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OF NEW YORK

Hosting Capacity Webinar

Summary of April 28, 2017 Stakeholder Engagement Group Meeting

NYSEG nationalgrid Orange & Rockland Rockland Electric Company conEdison People. Power. Possibilities. Central Hudson A FORTIS COMPANY RG&E

April 28, 2017 Agenda

- Introductions
- Agenda Overview
- Background
- Hosting Capacity Implementation Roadmap
- Stage 2 Hosting Capacity
- SDSIP Overview
- Live-Demo
- Q&A

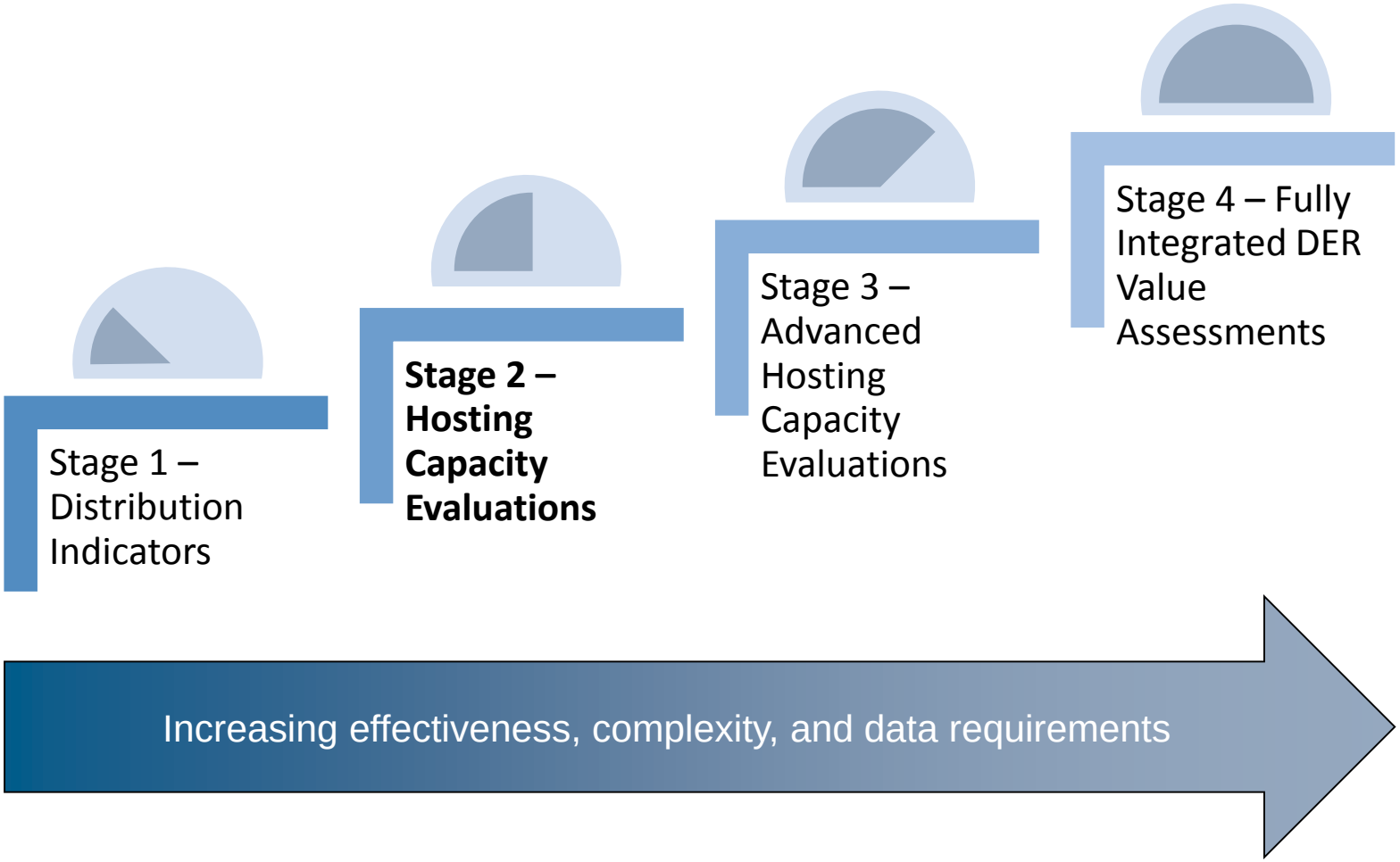
Background

- The Joint Utilities of New York (JU) provided a jointly filed Supplemental Distribution System Implementation Plan (SDSIP) on November 1st, 2016 to the Public Service Commission of New York (PSC).

