

**Submission of Indicated New York Transmission
Owners
For Authority to Construct and Operate Electric
Transmission Facilities in Multiple Counties in
New York**

Case 13-M-0457

Exhibit 2

Location of Facilities

*Edic to New Scotland 345 kV Transmission Line
and
New Scotland to Leeds 345 kV Transmission Line
Reconductoring
and
Leeds to Pleasant Valley 345 kV Transmission Line
Project
(ED-NS/NS-LD(R)/LD-PV)*

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**EDIC TO NEW SCOTLAND 345 KV TRANSMISSION LINE AND
NEW SCOTLAND TO LEEDS 345 KV TRANSMISSION LINE RECONDUCTORING
AND LEEDS TO PLEASANT VALLEY 345 KV TRANSMISSION LINE PROJECT
(ED-NS/NS-LD(R)/LD-PV)**

EXHIBIT 2: LOCATION OF FACILITIES

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EXHIBIT 2: LOCATION OF FACILITIES

2.0 Location of Facilities

The discussion of Exhibit 2, Location of Facilities, describes Part A Article VII components of the Edic to New Scotland 345 kV Transmission Line and New Scotland to Leeds 345 kV Transmission Line Reconductoring and Leeds to Pleasant Valley 345 kV Transmission Line Project (“ED-NS/NS-LD(R)/LD-PV Project”, “ED-NS/NS-LD(R)/LD-PV”, or “Project”).

2.1 General Description of Facility Location

The route for the Project is described below and is wholly within existing rights-of-way (ROW) of the Applicant. The description of the route is provided in terms of line segments between substations or switching stations.

The Project is comprised of four ROW segments, Edic to New Scotland (ED-NS), New Scotland to Leeds (NS-LD), Leeds to Churchtown (LD-CT), and Churchtown to Pleasant Valley (CT-PV). The Project includes the rebuild and expansion of the existing 230 kV Rotterdam Substation to include a 345 kV yard, the rebuild and expansion of the existing Churchtown 115 kV Switching Station, modifications to the existing 345 kV Edic Substation, existing 345 kV New Scotland Substations and existing 345 kV Leeds Switching Station and minor modifications to the existing Consolidated Edison Pleasant Valley 345 kV Substation.

The Project’s route and stations are depicted in Figure ED-NS/NS-LD(R)/LD-PV-1. The Project’s route and stations are summarized in Table 2-1. A list of jurisdictions crossed by the Project, and associated line segment lengths, is provided in Table 2-2.

Table 2-1: Proposed Project Route and Stations

Portion of Route	Segment	Total Distance (miles)
Edic Substation to New Scotland Substation 345 kV transmission line (includes 5.0-mile rebuild of two 230 kV transmission lines from Princetown Junction to Rotterdam Substation)	ED-NS	91.4
New Scotland Substation to Leeds Substation 345 kV transmission line reconductoring	NS-LD	25.9
Leeds Substation to Churchtown Switching Station 345 kV transmission line	LD-CT	8.9
Churchtown Switching Station to Pleasant Valley Substation 345 kV transmission line	CT-PV	32.3
Substation or Switching Station	Segments	
Edic Substation	ED-NS	
Rotterdam Substation	ED-NS	
New Scotland Substation	ED-NS & NS-LD	
Leeds Substation	NS-LD & LD-CT	
Churchtown Switching Station	LD-CT & CT-PV	
Pleasant Valley Substation	CT-PV	

Table 2-2: Jurisdictions Crossed by the Project

Name	Miles	County	Town	Miles by Jurisdiction	Miles by County
Edic to New Scotland	91.4	Oneida County	Town of Marcy	0.9	4.5
			Town of Deerfield	3.6	
		Herkimer County	Town of Schuyler	1.7	27.6
			Town of Frankfort	8.8	
			Town of German Flatts	9.1	
			Town of Little Falls	1.0	
			Town of Stark	6.0	
			Town of Danube	1.0	
		Montgomery County	Town of Minden	5.7	29.8
			Town of Canajoharie	6.3	
			Town of Root	6.0	
			Town of Glen	2.4	
			Town of Charleston	5.3	
			Town of Florida	4.1	
		Schenectady County	Town of Duaneburg	3.8	17.4
			Town of Princetown	9.9	
			Town of Rotterdam	3.7	
Albany County	Town of Guilderland	6.7	12.1		
	Town of New Scotland	5.4			

