



Transmission Planning

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2019 Local Transmission Plan

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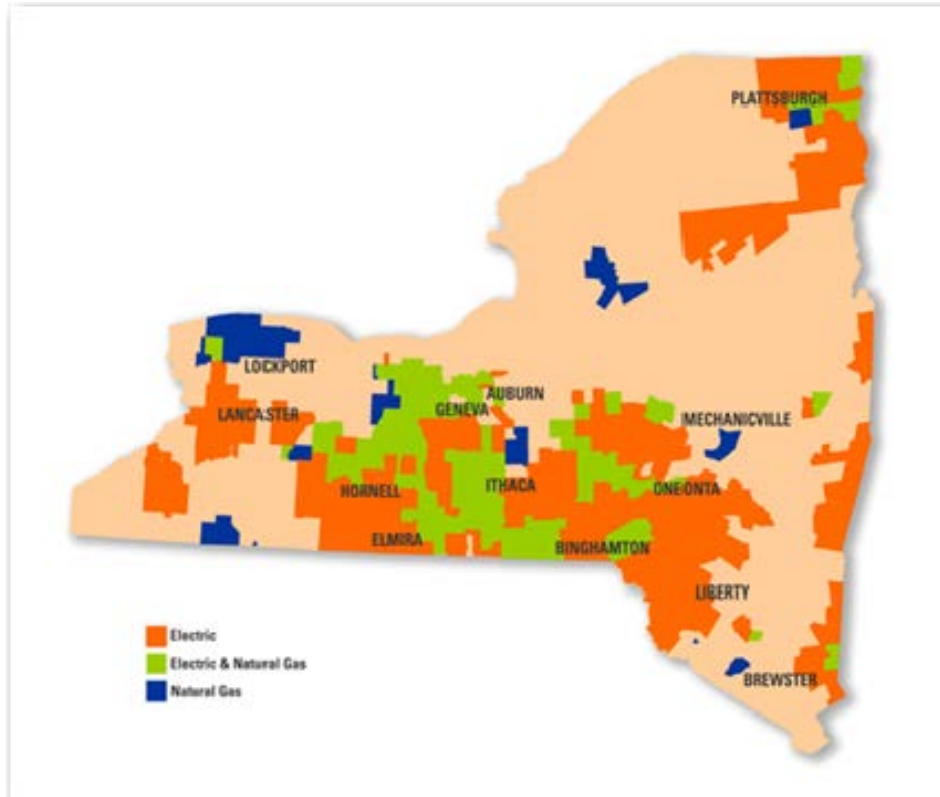
In this presentation

- 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

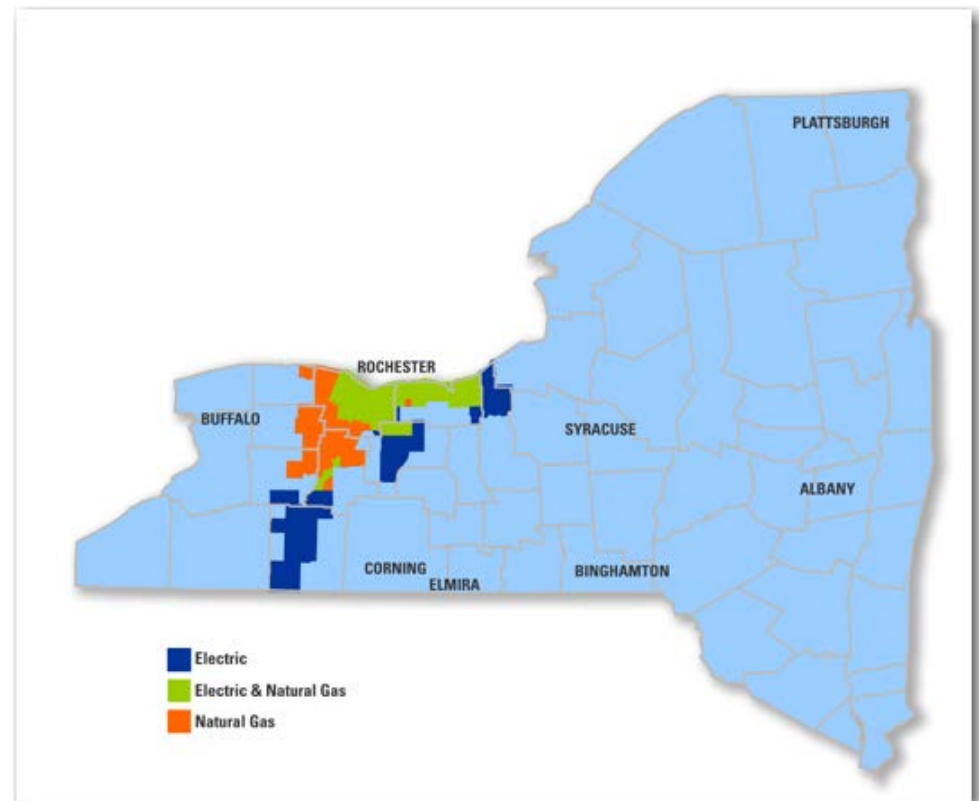
New York State Electric & Gas (NYSEG):

