



Transmission Planning

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2021 Local Transmission Plan

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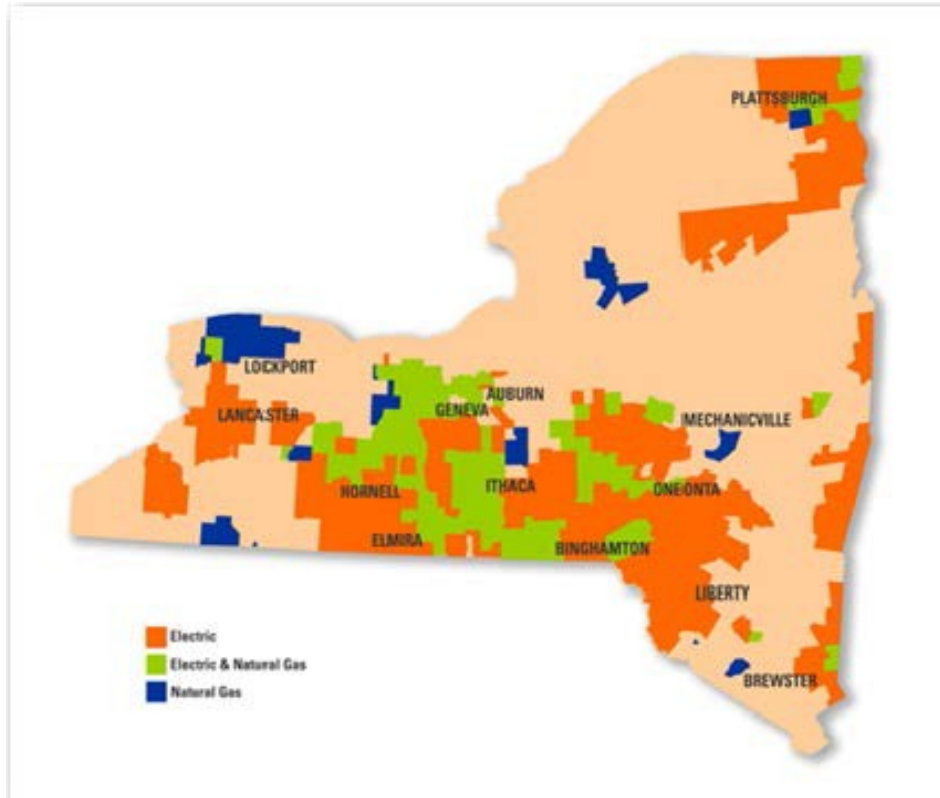
In this presentation

- Overview
 - Avangrid's service areas in New York
- Scope of the projects being presented today
- Criteria to determine “Firm” projects
- Local Transmission Plan (by division/area)
 - Binghamton
 - Brewster
 - Elmira
 - Geneva
 - Hornell
 - Mechanicville
 - Oneonta
 - Rochester