Table 2-2: Jurisdictions Crossed by the Project, continued

Name	Miles	County	Town	Miles by Jurisdiction	Miles by County
New Scotland to Pleasant Valley	67.1	Albany County	Town of New Scotland	6.0	11.7
			Town of Coeymans	5.7	
		Greene County	Town of New Baltimore	5.5	17.0
			Town of Coxsackie	5.1	
			Town of Athens	6.4	
			Village of Athens	1.0	
		Columbia County	Town of Greenport	5.2	17.3
			Town of Claverack	1.9	
			Town of Livingston	8.3	
			Town of Gallatin	1.2	
			Town of Clermont	0.7	
		Dutchess County	Town of Milan	8.0	21.1
			Town of Clinton	8.0	
Town of Pleasant Valley	5.1				

2.2 Segment Descriptions

The Project consists of the Edic to New Scotland (ED-NS) segment, the New Scotland to Leeds (NS-LD) segment, the Leeds to Churchtown (LD-CT) segment, and the Churchtown to Pleasant Valley (CT-PV) segment. The total distance of the Project is approximately 158.5 miles.

2.2.1 Edic to New Scotland

The ED-NS segment starts at the existing Edic Substation in the Town of Marcy, Oneida County. From the Edic Substation, the route traverses approximately 2,000 feet to the Porter Substation to join the existing 230 kV ROW (containing two 230 kV lines, referred to here as 230 kV A and 230 kV B), which

also includes two existing NYPA 345 kV lines. These facilities are located on adjacent double-circuit structures within this ROW for a total distance of approximately 12 miles.

Heading southeast past Porter Substation, the route crosses State Route 8/12 into the Town of Deerfield and continues past and to the north of the Utica Reservoir. After crossing into Herkimer County, the route turns south and crosses the New York State Thruway (I-90), the Erie Canal and the Mohawk River within a distance of approximately 3,000 feet.

The route continues in a south-southeasterly direction for approximately 8 miles in Herkimer County at which point the 230 kV B line separates from the other three circuits and continues to the east within a separate ROW. The route follows the alignment of the 230 kV A line, which continues to share the ROW with the two NYPA 345 kV lines for approximately 1.8 miles. The two NYPA 345 kV lines diverge south from the 230 kV A line and the 230 kV A line continues within its own ROW in a southeasterly and then easterly direction for approximately 3.0 miles, at which point it rejoins the 230 kV B line. The route continues in a southeasterly-easterly direction within the ROW of the 230 kV A and B lines through Herkimer County.

The route continues to follow the alignment of the 230 kV A and B lines in a southeasterly direction through Montgomery County, crossing Canajoharie Creek in the Town of Canajoharie. In the town of Charleston just west of State Route 30A, the 230 kV A and B lines separate with the 230 kV B line heading northeast before turning to the southeast and rejoining the 230 kV A line just west of Schoharie Creek. The structures and conductor within the approximately 4.2 mile ROW for the 230 kV B line will be removed. The route continues to follow the alignment of the 230 kV A line due east through this area, across Schoharie Creek before continuing into Schenectady County.

The route continues due east within the rights-of-way of the 230 kV A and B lines in Schenectady County to the intersection of the rights-of-way for the 230 kV A and B lines and the rights-of-way two National Grid 345 kV lines (the Applicant refers to this rights-of-way intersection as “Princetown Junction”).

From Princetown Junction, the Princetown to New Scotland portion of the segment route continues to the southeast ROW with two National Grid 345 kV lines. The route crosses Interstate 88 (I-88) about 5 miles south of Princetown Junction, just west of where I-88 ends at the New York State Thruway (I-90). About 1 mile south of the I-88 crossing, an additional National Grid 115 kV line joins the existing ROW and the route turns due south and continues into Albany County. In Albany County the route crosses U.S. Route 20 in the Town of Guilderland, continues due south just to the east of the Orchard Creek Golf Club, then turns southeast and continues within the existing 345 kV corridor, for a distance of approximately 2 miles

in the town of Guilderland. The route follows this corridor to the New Scotland Substation in the town of New Scotland.

Also from Princetown Junction, the Princetown to Rotterdam portion of the segment runs easterly for a distance of 2.2 miles, crossing Pattersonville-Rynex Corners Road (County Road 3P) and Upper Gregg Road. The route then turns slightly east for a distance of 2.0 miles, where it meets two National Grid lines. The route then turns southeast and continues for a distance of 0.9 miles, crossing I-90, and terminating at the Rotterdam Substation.