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



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

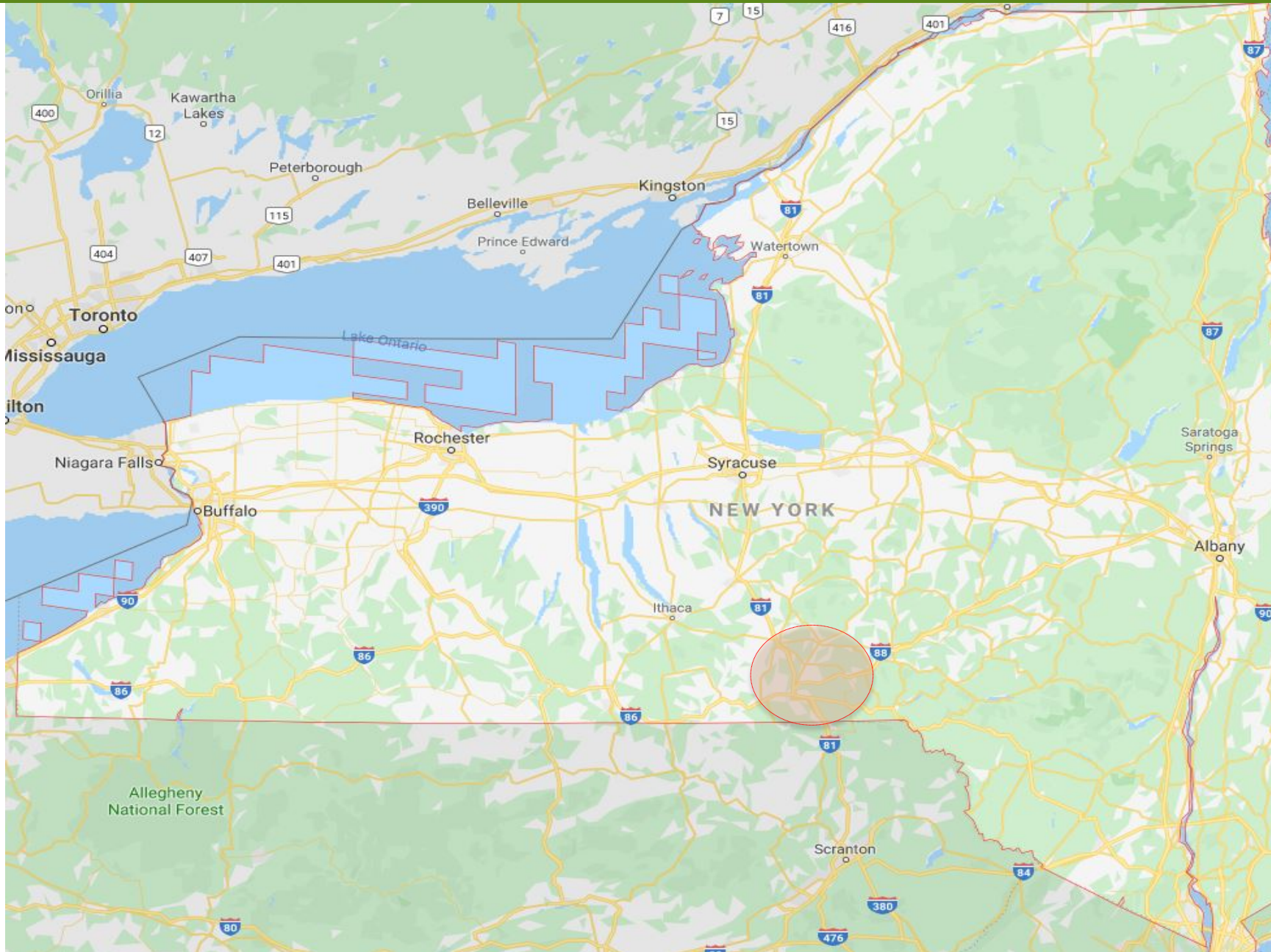
Determination of “Firm” projects

- 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
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

If a project was presented as complete in previous meeting, it will not be presented in the subsequent meetings

