



October 26, 2017

NYSEG and RG&E

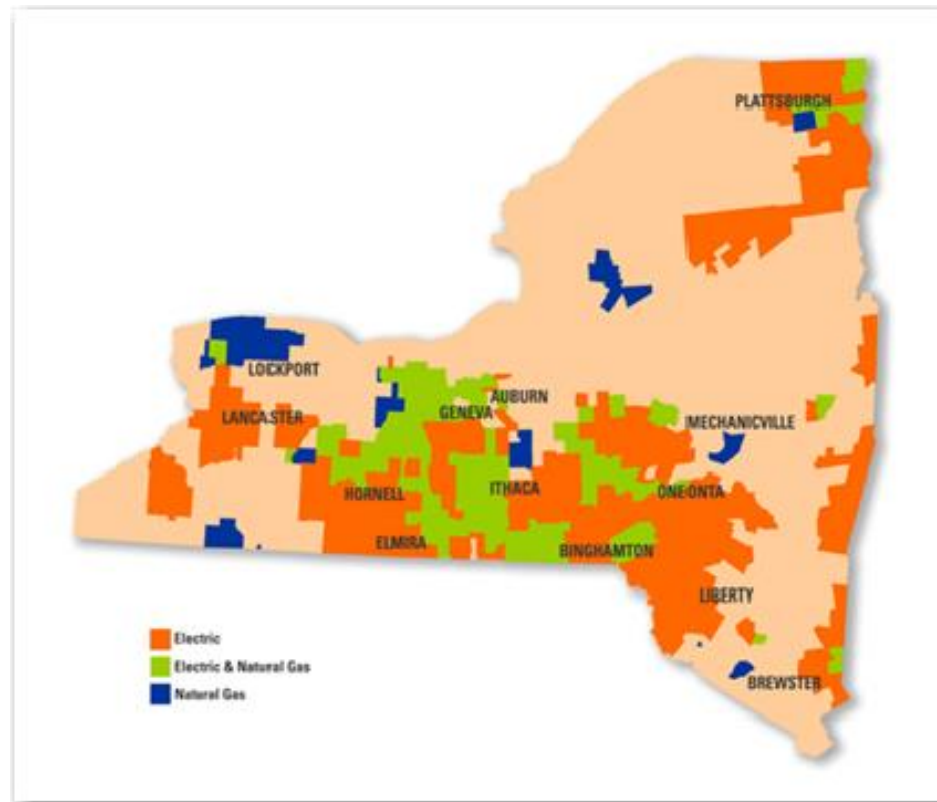
2017 Local Transmission Plan

Tim Lynch

Manager - Transmission Planning (New York)

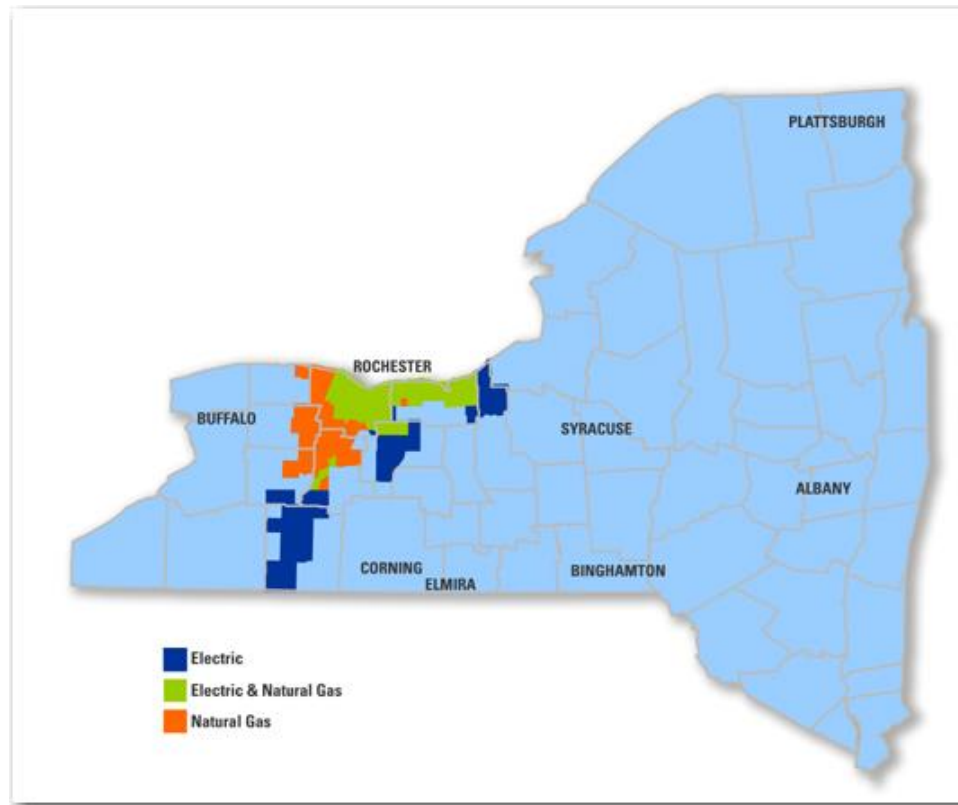
New York State Electric & Gas (NYSEG)