The total distance in Oneida County is approximately 4.5 miles; 0.9 mile in the Town of Marcy and 3.6 miles in the Town of Deerfield.

The total distance in Herkimer County is approximately 27.6 miles; 1.7 miles in the Town of Schuyler, 8.8 miles in the Town of Frankfort, 9.1 miles in the Town of German Flatts, 1.0 mile in the Town of Little Falls, 6.0 miles in the Town of Stark, and 1.0 mile in the Town of Danube.

The total distance in Montgomery County is approximately 29.8 miles; 5.7 miles in the Town of Minden, 6.3 miles in the Town of Canajoharie, 6.0 miles in the Town of Root, 2.4 miles in the Town of Glen, 5.3 miles in the Town of Charleston, and 4.1 miles in the Town of Florida.

The total distance in Schenectady County is approximately 17.4 miles; 3.8 miles in the Town of Duanesburg, 9.9 miles in the Town of Princetown, and 3.7 miles in the Town of Rotterdam.

The total distance in Albany County is approximately 12.1 miles, with 6.7 miles in the Town of Guilderland and 5.4 miles in the Town of New Scotland.

The total distance from the existing Edic Substation to the existing New Scotland Substation, including the distance from Princetown Junction to the existing Rotterdam Substation (i.e. the ED-NS segment) is approximately 91.4 miles.

2.2.2 New Scotland to Leeds

The New Scotland to Leeds segment starts at the New Scotland Substation in the Town of New Scotland. The route exits the substation to the west, and continues for approximately 1,200 feet, crossing County Road 308, to a point where it turns to the southwest. Here it crosses Orchard Hill Road and continues to the southwest, crossing an unnamed commercial drive and Spore Road, for a distance of approximately 6,700 feet where it then turns to the southeast. The route continues to the southeast for approximately

10.4 miles crossing the Delaware Turnpike (State Route 443), Indian Fields Road (State Route 32), Onesquethaw Creek Road, Rowe Road, Cedar Grove Road (State Route 396), Blodgett Hill Road, Payne Road, Starr Road, Bushendorf Road, Fares Road, Jarvis Road South, Cedar Ridge Road, and Aquetuck Road (State Route 143).

From this point, the route continues in a more southerly direction for approximately 8,900 feet where it turns and proceeds almost due south for approximately 7,800 feet crossing West Deans Mill Road, an unnamed private road, County Road 51, and County Road 54. The route continues south-southwesterly for approximately 2.0 miles to the intersection with Interstate 87, crossing High Rock Road, Schoolhouse Road, Roberts Hill Road, and Scheller Park Road.

From the intersection with Interstate 87, the route continues for approximately 350 feet before turning to the southwest for approximately 4,900 feet crossing State Route 81, as well as crossing Smith Road twice. At this point it turns to the southwest and continues in a southwesterly direction for approximately 5,600 feet, crossing Plank Road (County Road 9) and Peter Bronk Road. At this point it turns south and continues in a more southerly direction for approximately 5,900 feet where it turns south for approximately 5,800 feet. In this stretch the route crosses Fountain Flats Road and Greene Lake Road (County Road 49).

The route then turns to the southeast and continues for approximately 4,000 feet crossing U.S. Route 9W. Here it turns south and continues for approximately 2.6 miles where it turns towards the east and continues to the termination point at the Leeds Switching Station in the Town of Athens, a distance of approximately 1,800 feet. The route crosses an unnamed private drive, Schoharie Turnpike (County Road 28), and the access road to the Athens Substation.

The total distance in Albany County is approximately 11.7 miles, 6.0 miles in the Town of New Scotland and 5.7 miles in the Town of Coeymans.

The total distance in Greene County is approximately 14.2 miles, 5.5 miles in the Town of New Baltimore, 5.1 miles in the Town of Coxsackie, and 3.6 miles in the Town of Athens.

The total distance from the existing New Scotland Substation to the existing Leeds Substation (i.e. the NS-LD segment) is approximately 25.9 miles.

2.2.3 Leeds to Churchtown

The Leeds to Churchtown segment starts at the Leeds Substation in the Town of Athens. The route exits the substation to the west, and continues for approximately 1,600 feet to a point where it turns to the south-southwest. The route then continues in a south-southwesterly direction a distance of approximately 2,600 feet, crossing Leeds Road (County Road 74). At this point, it turns to the southeast for approximately 800 feet, crossing the CSX Railroad and then turns eastward for approximately 7,300 feet, crossing Howard Hall Road (County Road 53), where the route crosses the 115 kV transmission lines in the Leeds to Pleasant Valley transmission corridor and parallels the corridor on the eastern edge.

