customer Solar Project Line Reimb	Tran Line	Transmission - NY West	Genesee	Customer Requests/Public Requirements	Customer Interconnections	(152)	(1,524)	(1,219)	(152)	-
CSS0029	Customer BESS Project Stations	Tran Sub	Substation - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	324	973	324	-	-
CSS0029R	Customer BESS Project Stations Reimb	Tran Sub	Substation - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	(324)	(973)	(324)	-	-
CSS0030	Customer BESS Project Line	Tran Line	Transmission - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	473	1,183	710	-	-
CSS0030R	Customer BESS Project Line Reimb	Tran Line	Transmission - NY West	Frontier	Customer Requests/Public Requirements	Customer Interconnections	(473)	(1,183)	(710)	-	-
CSS0033	Customer (NY 37) Solar Project Stations	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	200	2,100	2,300	-	-
CSS0033R	Customer (NY 37) Solar Project Stations Reimb	Tran Sub	Substation - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	(200)	(2,100)	(2,300)	-	-
CSS0034	Customer (NY 37) Solar Project Line	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	200	817	1,017	-	-

CSS0034R	Customer (NY 37) Solar Project Line Reimb	Tran Line	Transmission - NY Central	Northern	Customer Requests/Public Requirements	Customer Interconnections	(200)	(817)	(1,017)	-	-
CSS0037	Customer Solar Project Stations	Tran Sub	Substation - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	1,063	562	-	-	-
CSS0037R	Customer Solar Project Stations Reimb	Tran Sub	Substation - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	(1,063)	(562)	-	-	-
CSS0038	Customer Solar Project Line	Tran Line	Transmission - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	2,276	1,776	-	-	-
CSS0038R	Customer Solar Project Line Reimb	Tran Line	Transmission - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	(2,276)	(1,776)	-	-	-
CSS0041	Customer Solar Project Stations	Tran Sub	Substation - NY Central	Utica Rome	Customer Requests/Public Requirements	Customer Interconnections	694	1,558	794	-	-

Exhibit 9: CIP Comparison to Approved Joint Proposal

National Grid's core responsibility is providing safe and reliable service to the over 1.6 million customers and hundreds of communities that rely on us for life-sustaining energy, while building and maintaining the delivery networks that will support the energy future for the next generation of New Yorkers. The table below provides a comparison of the capital investment levels in this document and the levels approved by the New York Public Service Commission ("PSC" or the "Commission") Order, issued August 14, 2025, in Case 24-E-0322. National Grid and electric utilities across the country have been experiencing significant cost increases from many factors, including material and labor inflation, supply chain constraints, and recently imposed federal tariffs (which the Commission is considering in Matter 25-00533 - In the Matter of Canadian Tariff Impacts). These increased cost pressures and other factors have led to a Company investment plan that is approximately 3.41% higher than the approved FY26-FY28 rate plan levels. While the Company has taken proactive steps to mitigate these cost pressures, their effects nevertheless increase estimated project costs, particularly related to contracted labor for the delivery of large Transmission and Substation projects necessary to meet 2030 CLCPA targets.

In the face of these challenges, the Company remains focused on affordability and the need to manage its investments to mitigate customer bill impacts. The Company is taking steps to identify efficiencies and reprioritize work to reduce costs and align with approved investment levels, while still maintaining safe and reliable service for customers at reasonable cost. As the Company works to reduce planned spending from the budget levels, it will keep Staff advised of our project challenges, successes, and spending, and seek feedback on prioritization efforts as part of its regular quarterly reporting cadence, or more frequently upon Staff's request.

System/Funding Mechanism	FY26 Rate Plan	FY26 Budget	FY27 Rate Plan	FY27 Budget	FY28 Rate Plan	FY28 Budget	Total FY26-28 Rate Plan	Total FY26-28 Budget	Variance Between Budget and Rate Plan
Transmission	518.7	587.7	570.4	667.9	530.6	540.6	1,619.7	1,796.2	176.5
Sub-Transmission	58.7	41.2	87.3	57.6	110.0	64.3	255.9	163.2	-92.7
Distribution	685.2	755.8	689.0	730.4	714.6	779.7	2,088.7	2,265.9	177.2
Local Spending Total	**1,262.6**	**1,384.8**	**1,346.6**	**1,455.9**	**1,355.1**	**1,384.6**	**3,964.3**	**4,225.3**	**261.0**
Cost Share 2.0	0.0	22.3	0.0	19.7	0.0	22.0	0.0	64.0	64.0
Approved Pro-Active Planning Filing	0.0	19.4	0.0	25.8	0.0	29.2	0.0	74.4	74.4
Local Supplemental Spending Total	**0.0**	**41.7**	**0.0**	**45.5**	**0.0**	**51.2**	**0.0**	**138.4**	**138.4**
CLCPA Ph2	0.0	303.5	0.0	623.8	0.0	748.7	0.0	1,676.0	1,676.0
EV MRP	0.0	4.5	0.0	8.7	0.0	10.8	0.0	24.0	24.0
Priority Transmission	0.0	51.0	0.0	9.5	0.0	0.0	0.0	60.5	60.5
Regional Spending Total	**0.0**	**359.0**	**0.0**	**642.0**	**0.0**	**759.5**	**0.0**	**1760.5**	**1760.5**
Capex Total	**1,262.6**	**1,785.4**	**1,346.6**	**2,143.4**	**1,355.1**	**2,195.2**	**3,964.3**	**6,124.1**	**2,159.7**
Indirect	76.0	56.5	72.5	52.5	88.0	58.0	236.6	167.0	-69.5

Cost of Removal	104.4	86.6	132.7	96.2	141.7	160.8	378.8	343.6	-35.2
Grand Total	**1,443.0**	**1,928.5**	**1,551.8**	**2,292.2**	**1,584.8**	**2,414.0**	**4,579.7**	**6,634.7**	**2,055.0**
Total Rate Case CAPEX and COR	**1,443.0**	**1,529.6**	**1,551.8**	**1604.6**	**1,584.8**	**1603.3**	**4,579.7**	**4,735.8**	**156.0**
								Variation % of Budget to Rate Plan	**3.41%**