Avangrid's service areas in New York

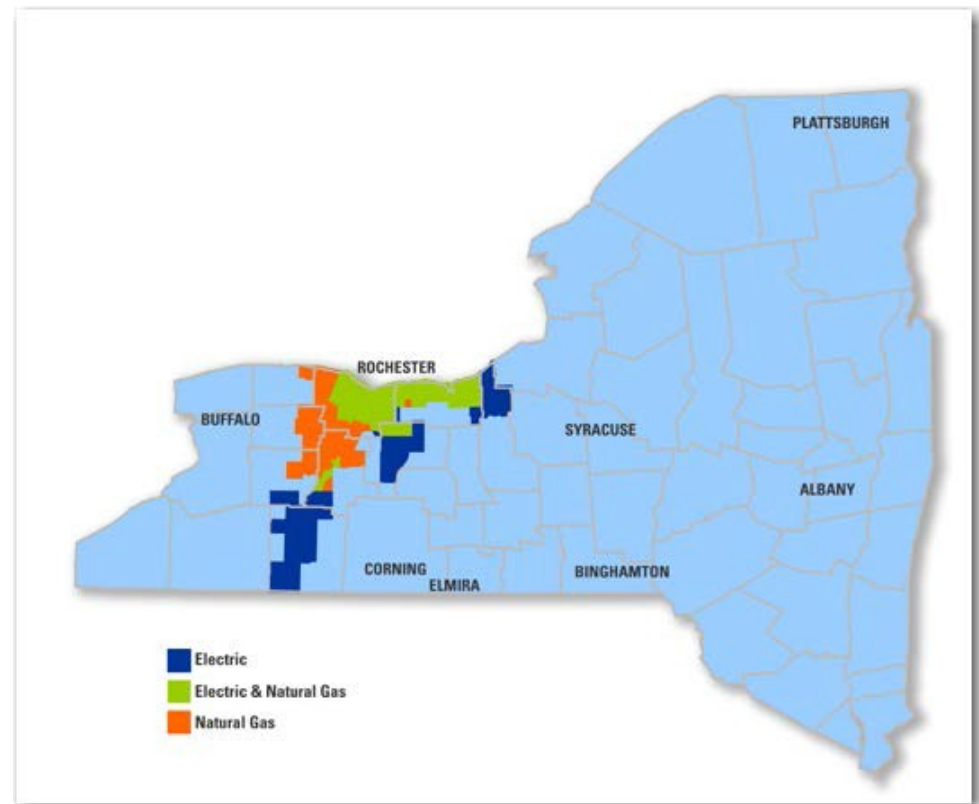
New York State Electric & Gas (NYSEG):

Serves ~881,000 electricity customers across ~18,400 square miles of upstate New York. It operates and maintains an electricity delivery system that consists of 4,500 miles of transmission lines and 34,000 miles of distribution lines.