The route continues within the eastern boundary of the Leeds to Pleasant Valley corridor in a southeasterly manner for a distance of approximately 2,100 feet crossing Washington Street (State Route 385). At this point the route turns and continues for approximately 5,200 feet in a more southerly direction crossing the Hudson River, two sets of tracks of the Amtrak Railroad, Mt. Merino Road, and a private drive. Here the route turns more southerly for approximately 4,000 feet crossing State Route 9G. Here it turns nearly due south and continues for approximately 6,200 feet, crossing Farm Road, an unnamed road, and Claverack Road (State Route 23). The route then departs the Leeds to Pleasant Valley corridor and continues to the southeast for a distance of approximately 7,300 feet, crossing Blue Hill Road (County Road 31), an unnamed private drive, and College Drive.

The route then turns more easterly and continues approximately 2.0 miles before turning southeast. In this part of the segment it crosses Kipp Road, State Route 9, Fingar Road, Claverack Creek, and Spook Rock Road (County Road 29). From here the route turns to the southeast for approximately 750 feet crossing State Route 23 before turning more southerly and terminating at the rebuilt and expanded 115 kV Churchtown Switching Station in the Town of Claverack, Columbia County, a distance of approximately 780 feet.

The total distance in Greene County is approximately 2.8 miles, all of which is within the Town of Athens. Approximately 1.0 mile of this 2.8 miles is also within the Village of Athens.

The total distance in Columbia County is approximately 6.1 miles, with 5.2 miles in the Town of Greenport and 0.9 mile in the Town of Claverack.

The total distance from the existing Leeds Substation to the existing Churchtown Switching Station (i.e. the LD-CT segment) is approximately 8.9 miles.

2.2.4 Churchtown to Pleasant Valley

The CT-PV segment begins in the vicinity of the rebuilt and expanded Churchtown Switching Station in the Town of Claverack, Columbia County, and proceeds south. The new Churchtown Switching Station will require an expansion of the existing fenceline on existing National Grid owned land. Within the Churchtown to Pleasant Valley segment, the Applicant proposes to remove an existing 115 kV double-circuit structure line and build a new 115/345 kV double-circuit transmission line.

South of the Churchtown Switching Station, the ROW is currently occupied with parallel double-circuit 115 kV lines. The ROW that constitutes this part of the segment contains this configuration for approximately 12 miles through the Town of Livingston, the Town of Gallatin and the Town of Clermont.

The route continues south into the Town of Milan in Dutchess County, and about 1 mile south of the county line the ROW is joined from the west by the 345 kV Leeds to Pleasant Valley lines in parallel, single-circuit configuration. The route continues within this ROW for approximately 6.0 miles, at which point the two 345 kV lines leave this shared ROW to the west; the route continues due south within the 115 kV ROW, passing to the east of Silver Lake in the town of Clinton. The route continues south in the Town of Clinton and continues within this ROW in the Town of Pleasant Valley to the Pleasant Valley Substation.

South of the Churchtown Switching Station the route roughly parallels the Taconic State Parkway, which is located approximately 2 to 3 miles to the east.

The total distance in Columbia County is approximately 11.2 miles, with 1.0 mile in the Town of Claverack, 8.3 miles in the Town of Livingston, 1.2 miles in the Town of Gallatin, and 0.7 mile in the Town of Clermont.

The total distance in Dutchess County is approximately 21.1 miles, with 8.0 miles in the Town of Milan, 8.0 miles in the Town of Clinton, and 5.1 miles in the Town of Pleasant Valley.

The total distance from the existing Churchtown Switching Station to the existing Pleasant Valley Substation (i.e. the CT-PV segment) is approximately 32.3 miles.

2.3 Location Maps

The general location of the Project is the Applicant's existing electric transmission corridors described above; this location is shown in Figure ED-NS-1 (Maps 1 through 16), Figure NS-LD-1 (Maps 1 through 5), Figure LD-CT-1 (Maps 1 through 3), and Figure CT-PV-1 (Maps 1 through 6). These maps are based

on the 1.2013 revision of the USGS 1:24,000 topographic edition maps. Consistent with 16 NYCRR §86.3(a)(1)(iii), the identification of any geologic, historic resource listed on the state or national register of historic places, or scenic area, park or wilderness within three miles on either side of the proposed centerline are depicted on these maps along with the proposed location of the Project route.