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 & Electric (RG&E)

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



Local Transmission Plans

- NYSEG – Local transmission facilities 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 – Local transmission facilities 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.
- Local transmission plans are developed to address reliability issues and accommodate forecasted load growth. Equipment replacements due to asset condition are not included.
- The projects cover a 10 year horizon.

Planning Criteria and Assumptions

- For all voltage levels of the Bulk Power System, Bulk Electric System and Local Transmission System, the planning criteria used in this LTP are described in the Avangrid Electric Transmission Planning Manual - Criteria & Processes.
- The load flow simulations were monitored for thermal and voltage violations under system normal and applicable contingency conditions.
- The study case used a 2027 NYCA summer peak load (90/10) representation with minor adjustments made in some regions to correct for local load conditions.
- The analysis was performed using PSS/e Version 33 and TARA.

Project Status Definitions

STATUS	DEFINITION
Concept	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

- Projects are listed in NYISO Gold Book as “Firm” when they have internal management approval, budget authorization, and an approved System Impact Study if applicable.
- Only firm projects have been provided in the detailed tables.

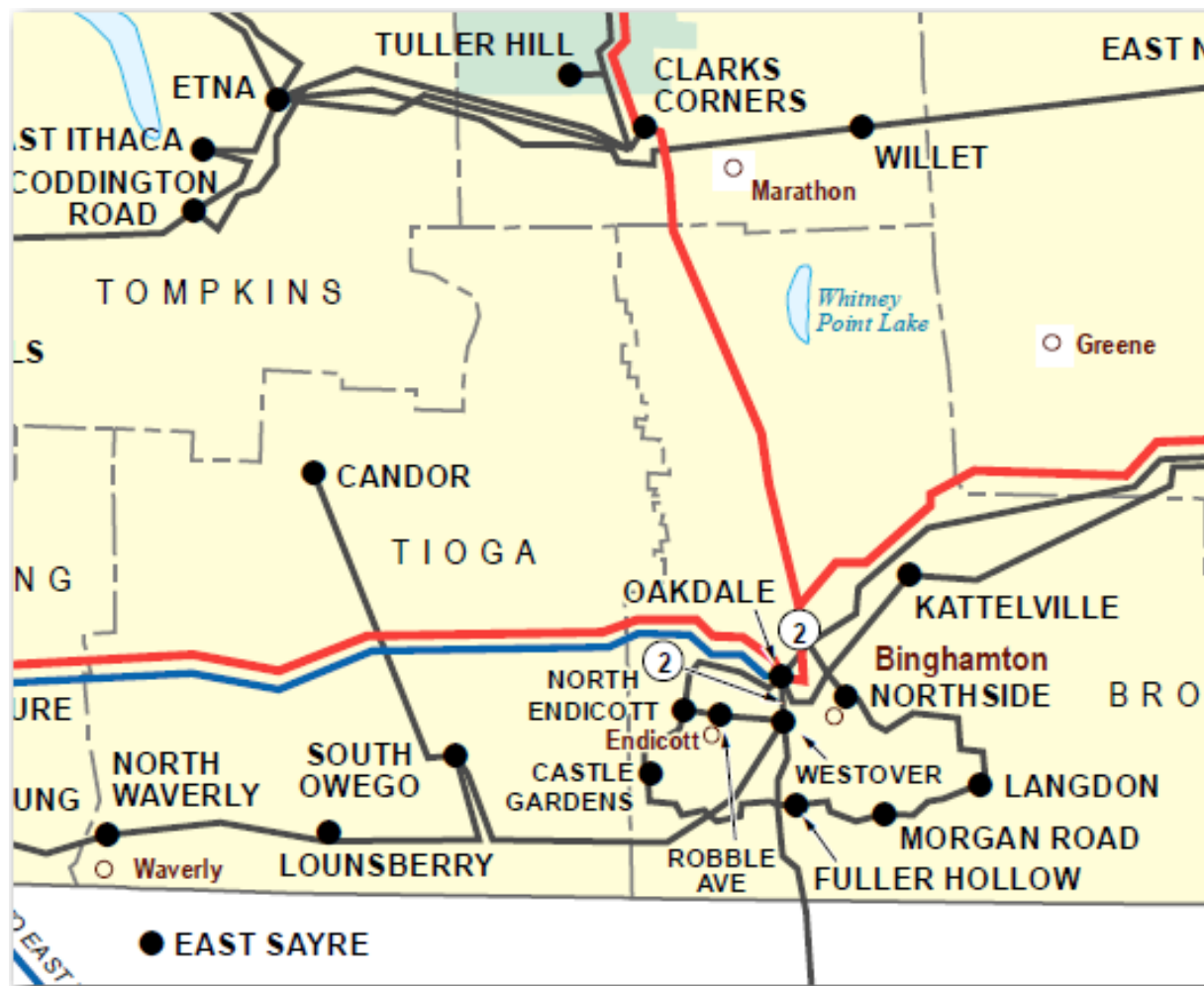
NYSEG – Auburn Division



Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Auburn Transmission Project	Construct new 115kV line and reconductor existing 115kV line	Yes	N/A	N/A	Yes	Complete	6/2017

NYSEG - Binghamton Division



Binghamton - Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Oakdale 345kV Reconfiguration and 3 rd 345/115kV Transformer	Install third 345/115kV transformer and reconfigure 345kV buswork; part of multi-element BES Program	No*	Pending	N/A	N/A	Planned	7/2021
Willet New 2 nd 115/34.5kV Transformer	Add second transformer	Yes	N/A	N/A	N/A	Planned	5/2019
Vestal – Westover Line 511/512 Upgrade	Upgrade conductors	Yes	N/A	N/A	N/A	In Construction	11/2017
Westover 115/34.5kV Transformer B7 Replacement	Replace transformer with larger size	Yes	N/A	N/A	N/A	In Construction	3/2018

*This project has been rolled into the multi-element BES Program and has been determined to need a System Impact Study.