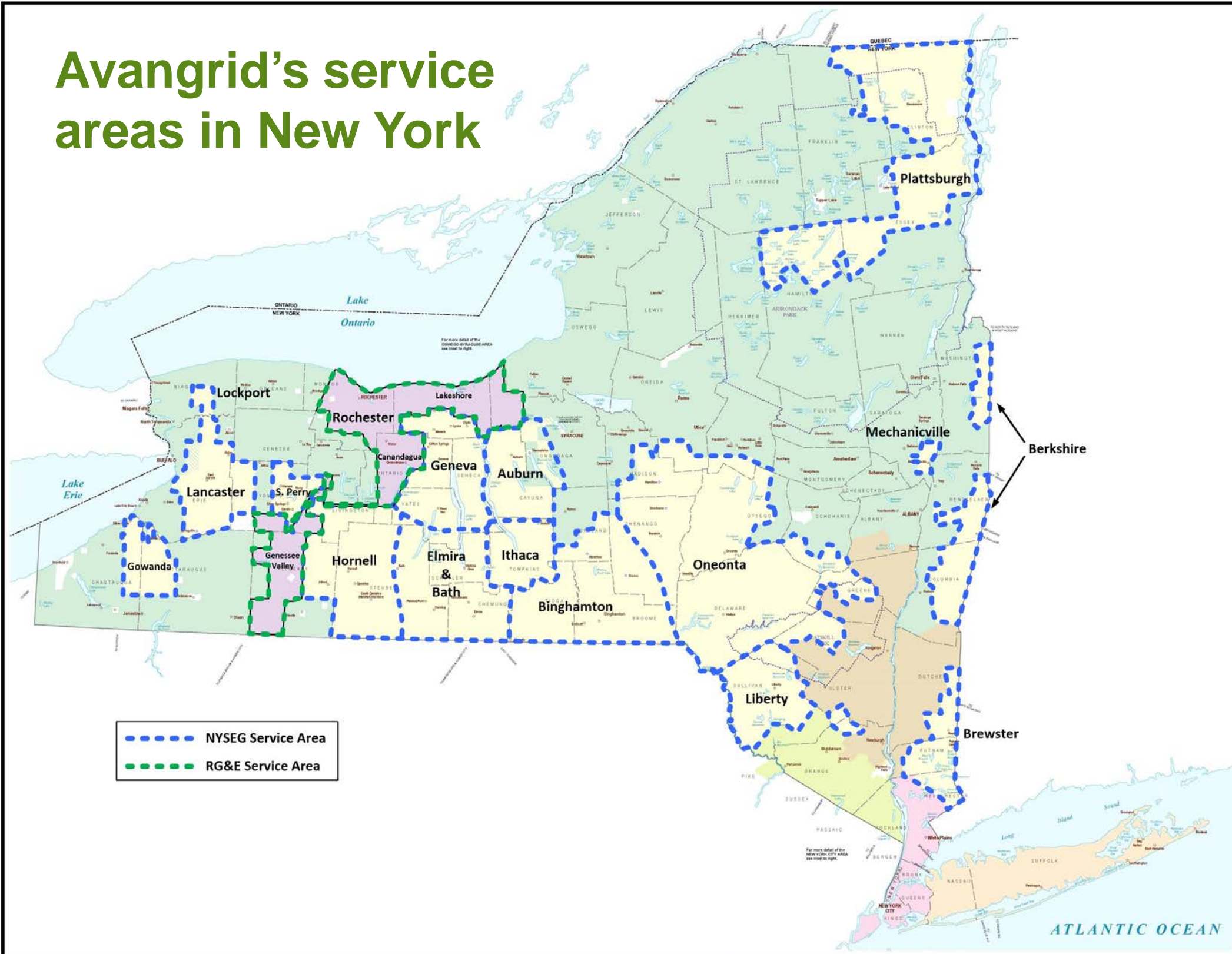


Rochester Gas and Electric (RG&E):

serves ~371,000 electricity customers in the metropolitan Rochester area and surrounding region, covering an area of ~2,700 square miles



Avangrid's service areas in New York



Scope of the LTP

- Address reliability issues on “local system”
 - NYSEG – include 115kV, 69kV, 46kV, and 34.5kV Some 34.5kV is dedicated to serving customer load and is considered distribution; some is dual purpose.
 - RG&E – include facilities between 115kV and 34.5kV, as well as 11kV facilities that are operated in parallel with the 115kV and 34.5kV systems and are thus considered an extension of the transmission system.
- Use Avangrid’s Local Planning Criteria as the reference
- Focus on projects with the In-Service Date (ISD) within 5 years

Determination of “Firm” projects

- Criteria
 - Internal management approval
 - Budget authorization
 - Has approved System Impact Study (if applicable)
- Status of a project can be one of the following categories

Status	Definition
Conceptual	new projects which will be developed through further study
Proposed	a recommended project that has been selected to address system needs
Planned	projects that have internal approval and budget, detailed engineering/procurement has commenced, and SIS and Article VII approval are being sought if applicable
In Construction	projects that have all necessary approvals and are under construction
Complete	project is in service

LTP: NYSEG – Binghamton Division

Project	Summary	Status	In-Service Date
Oakdale 345kV Reconfiguration and 3 rd 345/115kV Transformer	Install third 345/115kV transformer and reconfigure 345kV bus work; it will be constructed as part of the multi-element project called the “BES Program”	Planned	2027
Langdon Rd 115/34.5/12 kV Rebuild Project	Full AIS BAAH rebuild of 115 kV and medium voltage GIS	Planned	2031

LTP: NYSEG – Brewster Division

Project	Summary	Status	In-Service Date
Wood Street New 3rd 345/115kV Transformer	Install a third 345/115kV transformer	Planned	2023

LTP: NYSEG – Auburn Division

Project	Summary	Status	In-Service Date
Wright Avenue 115/34.5/12.5 kV Substation Rebuild	Full station rebuild with 115 kV GIS Ring Bus, 34.5 kV & 12.5 kV GIS, two new 50 MVA 115/34.5 kV transformers, two new 37 MVA 34.5/12.5 kV transformers and a new Control Building	Proposed	2026