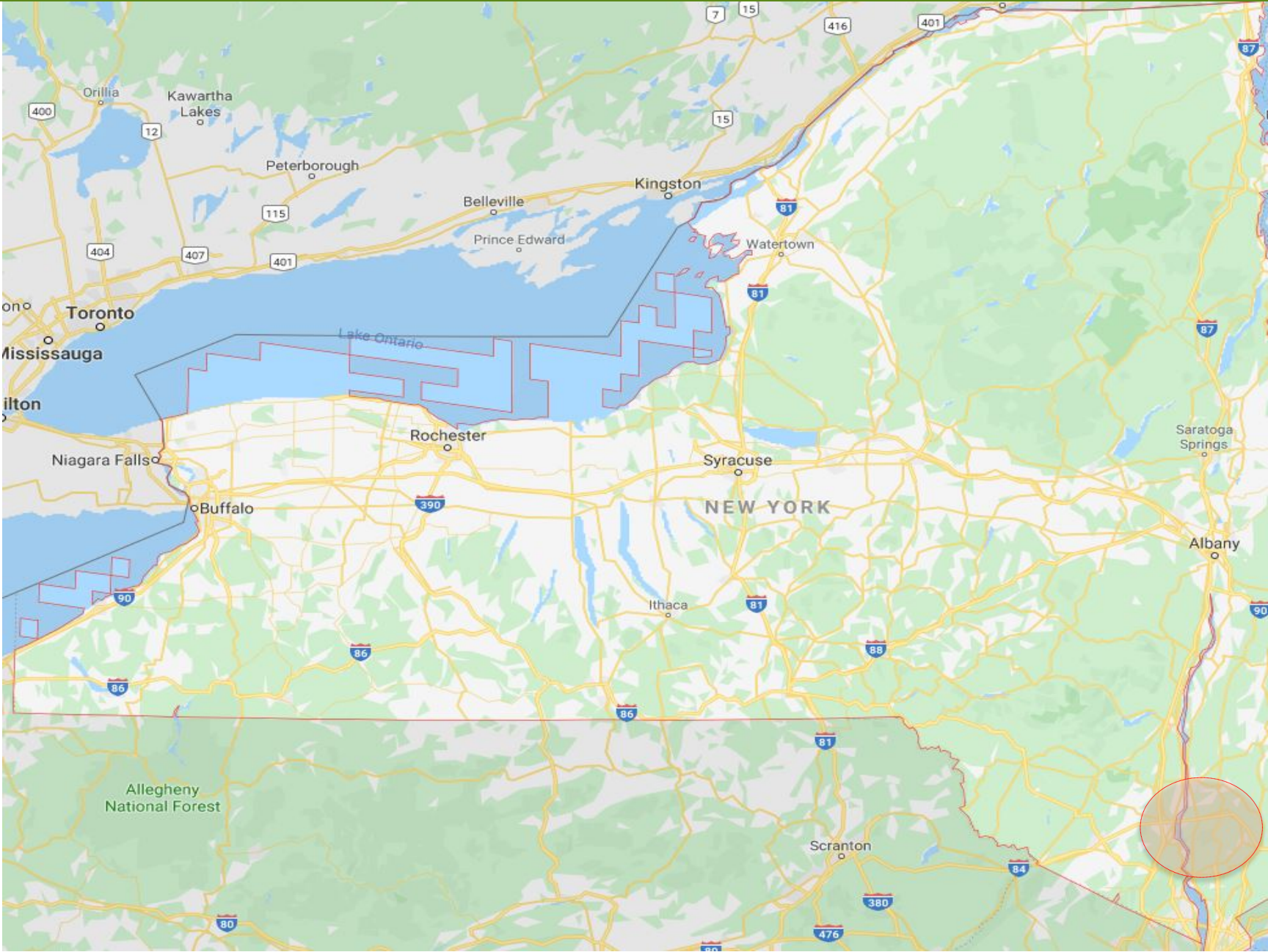
LTP: NYSEG – Binghamton Division



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	2024
Willet New 2 nd 115/34.5kV Transformer	Add second transformer	Planned	2020

