

**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 E-1

Description of Proposed Transmission Facilities

*Edic to New Scotland
345 kV Transmission Line
and
Knickerbocker to Pleasant Valley
345 kV Transmission Line Project
(ED-NS/KB-PV)*

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**EDIC TO NEW SCOTLAND 345 KV TRANSMISSION LINE
AND KNICKERBOCKER TO PLEASANT VALLEY
345 KV TRANSMISSION LINE PROJECT
(ED-NS/KB-PV)**

EXHIBIT E-1: DESCRIPTION OF PROPOSED TRANSMISSION FACILITIES

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EXHIBIT E-1: DESCRIPTION OF PROPOSED TRANSMISSION FACILITIES

E-1.1 Edic to New Scotland 345 kV Transmission Line and Knickerbocker to Pleasant Valley 345 kV Transmission Line Project

E-1.1.1 Edic to Princetown Junction

The ED-PT Junction portion of the segment starts at the existing 345 kV Edic Substation in the Town of Marcy, Oneida County. The scope of work consists of the removal of two existing 230 kV lines and the construction of a new 345 kV line within approximately 66.8 miles of existing ROW. For approximately 12.6 miles out of Edic Substation, this will involve the removal of one set of 230 kV wires and insulators from each of the two existing 230/345 kV double-circuit monopole structures and the installation of one set of 345 kV wires and insulators to one of them. For the remaining approximately 54.2 miles, the two existing 230 kV H-frame structure lines will be removed and replaced with one new 345 kV line consisting predominately of H-frame structures. New 345 kV tubular steel monopole structures will be used intermittently through this segment for approximately 5.4 miles in total. This segment terminates at Princetown Junction in the Town of Princetown, Schenectady County. The ED-PT segment passes through the Towns of Marcy and Deerfield in Oneida County, the Towns of Schuyler, Frankfort, German Flatts, Little Falls, Stark, and Danube in Herkimer County, the Towns of Minden, Canajoharie, Root, Glen, Charleston, and Florida, in Montgomery County, and the Towns of Duanesburg and Princetown in Schenectady County.

E-1.1.2 Princetown Junction to New Scotland

The PT-NS segment starts at Princetown Junction. The scope of work consists of the construction of a new 345 kV line within approximately 19.7 miles of the existing ROW. This segment will utilize approximately 11.5 miles of H-frame structures, 6.3 miles of monopole structures and 1.9 miles of 115/345 kV double-circuit monopole structures. This segment terminates at the existing 345 kV New Scotland Substation in the Town of New Scotland, Albany County. The PT-NS segment passes through the Town of Princetown in Schenectady County, and the Towns of Guilderland and New Scotland, in Albany County.

E-1.1.3 Princetown Junction to Rotterdam

The PT-RD portion of the segment also starts at the Princetown Junction. The scope of work consists of the removal of two existing 230 kV H-frame structure lines and the construction of two new 345 kV

compact monopole structure lines within approximately 5.0 miles of existing ROW. This segment terminates at the rebuilt and expanded 345 kV Rotterdam Substation in the Town of Rotterdam, Schenectady County.

E-1.1.4 Knickerbocker to Churchtown

The KB-CT segment starts at the new 345 kV Knickerbocker Switching Station in the Town of Schodack, Rensselaer County. This scope of work includes the removal of one existing double-circuit 115 kV lattice structure and construction of a new monopole double-circuit 115/345 kV line within approximately 21.9 miles of existing ROW. This segment terminates at the rebuilt and expanded 115 kV Churchtown Switching Station in the Town of Claverack, Columbia County. The existing NYSEG 115 kV Churchtown Switching Station in the Town of Claverack, Columbia County will be rebuilt and expanded to provide termination locations for five 115 kV lines. This expansion requires an extension of the existing Churchtown Switching Station fenceline. The KB-CT segment passes through the Town of Schodack in Rensselaer County, and the Towns of Stuyvesant, Stockport, Ghent, and Claverack, in Columbia County.

E-1.1.5 Churchtown to Pleasant Valley

The CT-PV segment starts at the rebuilt and expanded Churchtown Switching Station. The scope of work consists of the removal of two existing 115 kV double-circuit lattice structures, and the construction of a new 115/345 kV double-circuit monopole structure line within approximately 32.3 miles of existing ROW. This segment terminates at the existing Consolidated Edison 345 kV Pleasant Valley Substation in the Town of Pleasant Valley, Dutchess County. All work at the Pleasant Valley Substation will be within the existing fenceline. The CT-PV segment passes through the Towns of Claverack, Livingston, Gallatin, and Clermont in Columbia County, and the Towns of Milan, Clinton, and Pleasant Valley in Dutchess County.

E-1-2 Design Voltage, Conductor, and Insulators

Table E-1-1 below summarizes the design voltages, operating voltages, and conductor types for each segment.

Table E-1-1: Design Voltage and Conductor

Project / Line	Design Voltage (kV)	Operating Voltage (kV)	Proposed Conductor
Edic-New Scotland			
#53 Edic-New Scotland	345	345	2 - 954 kcmil 54/7 "Cardinal" ACSS
#14A Edic-Rotterdam	345	345	2 - 954 kcmil 54/7 "Cardinal" ACSS
#14B Rotterdam-New Scotland	345	345	2 - 954 kcmil 54/7 "Cardinal" ACSS
#13 Rotterdam-New Scotland	115	115	954 kcmil 54/7 "Cardinal" ACSS
Knickerbocker-Pleasant Valley			
#96 Knickerbocker-Pleasant Valley	345	345	2 - 954 kcmil 54/7 "Cardinal" ACSS
#14 Schodack-Valkin	115	115	954 kcmil 54/7 "Cardinal" ACSS
#15 Valkin-Hudson	115	115	954 kcmil 54/7 "Cardinal" ACSS
#12 Hudson-Churchtown	115	115	954 kcmil 54/7 "Cardinal" ACSS
#4 Churchtown-Blue Stores	115	115	954 kcmil 54/7 "Cardinal" ACSS
#T7 Blue Stores-Milan	115	115	954 kcmil 54/7 "Cardinal" ACSS
#10 Milan-Pleasant Valley	115	115	954 kcmil 54/7 "Cardinal" ACSS

Insulators for all the new transmission lines will typically be suspension-type ball-and-socket ceramic insulators in “I” or “V” configuration. Insulator color will match the finish of the new structures to the greatest extent possible. Grey insulators will be used with galvanized steel structures and brown insulators will be used with weathered steel or wood structures.

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