

**APPLICANT:**  
**NORTH AMERICA TRANSMISSION, LLC**  
**NORTH AMERICA TRANSMISSION CORPORATION**

**EXHIBIT E-1**  
**DESCRIPTION OF PROPOSED NEW SCOTLAND TO LEEDS TO**  
**PLEASANT VALLEY COMPONENT**  
**(§88.1(a) – (d))**

## **EXHIBIT E-1**

### **DESCRIPTION OF PROPOSED NEW SCOTLAND TO LEEDS TO PLEASANT VALLEY COMPONENT (§88.1(a) – (d))**

In accordance with 16 NYCRR § 88.1(a)-(d), as modified by the December 16 Order, this Exhibit E-1 provides a description of certain aspects of the New Scotland-Leeds-Pleasant Valley component, including design voltage and voltage of initial operation, type, size, number and materials, insulator design and length of transmission line.

#### **DESIGN VOLTAGE AND VOLTAGE OF INITIAL OPERATION (§88.1(a))**

New Scotland-Leeds-Pleasant Valley is designed to operate at a nominal system voltage of 345 kV, alternating current (“AC”). The voltage of initial operation will be 345 kV. Alternative 1 is also designed to operate at a nominal system voltage of 345 kV, AC and the initial operation will be 345 kV. Alternative 2 is designed to operate at a nominal system voltage of 345 kV with two 115 kV circuits underbuilt. The voltage of initial operation will be 345 kV and 115 kV.

#### **TYPE, SIZE, NUMBER, AND MATERIALS OF CONDUCTORS (§88.1(b))**

The proposed conductor type for New Scotland-Leeds-Pleasant Valley is 1590 kcmil 54/19 ACSR “Falcon” conductor. New Scotland-Leeds-Pleasant Valley is designed for a two conductor bundle per phase for the entire circuit. The proposed conductor type for Alternative 1 is 1590 kcmil 54/19 ACSR “Falcon” conductor and the entire circuit is designed for a two conductor bundle per phase. The proposed conductors for Alternative 2 are a two-bundle per phase Falcon ACSR for the 345 kV circuit and a single 795 kcmil 26/7 ACSS “Drake” conductor for the 115 kV circuits. Special consideration will be given to the conductor design for the long span crossings of rivers, streams, ponds or other geographic features.

The aerial shield wire on New Scotland-Leeds-Pleasant Valley will be a DNO-8696 or equivalent Optical Ground Wire (“OPGW”) that will provide line shielding as well as a communication path between the substation communication facilities.

#### **INSULATOR DESIGN (§88.1(c))**

Insulator design for New Scotland-Leeds-Pleasant Valley, Alternative 1 and Alternative 2 345 kV circuits will be suspension type, polymer insulator with ball and wye-clevis connections. In all suspension applications, regardless of structure type, insulators will consist of two polymer insulators configured in a V-string formation. Dead-end and angle structures will utilize two polymer insulators configured in a parallel formation placed in a strain condition with associated dead-ending hardware. Where required, vertical polymer jumper post insulators will be utilized to provide proper clearance to

grounded portions of the structures and to restrict jumper loop movement due to wind loading.

Alternative 2 115 kV circuits will be suspension type, polymer insulator with ball and wye-clevis connections. In all suspension applications, regardless of structure type, insulators will consist of one polymer insulator configured in a I-string formation. Dead-end and angle structures will utilize two polymer insulators configured in a parallel formation placed in a strain condition with associated dead-ending hardware. Where required, vertical polymer jumper post insulators will be utilized to provide proper clearance to grounded portions of the structures and to restrict jumper loop movement due to wind loading.

#### **LENGTH OF TRANSMISSION LINE (§88.1(d))**

The length of the proposed route totals approximately 65 miles. The Scoping Statement and Schedule for the New Scotland-Leeds-Pleasant Valley component details further routing analysis to take place prior to the filing of Part B of the application.

The length of Alternative 1 (I-87 ROW Alternative) is approximately 83 miles, reflecting that routing the line in existing transportation ROW requires a longer path vs. the proposed route. The length of Alternative 2 (the 115-kV ROW Alternative) is approximately 66 miles, reflecting a shorter path between New Scotland and Pleasant Valley Substations and bypassing Leeds Substation.