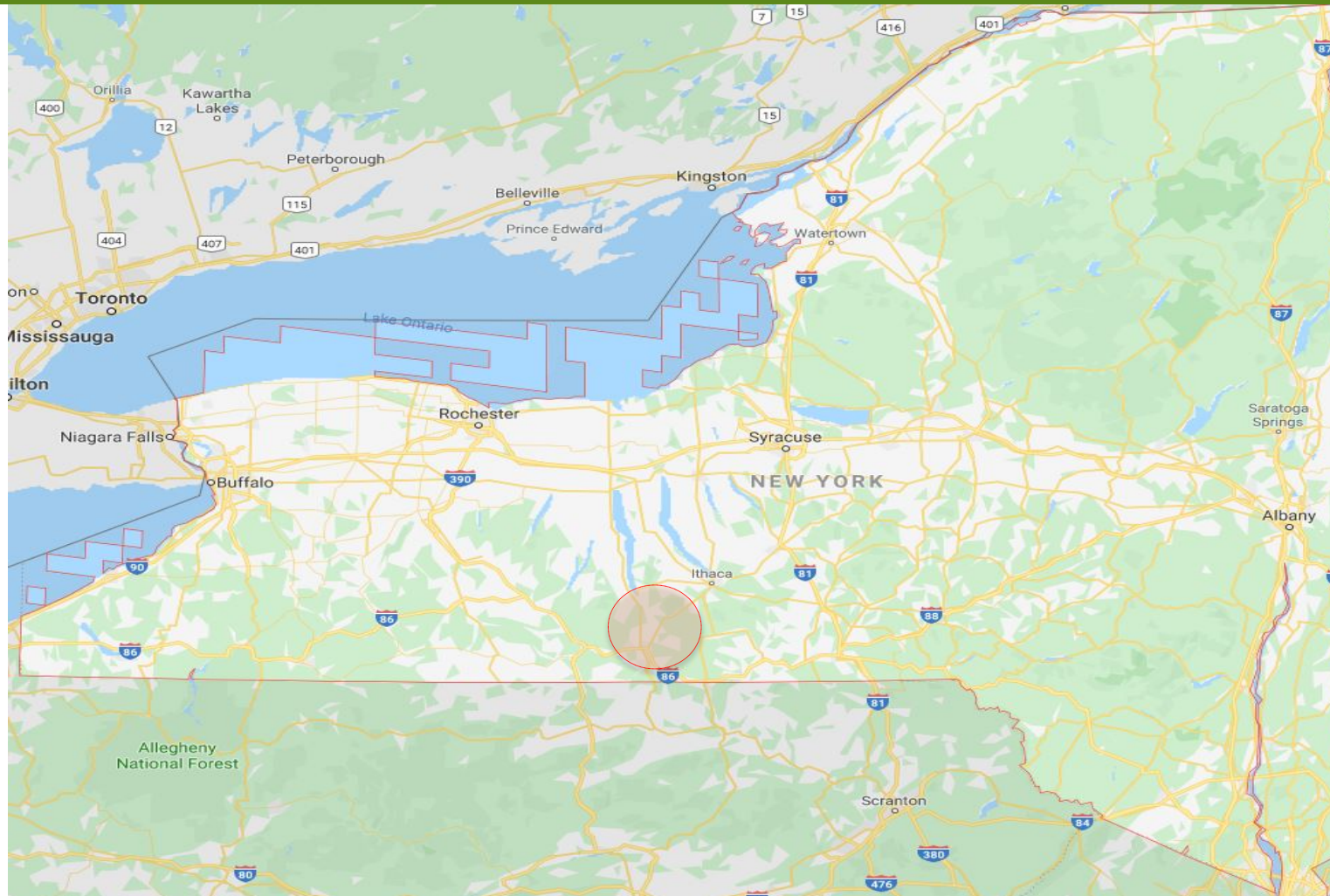
LTP: NYSEG – Brewster Division



LTP: NYSEG – Brewster Division

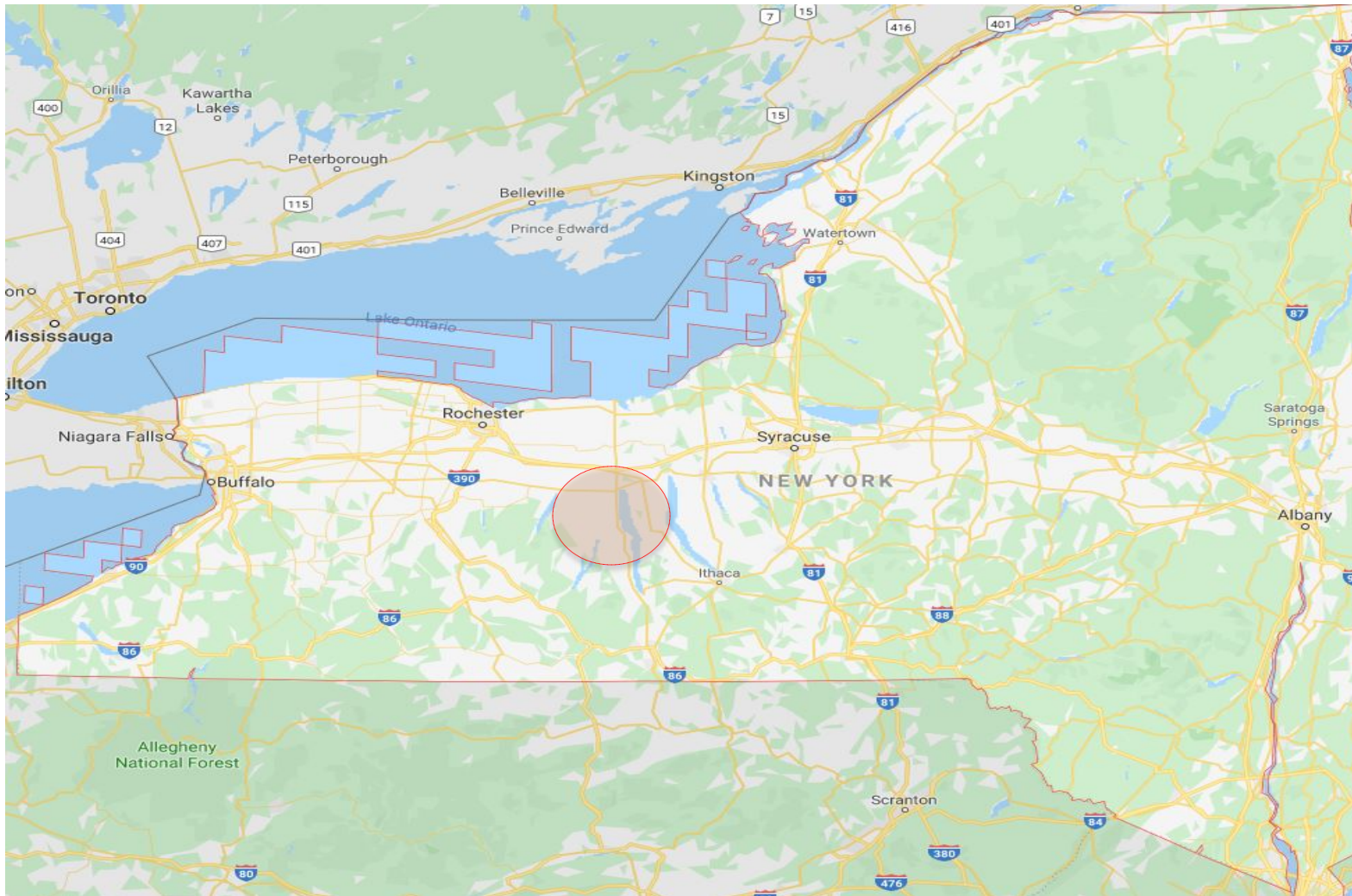
Project	Summary	Status	In-Service Date
Wood Street New 3rd 345/115kV Transformer	Install a third 345/115kV transformer	Planned	2023
Brewster Line 807 Conversion Project	Convert the existing 46kV loop to 115kV operation from Katonah to Wood Street to Carmel	Complete	2019
Silo Ridge Field Club	Install 115kV Capacitor at Pawling and 46kV Capacitor at Dover Plains	Complete	2019

LTP: NYSEG – Elmira Division



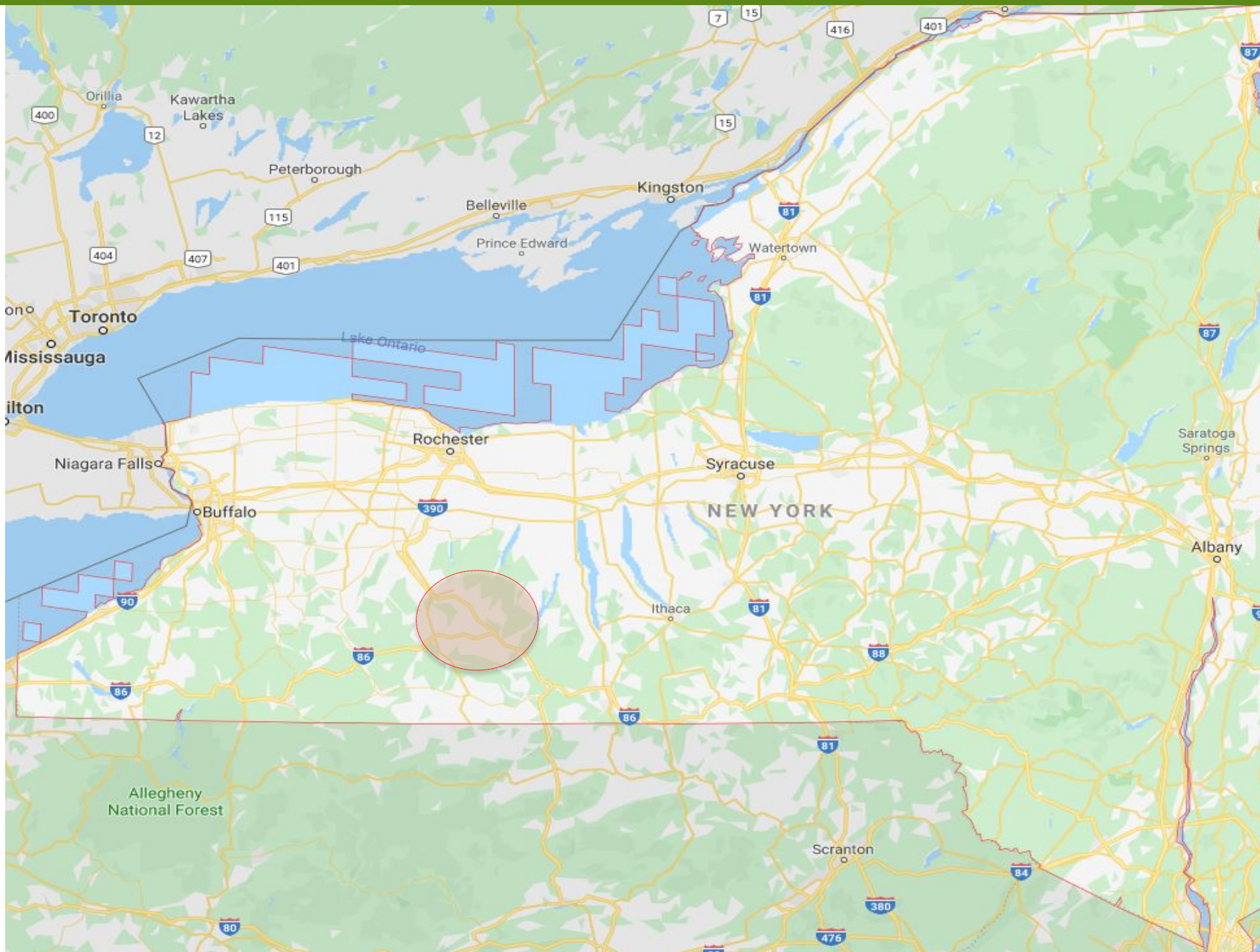
Project	Summary	Status	In-Service Date
Watercure Road New 2nd 345/115kV Transformer	Install a second 345/115kV transformer	In Construction	2020