Preliminary summaries of these resources, with the exception of the geologic resources, will be provided in the March 2, 2015 filing. All of these resources will be described further in Exhibit 4, to be provided with the Part B Article VII application.

Figure ED-NS-2, Figure NS-LD-2, Figure LD-CT-2, and Figure CT-PV-2 show the proposed Project and illustrate its relationship to the Applicant's transmission system and the interconnected electric system.

2.4 Aerial Photographs

The aerial photo based exhibit required by 16 NYCRR §86.3(b) will be provided with the Part B Article VII application.

2.5 Supplemental Right-of-Way Information

The Applicant currently owns in fee or holds easements to the existing ROWs. Consistent with the Commission's April 2013 Order, areas "where the construction ... of the proposed facility would necessitate permanent clearing or other changes to the topography, vegetation or man-made structures" will be identified in the Part B Article VII application. The plan and profile drawings to be provided as part of the Environmental Management & Construction Plan ("EM&CP") will show any temporary and/or permanent access requirements required for the Project.

2.6 Roadways, Railroads, Airports, and Right-of-Way Access

Construction and maintenance access for the Project will, to the extent possible, make use of existing access roads along the ROW. Specific locations and specifications of access and maintenance routes will be shown on the plan and profile drawings to be provided as part of the EM&CP. The numerous road crossings along the ROW will be used to provide access to the ROW for construction equipment, personnel, and materials. Stabilized construction entrances from public roadways will be established at specific locations and in accordance with the specifications to be presented in the EM&CP.

An assessment of roadway and railroad corridors crossed by the Project ROW and the proximity of the Project to local airports will be presented in Exhibit E-6.

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EXHIBIT 2: LOCATION OF FACILITIES

FIGURES

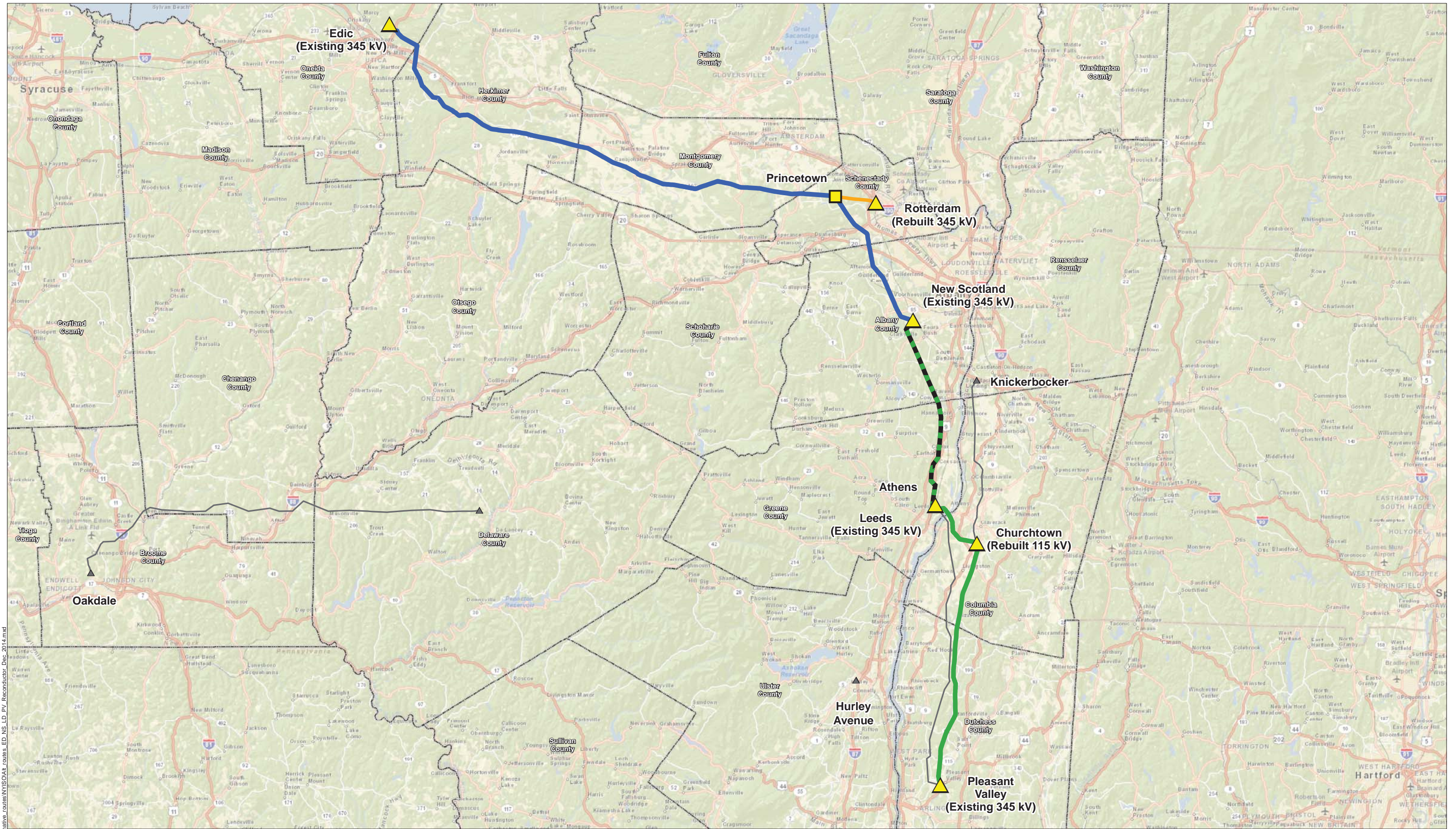
*Edic to New Scotland 345 kV Transmission Line
and
New Scotland to Leeds 345 kV Transmission Line
Reconductoring
and
Leeds to Pleasant Valley 345 kV Transmission Line
Project
(ED-NS/NS-LD(R)/LD-PV)*