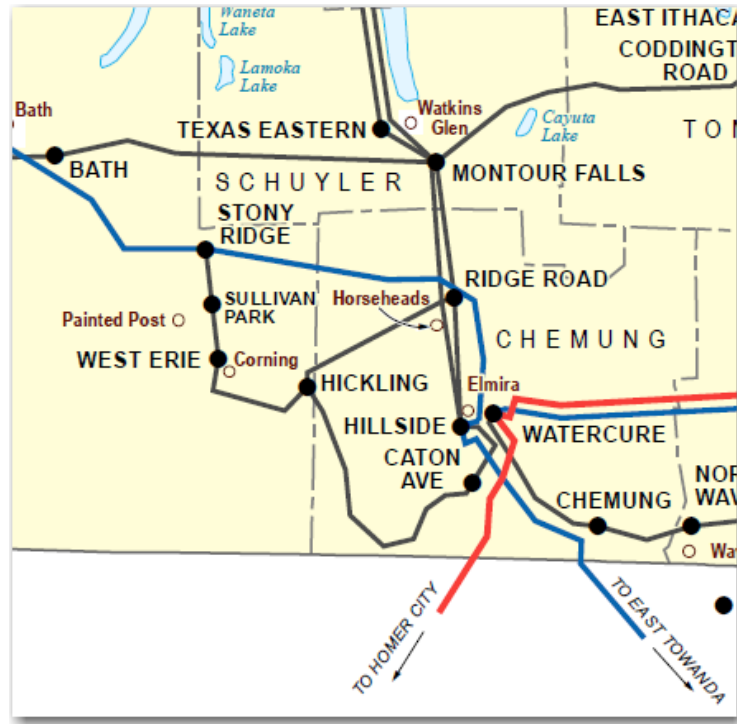
NYSEG – Brewster Division



Brewster – Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Wood Street New 3rd 345/115kV Transformer	Install a third 345/115kV transformer	Yes	Yes	N/A	N/A	Planned	1/2022
Brewster Line 807 Conversion Project	Convert the existing 46kV loop to 115kV operation from Katonah to Wood Street to Carmel	Yes	N/A	N/A	N/A	In Construction	12/2018
Silo Ridge Field Club	Install 115kV Capacitor at Pawling and 46kV Capacitor at Dover Plains	Yes	N/A	N/A	N/A	Planned	9/2019

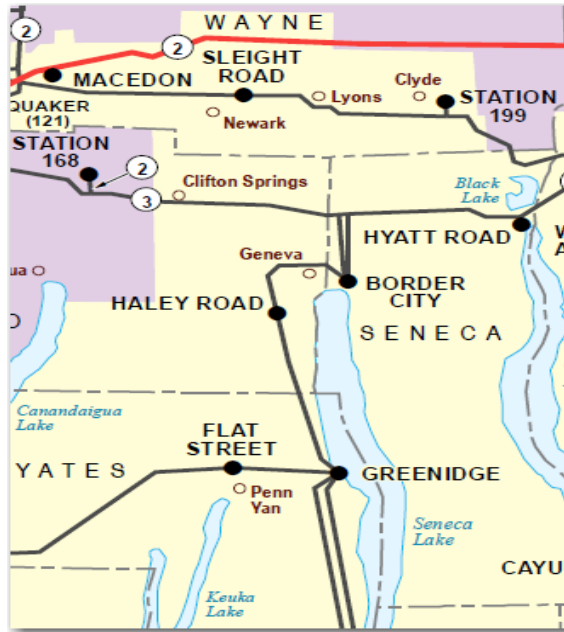
NYSEG – Elmira Division



Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Watercure Road New 2nd 345/115kV Transformer	Install a second 345/115kV transformer	Yes	N/A	N/A	N/A	Planned	12/2018