LTP: NYSEG – Geneva Division



Project	Summary	Status	In-Service Date
Flat Street Substation New 2nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer	In Construction	2019

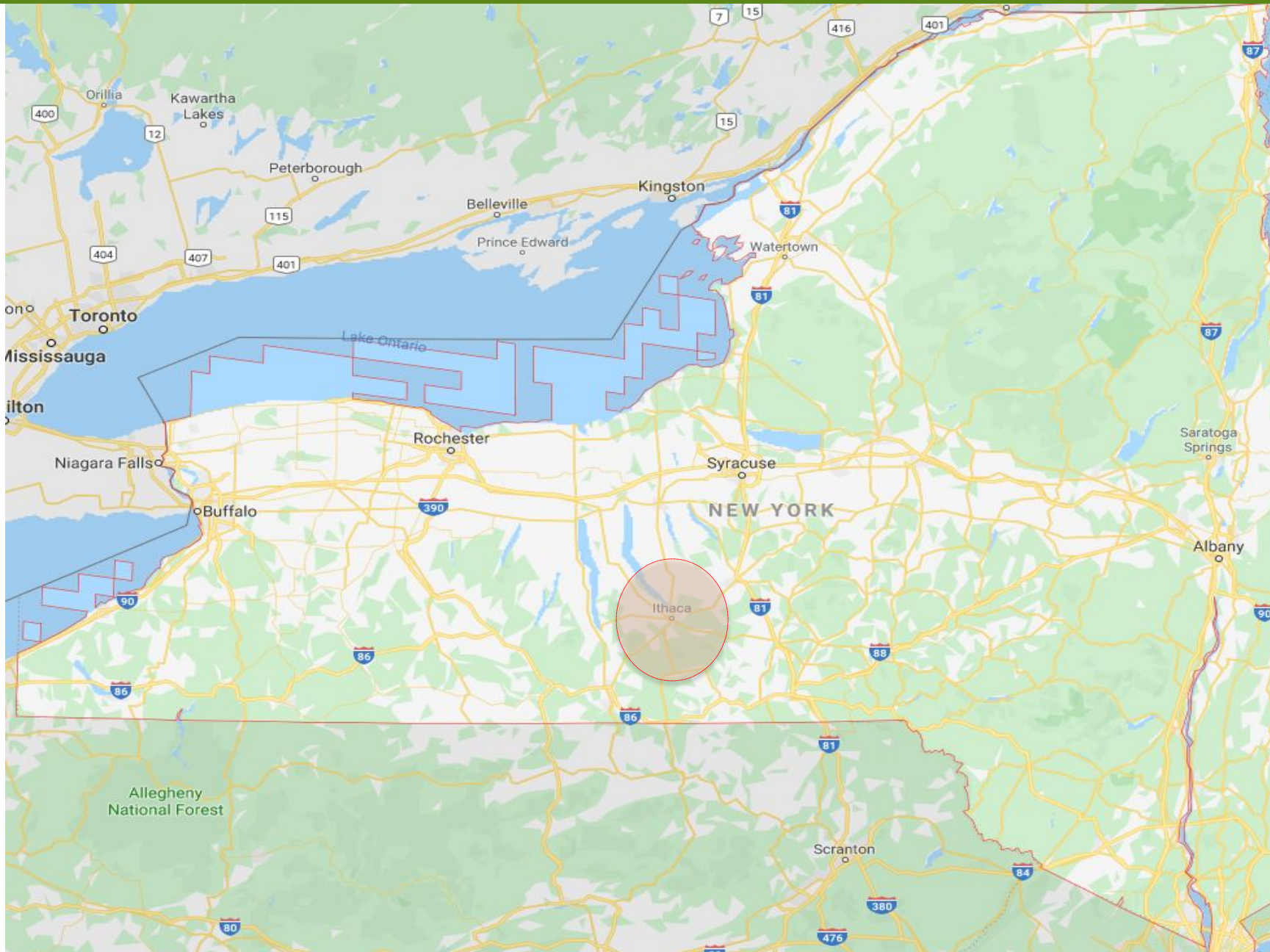
LTP: NYSEG – Hornell Division



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	Planned	2022
Meyer New 2nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer	Planned	2022