Figure ED-NS/NS-LD(R)/LD-PV-1 **Edic to New Scotland and
New Scotland to Leeds (Reconductoring)
and to Leeds to Pleasant Valley Project**

Figure ED-NS-1 **Location of Facilities:
Edic to New Scotland (Maps 1 through 16)**

Figure ED-NS-2 **Location of Other Facilities:
Edic to New Scotland**

- Figure NS-LD-1** **Location of Facilities:**
New Scotland to Leeds (Maps 1 through 5)
- Figure NS-LD-2** **Location of Other Facilities:**
New Scotland to Leeds
- Figure LD-CT-1** **Location of Facilities:**
Leeds to Churchtown (Maps 1 through 3)
- Figure LD-CT-2** **Location of Other Facilities:**
Leeds to Churchtown
- Figure CT-PV-1** **Location of Facilities:**
Churchtown to Pleasant Valley (Maps 1 through 6)
- Figure CT-PV-2** **Location of Other Facilities:**
Churchtown to Pleasant Valley



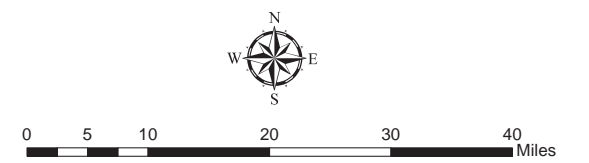
Legend

- New 345 kV Transmission Line (UPNY/SENY)
- New 345 kV Transmission Line (Central East)
- Reconductored 345 kV Transmission Line (UPNY/SENY)
- 345 kV Transmission Rebuild (Central East)
- Other Project Segment
- ▲ Project Station
- Project Junction
- ▲ Other Project Station
- County Boundary

nationalgrid

Burns & McDonnell
SINCE 1898

Figure ED-NS/NS-LD(R)/LD-PV-1
Edic to New Scotland and
New Scotland to Leeds (Reconductor) and
Leeds to Pleasant Valley
 January 2015



Sources: BM&D Engineering, ESRI

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Figure ED-NS-1
Location of Facilities:
Edic to New Scotland
(Maps 1 through 16)

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Exhibit 2

Figure ED-NS-2

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because it contains critical infrastructure information.]*

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Figure NS-LD-1
Location of Facilities:
New Scotland to Leeds
(Maps 1 through 5)

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Exhibit 2

Figure NS-LD-2

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Figure LD-CT-1
Location of Facilities:
Leeds to Churchtown
(Maps 1 through 3)

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Exhibit 2

Figure LD-CT-2

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Figure CT-PV-1
Location of Facilities:
Churchtown to Pleasant Valley
(Maps 1 through 6)

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Exhibit 2

Figure CT-PV-2

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