Optional Interconnection Study
Report GIP-IR507-OIS-R

System Interconnection Request #507
1.95 MW Tidal Generating Facility
Digby County, NS

Nov. 27, 2015

Transmission Planning
Nova Scotia Power Inc.

Executive Summary

As a result of a large cost estimate increase from the system impact system (SIS) to the facilities study (FAC), the Interconnection Customer (IC) has requested an Optional Interconnection Study (OIS) to estimate the cost of an alternate route and Point-of-Interconnection (POI) to the NSPI distribution system. For clarity, this Option will be called the Shore Road to the Saint John Ferry Terminal Route whereas the previous Option estimated in the FAC will be called the Lighthouse Road Route. This review is intended to outline the modifications and additions required for the interconnection of the Tidal Facility to the NSPI system via the Shore Road to the Saint John Ferry Terminal Route and estimate the costs involved.

The modifications and additions required for the interconnection of the Tidal Facility to the NSPI system are:

(1) The reconductoring of 3.1 km of #6 copper primary and neutral conductors with #2/0AASC on the existing distribution line on the Shore Road (Hwy #303) from Raquette Road to the Digby-Saint John Ferry Terminal.

(2) At the Saint John Ferry Tidal shore site install poles and line as far as the customer owned gang operated switch for the recloser/antenna, metering rack.

(3) On the line tap to the Tidal site, install an electronic recloser complete with internal PT's, "B" disconnect switch, and a pole mounted cabinet with protection relay; a primary metering rack and a 10KVA pole mounted transformer for recloser control power.

(4) NSPI's communications will be installed to link the Tidal site to the existing Lansdowne Radio Site and network links will be used to provide the communications to the Energy Control Center (415 H- Ragged Lake) for SCADA for metering and curtailment.

With regards to the required upgrades antalong Shore Rd/Bay View Rd, a few easements might be required from private landowners. At this time, the IC is not sure of the exact location of the Point-of-Change-of-Ownership (PCO), the IC will be responsible for obtaining any easements in the name of NSPI for any new line extensions.

The estimated cost for this Option is $633,368.99. It covers all costs associated with any upgrades to the NSPI existing distribution system, as well as a new line extension up to the PCO. The customer will be responsible for any new line/cable extensions between the PCO and the generating facility.

Once the IC determines that they wish to proceed with this option then an in-service date, milestones and the amount of each deposit can be determined.