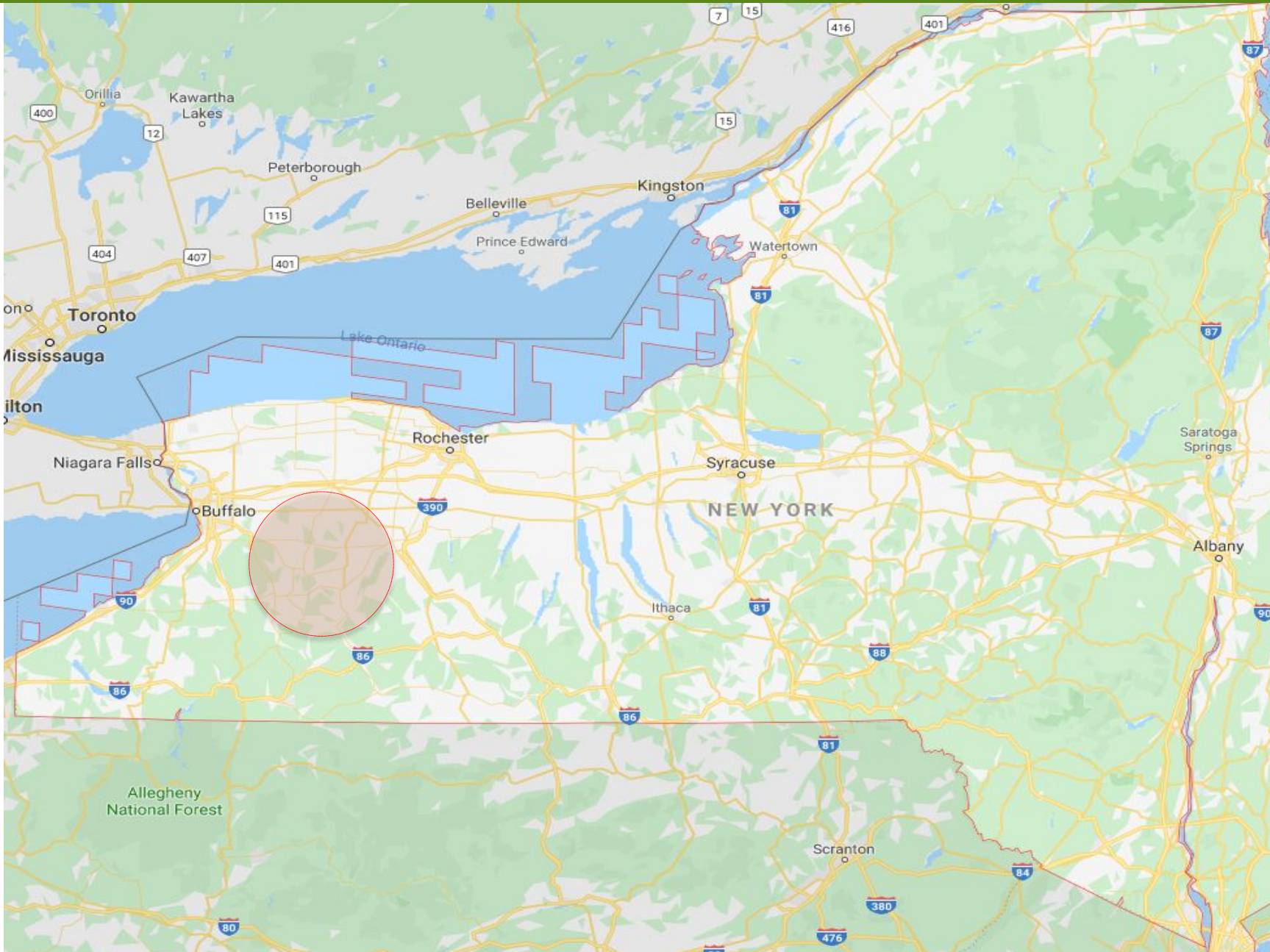
LTP: NYSEG – Ithaca Division



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Project	Summary	Status	In-Service Date
Line 981 Update	Upgrade 115kV Line 981 and install OPGW from Etna to Coddington (BES)	In Construction	2020