- In preparation of the SDSIP, the JU held a number of stakeholder engagement sessions in 2016 to solicit input on their approach to the different topics within the SDSIP; five of which were focused on Hosting Capacity.

- To ensure the approach to calculating hosting capacity is consistent across each utility, within the SDSIP the JU highlighted that they would agree to a common set of assumptions and tools for completing their hosting capacity analysis.

Hosting Capacity Implementation Roadmap



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Stage 2 Hosting Capacity

- The JU will produce the hosting capacity analysis for distribution circuits at 12 kV or greater by October 1st 2017 according to timeline set by the recent DSIP Order

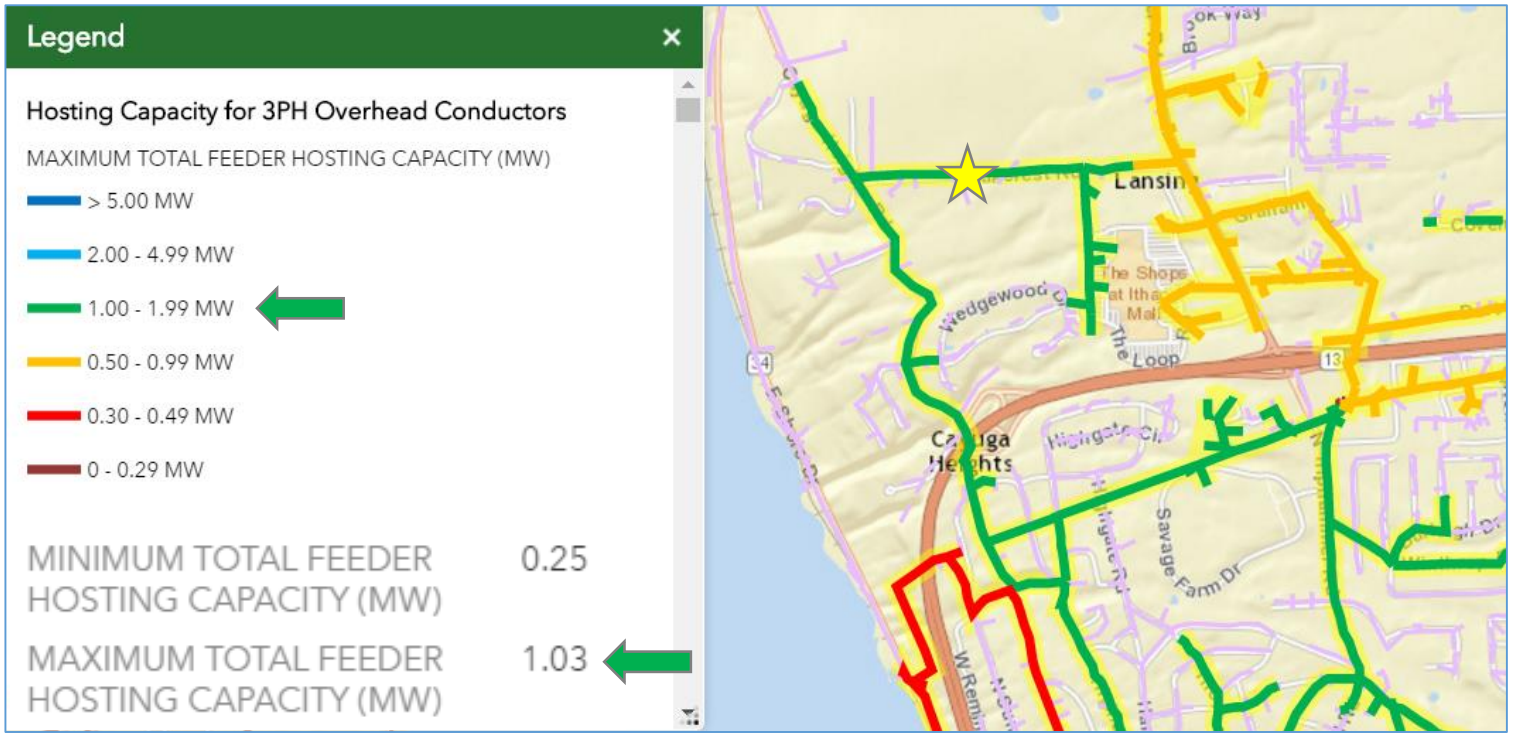
- To drive greater consistency, the utilities will all conduct their hosting capacity analysis using EPRI's DRIVE tool and present their results in the ESRI mapping environment.