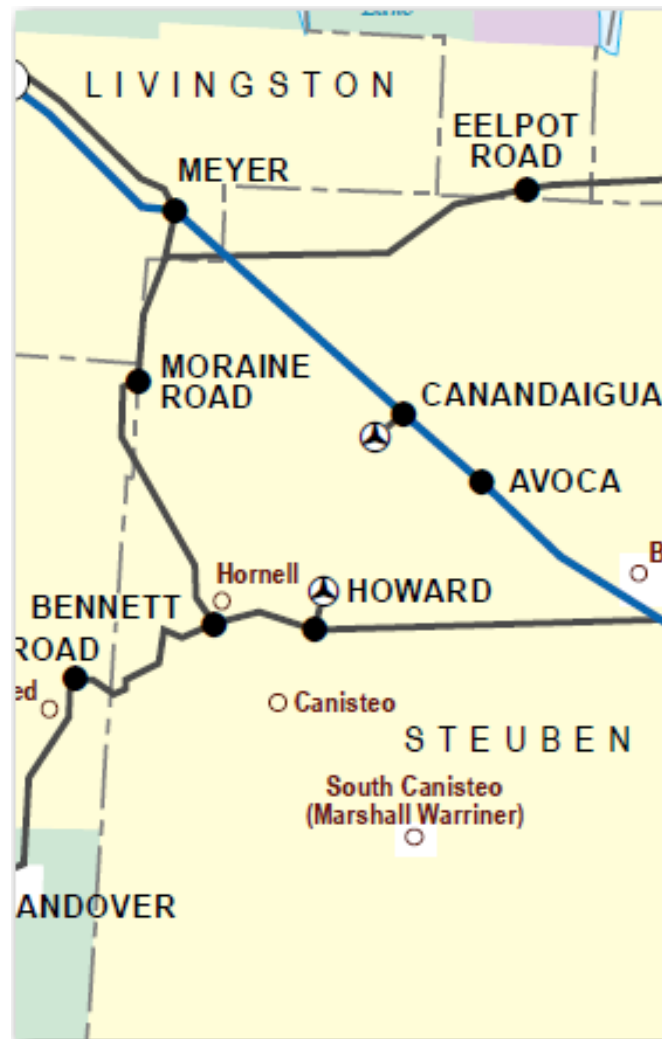
NYSEG – Geneva Division



Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Flat Street Substation New 2nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer	Yes	N/A	N/A	N/A	Planned	11/2018

NYSEG – Hornell Division



Hornell – Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In- Service Date
Eelpot Road New 2 nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer	Yes	N/A	N/A	N/A	Complete	9/2016
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	Yes	Yes	N/A	N/A	In Construction	8/2019
Meyer New 2nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer	Yes	N/A	N/A	N/A	Planned	11/2018

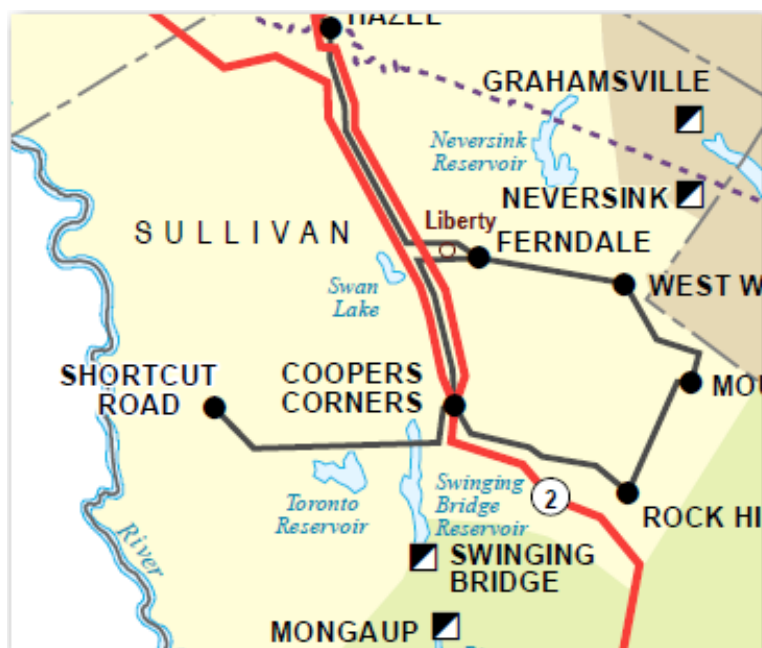
NYSEG – Lancaster Division



Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
New Gardenville New 3 rd 230/115kV Transformer	Install a new 230/115kV transformer and rebuild areas of substation to new configuration	Yes	N/A	N/A	N/A	Planned	6/2021

