Article VII Application

Canisteo Wind Transmission Facility

Case No. 19-T-__

Exhibit E-2

Other Facilities

Invenergy

EXHIBIT E-2 – OTHER FACILITIES

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EXHIBIT E-2 OTHER FACILITIES

This Exhibit addresses the requirements of 16 NYCRR § 88.2.

E-2.1 General Description of Other Facilities

As stated in Exhibit E-1, the Transmission Facility will include the following other facilities in addition to the 115 kV transmission line:

- "High-side" of the collection substation in the Town of Jasper
- POI Switchyard in the Town of Hornellsville

These facilities are described below.

E-2.2 Collection Substation

The collection substation is part of the proposed Canisteo Wind Farm, which is addressed in a previously submitted filing under Article 10 of the New York Public Service Law (Siting Board Case 16-F-0205). The collection substation will transform electricity generated by wind turbines from 34.5 kilovolt (kV) to 115 kV to allow for interconnection at the POI Switchyard. The low (34.5 kV) side of the collection substation is subject to Article 10 while the high (115 kV) side is subject to Article VII. The collection substation equipment will be configured in a radial arrangement as shown in Figure E-2-1. Elevation drawings of the proposed collection substation are included as Figures E-2-2 through E-2-7. Estimated costs for the collection substation are included in Exhibit E-9 of this application.

The following is a list of main components for the proposed Collection Substation:

- 115 kV breakers
- 115 kV switches
- 115 kV bus to transmission line to Bennett Substation (POI Substation)
- Static mast and wire

Additional Main components for the proposed Collection Substation that were already included in the Article 10 application:

- 34.5 kV main bus to underground feeders (ECS)
- 35 kV switches
- 35 kV breakers
- 34.5 kV– 115 kV transformers
- Control Building

The proposed collection substation will be designed, manufactured, installed, and tested by a professional engineer licensed in New York State or under their supervision. All structures associated with the collection substation will be compliant with the New York Independent System Operator (NYISO) System Reliability Impact Study (SRIS) and Facility Study requirements.

As discussed elsewhere in this Application, the collection substation will be designed and constructed to minimize environmental, social, and economic impacts. Development of the Transmission Facility will be compliant with all local ordinances and building and safety codes. All power equipment will be tested prior to use to ensure the proper operation of the Facility.

E-2.3 POI Switchyard

The POI Switchyard will connect the proposed transmission line to the regional grid. The POI Switchyard will be at NYSEG's existing Bennett Substation (Bennett) in the Town of Hornellsville. The Bennett Substation currently has an open 115 kV breaker slot that has been approved for use by the Transmission Facility according to the System Reliability Impact Study (Q#519) released in January 2018. The proposed POI Switchyard will include a 115 kV breaker, ancillary hardware, and metering to interconnect the 115 kV Transmission Facility to the existing 115 kV bus at Bennett. Estimated costs for the POI Switchyard including replacement of an over-dutied 34.5 kV breaker at Bennett and related system upgrades are included in Exhibit 9. The POI Switchyard equipment will be configured as shown in Figure E-2-8 assuming no additional upgrades are requested by the interconnecting utility as part of the Facilities Study.

The following is a list of main components for the proposed POI substation:

- 115 kV breaker and ancillary equipment
- Metering equipment

The proposed POI Switchyard will be designed, manufactured, installed, and tested by or under the supervision of a professional engineer licensed in New York State. All structures associated with the POI substation will be compliant with the NYISO-approved SRIS, a copy of which is included as Appendix E4a4.

As discussed elsewhere in this Application, the POI Switchyard will be designed and constructed to minimize environmental, social, and economic impacts. Development of the Transmission Facility will be compliant with all local ordinances and building and safety codes. All power equipment will be tested prior to use to ensure the proper operation of the Facility.