- DRIVE allows each utility to calculate the hosting capacity for their distribution system using EPRI's streamlined methodology.

- Stage 2 hosting capacity is focused on feeder-level analysis for large scale solar PV but future stages could look at the impact of other technologies

Hosting Capacity Heat Maps for Centralized PV

- Heat maps of the gross hosting capacity by feeder calculated using large centralized solar PV scenarios. Maps will be colored according to the upper limit of the range of minimum gross three-phase feeder level hosting capacity.



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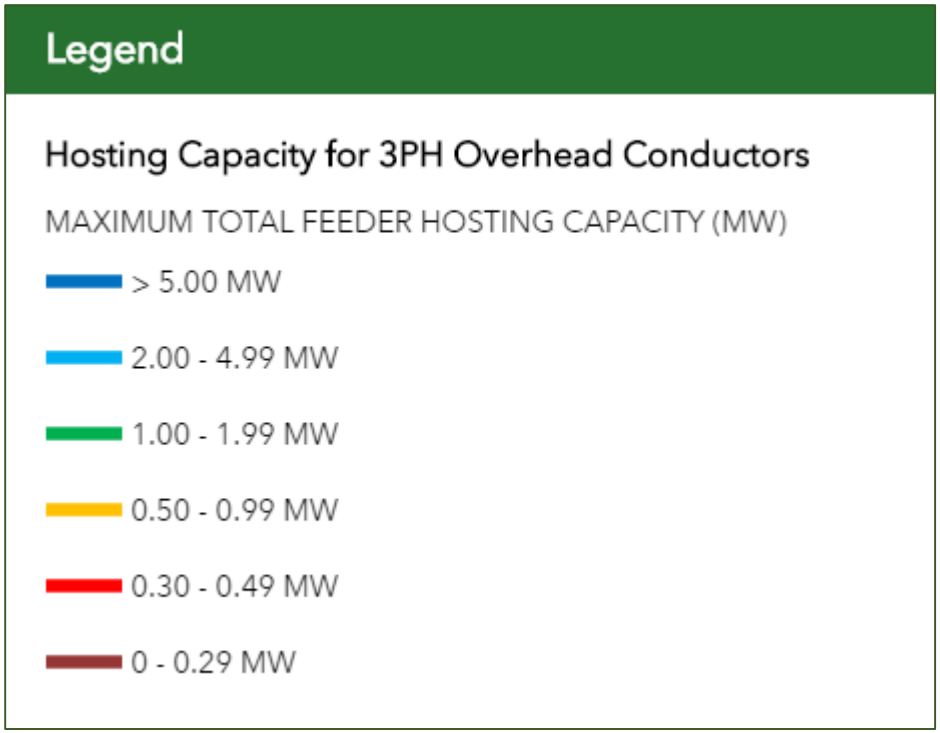
Color Mapping for Hosting Capacity Analysis

- Coloring of the three-phase sections of the feeders will range from minimum values (dark red) to maximum values (dark blue). Breakpoints will include: less than 300 kW, 300-500 kW, 500-1,000 kW, 1,000-2,000 kW, 2,000-5,000 kW, and greater than 5,000 kW.