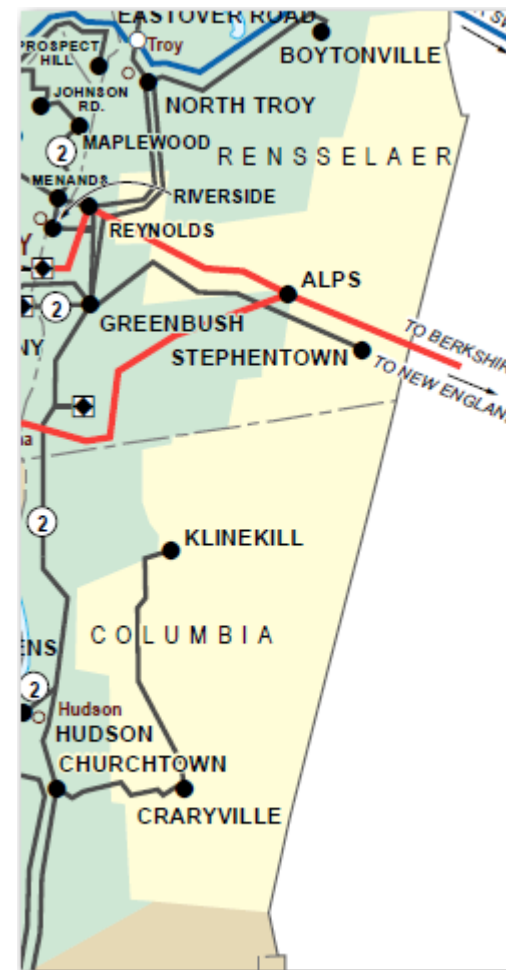
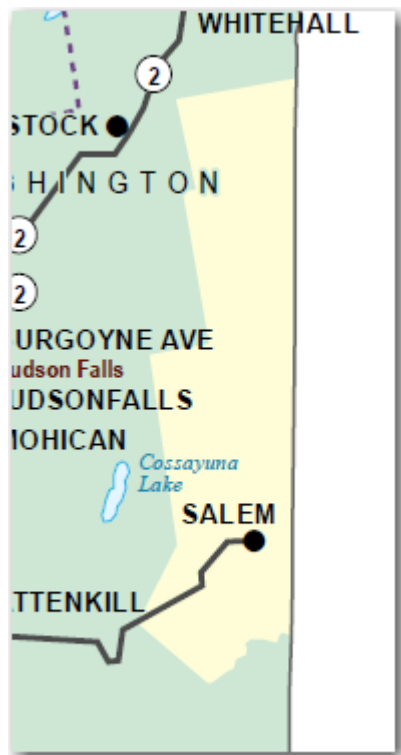
NYSEG – Liberty Division



Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Coopers Corners New 3rd 345/115kV Transformer and Coopers Corners New 2nd 115/34.5 kV Transformer	Install a third 345/115kV transformer and second 115/34.5kV transformer	Yes	N/A	N/A	N/A	Proposed	7/2022

NYSEG – Mechanicville Division



Mechanicville – Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In- Service Date
Mechanicville Reinforcement Project	Install a new 115/34.5kV source substation and two 34.5kV distribution lines	Yes	N/A	N/A	N/A	Complete	2/2016
Columbia County Transmission Project (New Falls Park 115/34.5kV Distribution Substation)	Install a new 115/34.5kV source substation with two 34.5kV distribution lines	Yes	N/A	N/A	Yes	Planned	11/2018
Stephentown New 2nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer	Yes	N/A	N/A	N/A	In Construction	3/2018