LTP: NYSEG – Lancaster Division



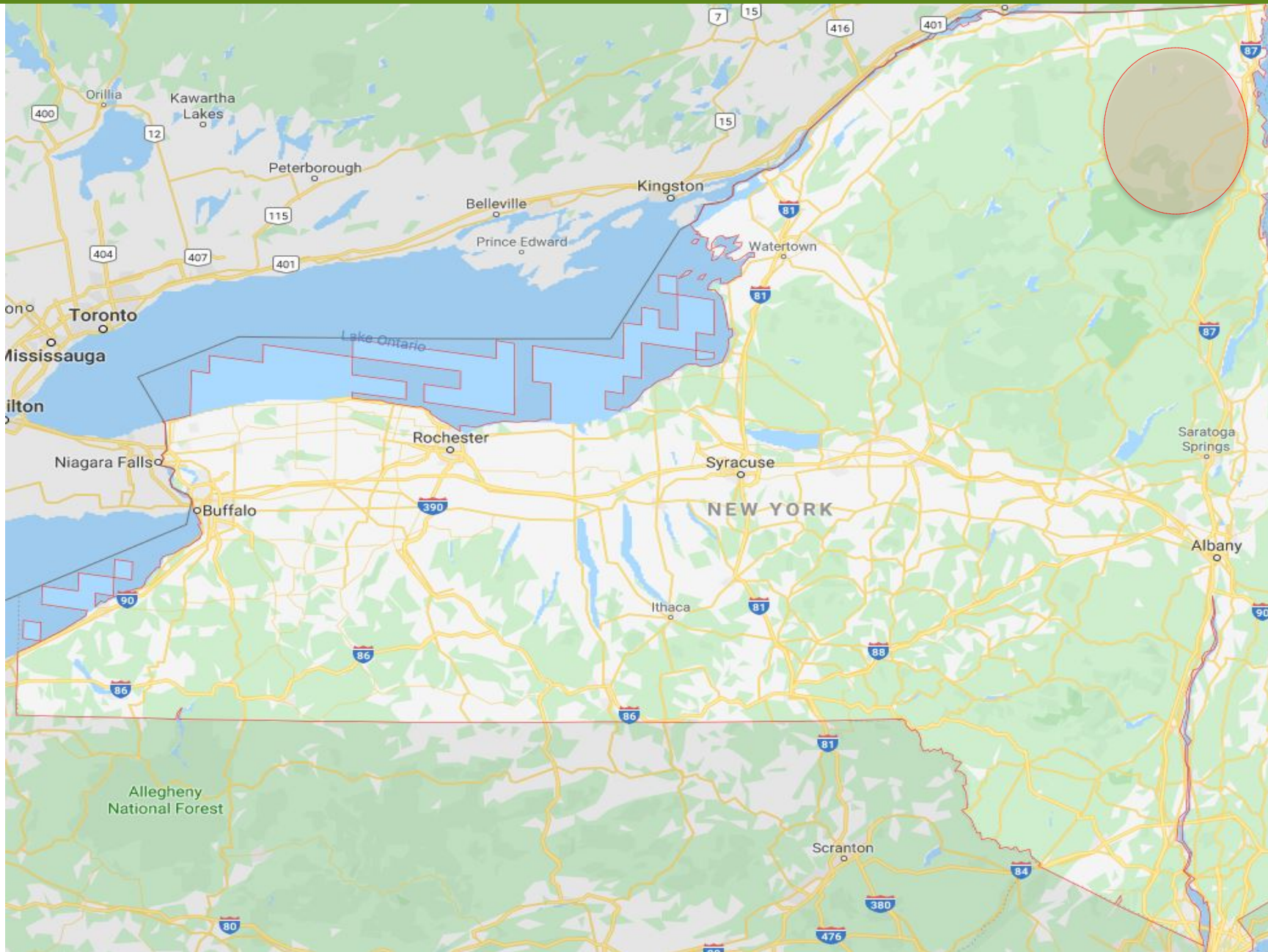
LTP: NYSEG – Lancaster Division

Project	Summary	Status	In-Service Date
Gardenville New 3 rd 230/115kV Transformer	Install a new 230/115kV transformer and rebuild areas of substation to new configuration	Planned	2023
Erie Street Rebuild	Rebuild the 115kV as a 3-bay Breaker-and-a-half, install 115 kV capacitors, replace transformers,... (BES)	In Construction	2022
Big Tree Road	Rebuild the 115 kV as a Breaker-and-a-half, relocate transformers, reconfigurations (BES)	In Construction	2022

LTP: NYSEG – Liberty Division

Project	Summary	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	Proposed	2025
Old Falls Substation Upgrade	Upgrade Old Falls Substation to 115 - 12.5 kV operation by tapping the West Woodbourne to Mountaindale 115 kV line	Cancelled	