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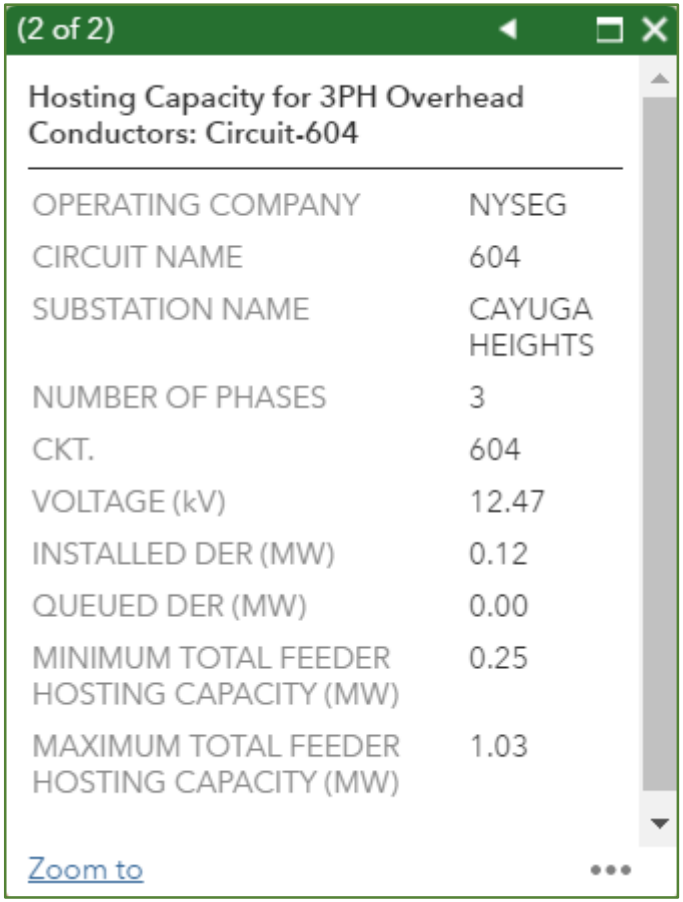
Additional Data to be Provided

- Data pop-ups for each feeder will provide information in tabular format: voltage level of the feeder and other data shown in the Stage 1 indicator maps; current and queued solar PV (MW); and range of gross three-phase feeder level hosting capacity (MW) bounded by the least and greatest minimum hosting capacity values of any three-phase section on that feeder.

- The data provided by October 1st will include active queue management to reflect progress made in the Interconnection Policy Working Group.



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Live Demo

Resources: http://www.nyseg.com/SuppliersAndPartners/distributedgeneration/

Summary of stakeholder input heard during session and related discussion items

Stakeholder Inputs and Engagement Group Decision

Stakeholder Input	Discussion Points	Next Steps

Stakeholders requested that, similar to the California ICA maps, additional circuit data be included and aggregated at the substation level to be included in the data pop-ups	• Substation info currently provided in California:
	  • Name
	  • Voltage
	  • Installed and Queued DG (MW)
	  • Total DG (MW)
	  • Projected Load
	  • Current Penetration level (%)
	  • Max remaining generation capacity
	  • 3V0: Upgrades Complete or Scheduled YES or NO?
	  • Notes: (Space to include any other relevant information that can be manually recorded to help guide interconnection applicants, including electrical restrictions, planned upgrades, etc.)
	• Circuit info currently provided in California:
	  • Projected Load
	  • Current Penetration Level (%)
	  • Notes: (Space to include any other relevant information that can be manually recorded to help guide interconnection applicants, including electrical restrictions, planned upgrades, etc.)
		OPEN – Further discussion warranted

Stakeholder Inputs and Engagement Group Decision

Stakeholder Input	Discussion Points	Next Steps

Stakeholders requested electrical information on the substation also be provided in the displays or data pop-ups, specifically if an interconnection study has identified the need for 3V0 protection or not	• Proposed inclusion of 3V0 in the data pop-up
	  • 3V0: Upgrades Complete or Scheduled YES or NO?
	  • Notes: (Space to include any other relevant information that can be manually recorded to help guide interconnection applicants, including electrical restrictions, planned upgrades, etc.)
	• Stakeholders noted that the status of 3V0 upgrades at a substation would be of great value to determining the feasibility of a project
		OPEN – Further discussion warranted

Stakeholders requested additional data portal language to reflect not all protection issues are included in the analysis	• Because 3V0 protection at the substation was not consider in the analysis presented, language should be included as a disclaimer to note the need for protection upgrades not considered in this analysis	**OPEN** – Further discussion warranted

Stakeholder Inputs and Engagement Group Decision

Stakeholder Input	Discussion Points	Next Steps
Stakeholders requested explicit documentation of large PV profiles used to conduct the analysis in the data portal	• Understanding the assumptions used in the analysis as they relate to the results displayed would be of value to the end user	**CLOSED** – The Hosting Capacity Working Group is working to include language to address this concern in the final displays
Stakeholders requested disaggregated DG information by technology type	• Stakeholders noted that the disaggregated DG information by technology type would be of value when presenting the total queued and installed DG in the hosting capacity data pop-up	**OPEN** – Further discussion warranted
Stakeholders requested additional information currently provided in pre-application	• Stakeholders noted that information already available in the pre-application could be included in the hosting capacity data pop-ups	**OPEN** – Further discussion warranted

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