NYSEG – Oneonta Division



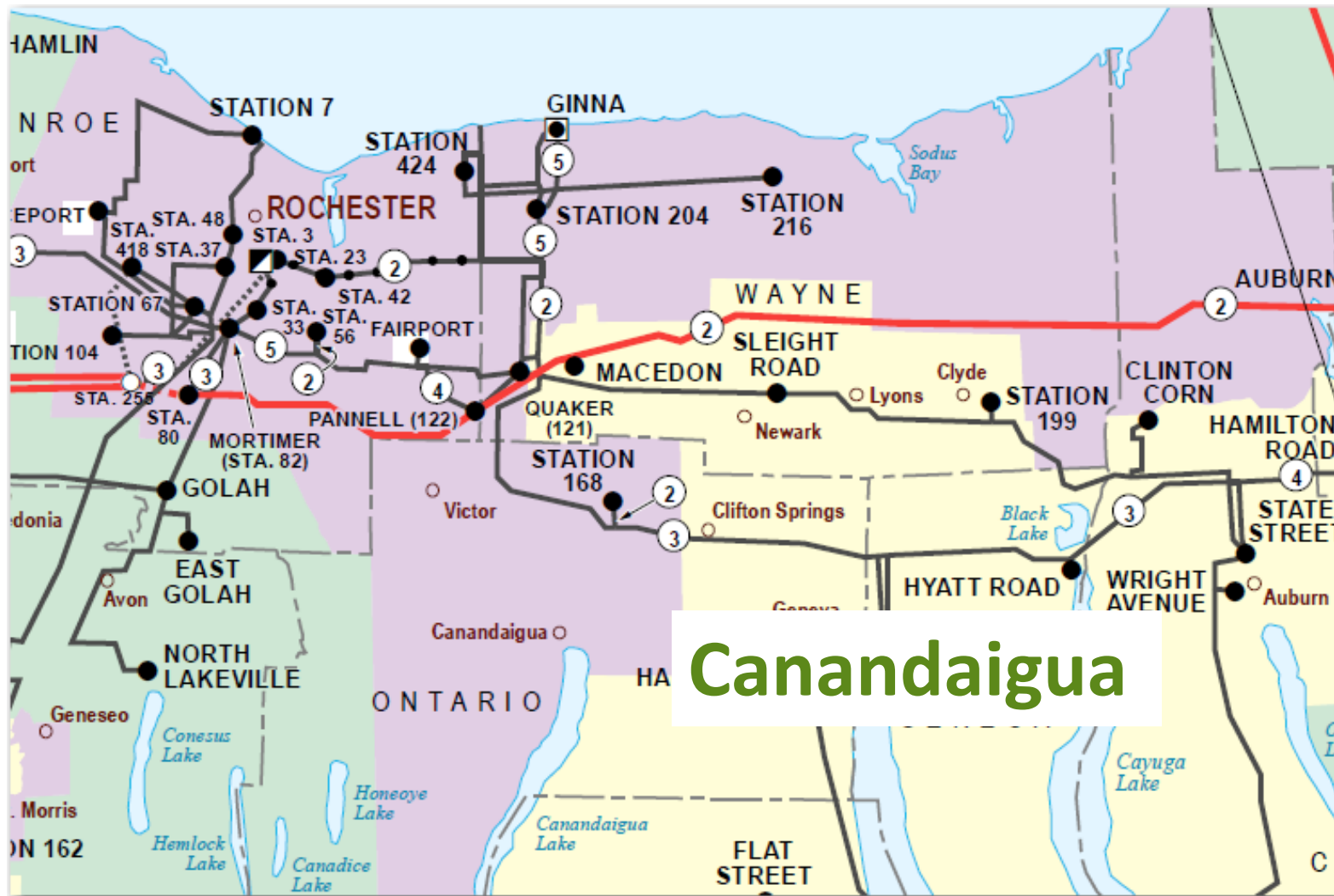
Oneonta – Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In- Service Date
Fraser New 2nd 345/115kV Transformer and 115kV Bus Reconfiguration	Install second 345/115kV transformer and reconfigure 115kV to BAAH; part of BES Program	No *	Pending	N/A	N/A	Proposed	2/2016