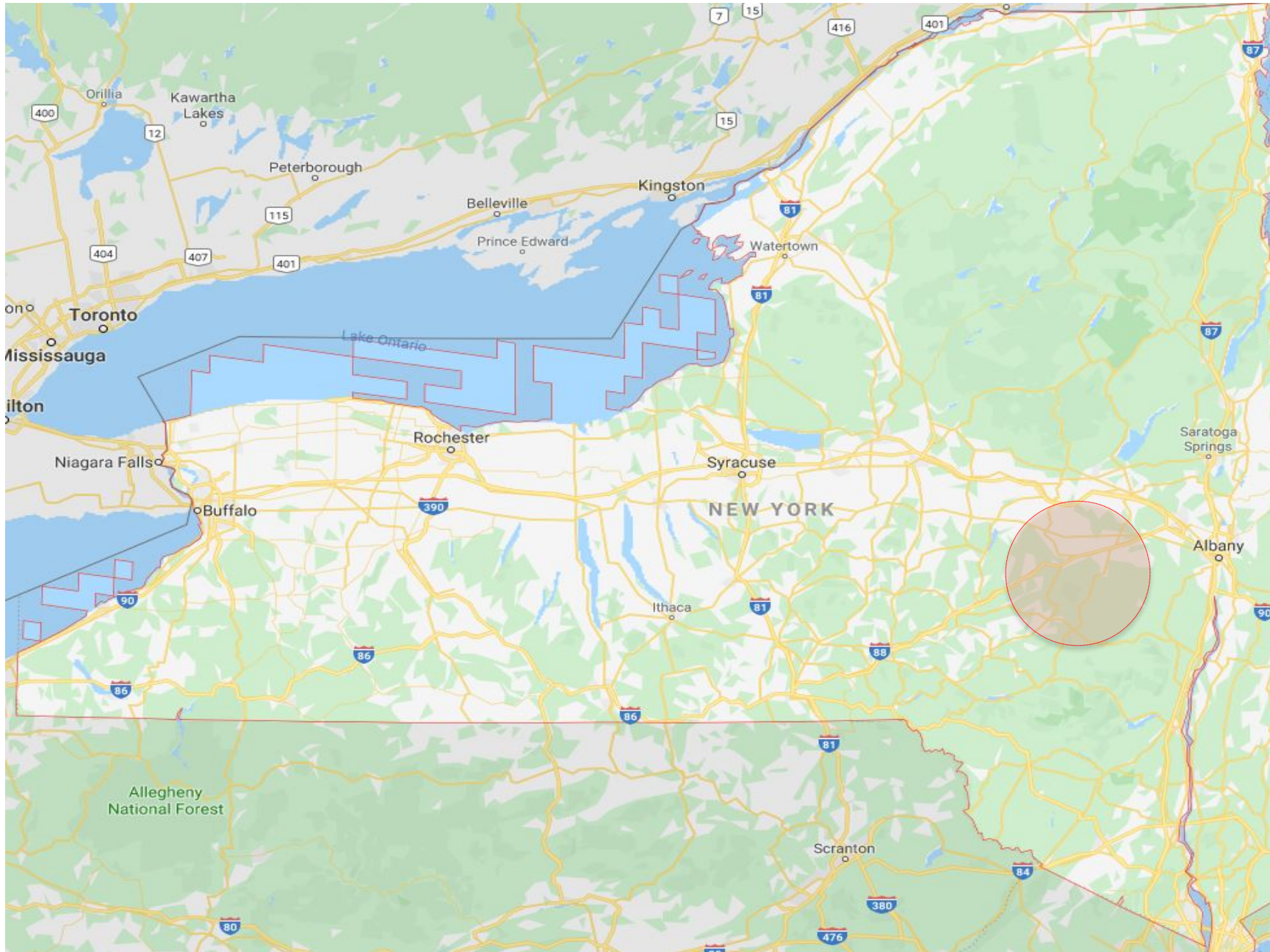
LTP: NYSEG – Mechanicville Division



LTP: NYSEG – Mechanicville Division

Project	Summary	Status	In-Service Date
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	Complete	2019
Stephentown New 2nd 115/34.5kV Transformer	Install a second 115/34.5kV transformer	Complete	2019

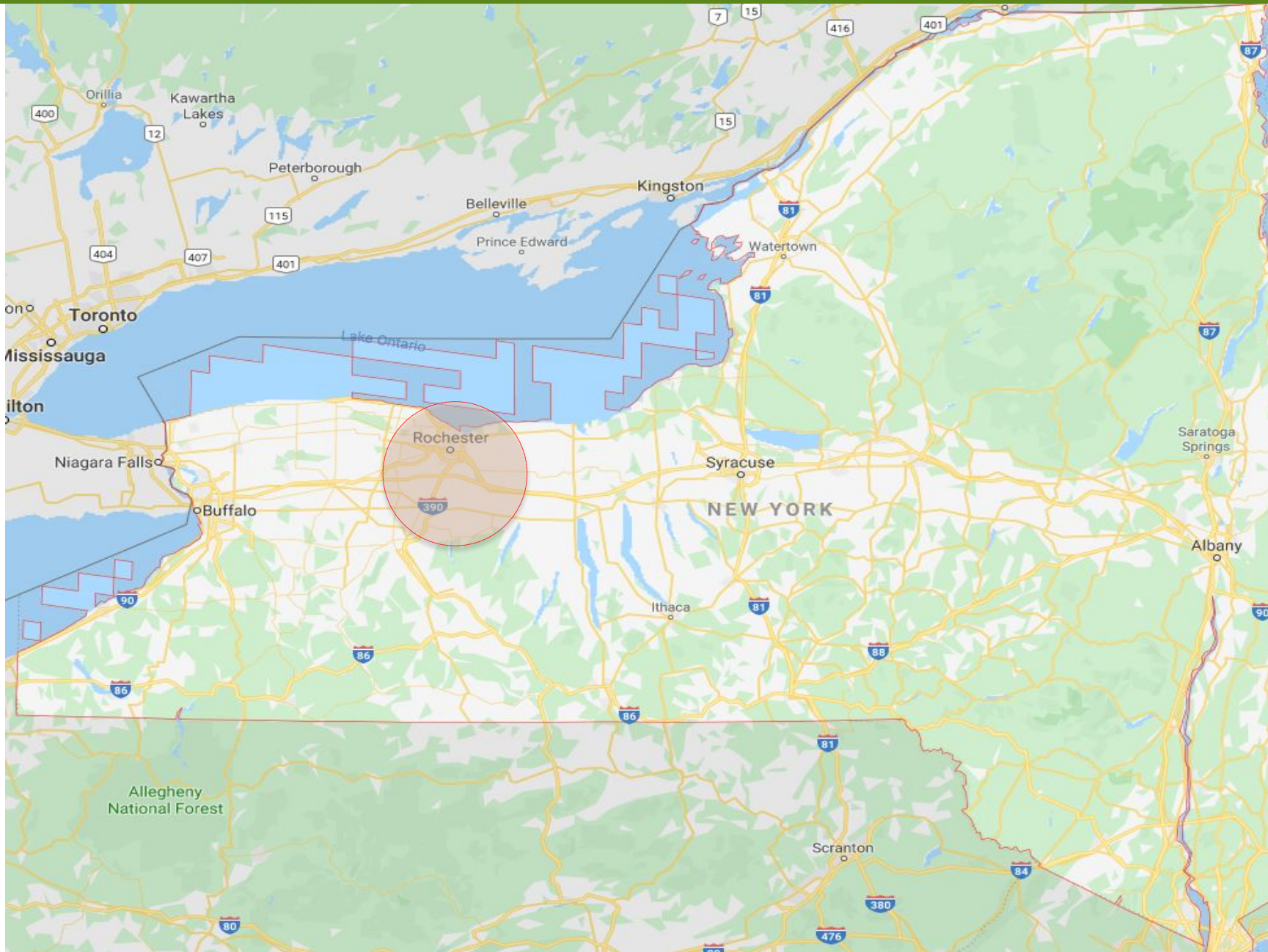
LTP: NYSEG – Oneonta Division



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	2022

LTP: RG&E



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	In Construction	2020
Station 122 Relay Upgrade	Upgrade relays on 345kV lines S122-Clay1 and S122-Clay2	Proposed	TBD*
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	In Construction	2019
Station 262 - New 115/34.5kV Substation	Construct a new 115/34.5kV substation between Station 33 and Station 23	In Construction	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	2022
Station 49 – Substation Upgrade	Replace two existing 34.5/11.5kV transformers with larger units and upgrade switchgear	Planned	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	2024
Station 127 – New 2 nd 115/34.5kV Transformer	Add second transformer	Planned	2022
Station 42 Phase Shifting Transformer	Install phase shifting transformer at Station 42 to control flow to Station 23	Complete	2019
115 Line 901/902 Upgrade	Upgrade capacity of Mortimer-Station 251 Line 901 and Station 251 - Station 82 Line 902	Planned	2024
34.5kV Line 778 Upgrade	Upgrade or install a parallel 34.5 line to increase capacity	Planned	2023

LTP: Postings

The following URLs are the location where Avangrid's Local Transmission Plan are posted:

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