LTP: NYSEG – Hornell Division

Project	Summary	Status	In-Service Date
South Perry New 230/115kV Transformer and South Perry New 2nd 115/34.5kV Transformer	Install a new 230/115kV transformer to create a new source for the 115kV system and add a second 115/34.5kV transformer. Scope re-evaluated due to deficiencies on bus 115KV identified late in the project. Re-configure 115 KV bus work.	Planned	2027
Meyer New 2nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer. Replace existing bay. Build breaker and a half layout on 115 KV bus.	Planned	2026

LTP: NYSEG – Ithaca Division

Project		Summary	Status	In-Service Date
Line 981 Update		Upgrade 115kV Line 981 and install OPGW from Etna to Coddington (BES)	In Construction	2024

LTP: NYSEG – Lancaster Division

Project	Summary	Status	In-Service Date
New Gardenville Upgrades (Entire scope changed)	Install 2 new 115/34 KV 50 MVA transformers, 1 new 230/115/34 KV 448MVA transformer. New 230 kV ring bus. 115 kV breaker and a half 6 bay GIS. 34.5 KV straight bus, 2 tie breaker GIS	Planned	2026
Erie Street Rebuild	Rebuild the 115kV as a 3-bay Breaker-and-a-half, install 115 kV capacitors, replace transformers (BES)	Planned	2027
Big Tree Rebuild	Rebuild the 115 kV as a Breaker-and-a-half, relocate transformers, route Line 151 into and out of the substation (BES)	In Construction	2022

LTP: NYSEG – Liberty Division

Project	Summary	Status	In-Service Date
Coopers Corners Transformer Additions	Install a third 345/115kV transformer and second 115/34.5kV transformer	Proposed	2031

LTP: NYSEG – Oneonta Division

Project	Summary	Status	In-Service Date
Fraser expansion and Delhi removal	The project consists of an expansion of Fraser 345 and 115 kV along with a complete removal of Delhi's 115 kV and move all 115 lines to Fraser (BES)	In Construction	2024

LTP: RG&E

Project	Summary	Status	In-Service Date
Rochester Area Reliability Project	Construct new Sta 255 with two 345/115kV transformers, connect to 345kV lines, install new 345kV line to Sta 80 and two 115kV lines to Sta 418 and Sta 23 respectively	Complete	2020
Station 122 Relay Upgrade	Upgrade relays on 345kV lines S122-Clay1 and S122-Clay2	Complete	2020
Station 23 - New Downtown 115kV Source and New 34.5/11.5kV Transformer and 11.5kV Switchgear	Upgrade Station 23 to provide a new 115kV source	Complete	2019
Station 262 - New 115/34.5kV Substation	Construct a new 115/34.5kV substation between Station 33 and Station 23	Complete	2020
Station 168 Area Reinforcement	Sectionalize National Grid Trunks #2 and #4 at Station 168 with 115kV circuit breakers and install 34.5kV capacitor banks	Planned	2024
Station 49 – Substation Upgrade	Replace two existing 34.5/11.5kV transformers with larger units and upgrade switchgear	Complete	2021

*ISD is being confirmed

LTP: RG&E

Project	Summary	Status	In-Service Date
Station 48 – 418 New 115kV Line (Line 949)	Install a new 115kV line (BES)	Planned	2026
Station 127 – New 2 nd 115/34.5kV Transformer	Add second transformer. Expand the 115KV bus to have 2 breakers on either side of cap banks and sectionalize national grid lines	Planned	2024
115 Line 901/902 Upgrade	Upgrade capacity of Mortimer-Station 251 Line 901 and Station 251 - Station 82 Line 902	Planned	2028
115 Line 942/943 Upgrade	Upgrade Line 942 and Line 943	Planned	2026
Monroe County Reliability Project	Rebuild line 947 from Station 418 to Station 70 and reconductor, Rebuild line 946, 945, and 917 from Station 70 to Station 7 and reconductor.	Planned	2027