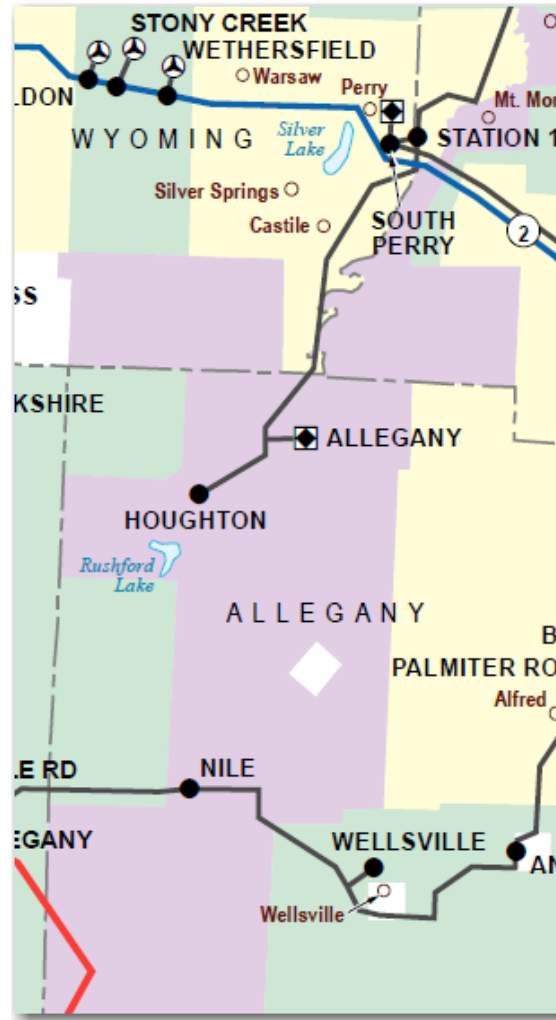
*This project has been rolled into the multi-element BES Program and has been determined to need a System Impact Study.

RG&E Central

Lakeshore



Genessee Valley



RG&E – Firm Projects

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Station 218 to Clyde New 34.5kV Line	Construct a new 34.5kV line	Yes	N/A	N/A	N/A	Complete	5/2016
Ginna Retirement Transmission Alternative (GRTA)	Replace transformers at Station 122 , reconfigure 345kV Bus at Sta 122 and Sta 80, and upgrade three 34.5kV lines and one 11kV line	Yes	N/A	N/A	N/A	Complete	6/2017
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	Yes	Yes	Yes	Yes	In Construction	11/2021
Station 122 Relay Upgrade	Upgrade relays on 345kV lines S122-Clay1 and S122-Clay2	YES	N/A	N/A	N/A	Planned	6/2019
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	Yes	N/A	N/A	N/A	In Construction	12/2019

RG&E – Firm Projects, continued

Project	Summary	Firm?	SIS Approved?	Facility Study Approved?	Article VII Approved?	Status	In-Service Date
Station 262 - New 115/34.5kV Substation	Construct a new 115/34.5kV substation between Station 33 and Station 23	Yes	N/A	N/A	N/A	In Construction	12/2018
Station 168 Area Reinforcement	Sectionalize National Grid Trunks #2 and #4 at Station 168 with 115kV circuit breakers and install 34.5kV capacitor banks	Yes	N/A	N/A	N/A	Planned	7/2020
Station 49 – Substation Upgrade	Replace two existing 34.5/11.5kV transformers with larger units and upgrade switchgear	Yes	N/A	N/A	N/A	Planned	7/2019
Station 48 – 418 New 115kV Line	Install a new 115kV line; part of BES Program	Yes	N/A	N/A	N/A	Planned	12/2020
Station 127 – New 2 nd 115/34.5kV Transformer	Add second transformer	Yes	N/A	N/A	N/A	Planned	12/2022
34.5kV Line 778 Upgrade	Upgrade or install a parallel 34.5kV line to increase capacity	Yes	N/A	N/A	N/A	Planned	12/2025

LTP Posted On-line

This Local Transmission Plan is posted to NYISO website and the respective websites of NYSEG and RGE at:

- <http://www.nyseg.com/SuppliersAndPartners/transmissioninfo/localtransmissionplans.html>
- <http://www.rge.com/SuppliersAndPartners/transmissioninfo/localtransmissionplans.html>