BC hydro
FOR GENERATIONS

XXXXX

Meikle Creek Wind Energy

Interconnection Facilities Study
and
Project Plan

Report No. TGI-2015-A110-FS-R1

March 25, 2015

British Columbia Hydro and Power Authority

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PROJECT INFORMATION

Interconnection Customer (IC)	XXXXX
Project Name	Meikle Creek Wind Energy Project
Point of Interconnection (POI)	On 2L313 approximately 23km north of Tumbler Substation
BCH Proposed ISD	31 October 2016
IC Proposed COD	30 November 2016
Maximum Power Injection (MW)	180
Number of Generator Units	62
Plant Fuel	Wind

EXECUTIVE SUMMARY

XXXXX, the Interconnection Customer (IC), proposes to develop the Meikle Creek Wind Energy Project to deliver electric energy to BC Hydro (BCH) through the 2008 Clean Power Call (CPC). The Meikle Creek Wind Energy Project consists of sixty-two (62) Siemens 3.0 MW wind turbines. A total of seven 34.5 kV overhead feeders will connect the 62 wind turbine generators to a BCH 230/34.5 kV 210 MVA collecting substation, which will connect to BCH line 2L313 (Sukunka to Tumbler) via a 4 km line.

This report identifies the required system modifications for interconnecting the proposed Meikle Creek Wind Energy project. These modifications are as follows:

- The new BC Hydro Meikle Terminal Station is a 230kV ring bus station configuration with three 230kV circuit breakers, two 230kV transmission line terminals and one line terminal connection to the Meikle Wind farm generation (IPP).

- The station service will be provided by a diesel generator and a 100kVA single phase 230/240/120 potential transformer.

- The proposed substation will be located alongside structures #104-01 and #104-02 immediately to the west of the 230kV 2L313 right of way, 23 km northwest of Tumbler Ridge, B.C.

- The design does not require any outages for this project. All line work will be done while line is energized.

- Provide telecommunication infrastructure and network link for Supervisory Circuits and Teleprotection Circuits on concerned substations using WECC Class 1 communication link.

- The Control Center will have to update the SCADA database to reflect new alarms, controls, indication, and metering with respect to the Meikle substation and IPP.

- The environmental scope will include the new land required for the construction of Meikle Wind Energy 230kV switching substation and new 40m access road to the site. The area required for the substation is approximately 95m x 140m. Tree clearing will also be required.

- The properties task is to acquire a License of Occupation and Crown Grant from the Provincial Crown for a 7.1 Ha substation site for the Meikle Wind Energy project intertie to the BC Hydro transmission grid.

- BC Hydro's Aboriginal Relations Department will lead all consultation activities with First Nations. First Nations whose asserted rights or title are potentially impacted by the project will be consulted to ensure that the Crown's duties in this regard have been met.

- The maximum power injection into BCH system is 180 MW. The proposed Commercial Operation Date (COD) is November 30, 2016.

The cost estimate, +20/- 10%, for the interconnection Network Upgrades required to interconnect the proposed project to the BCH Transmission System is $28.85 M.

The estimated time to construct the Network Upgrades required to interconnect the project to the BCH Transmission System is listed below. The attached project schedule provides greater details of the construction timelines.

Date	**Description**
March 30, 2015	Expected Approval Date
November 17, 2014	Procurement activities commence (Early Engineering)
July 31, 2015	Start Construction work
October 31, 2016	BCH Project In-Service
November 30, 2016	IC COD

The above schedule is based on an accelerated permitting process. It assumes that FLNRO will grant permits by April 2015.

A PSCAD working model will need to be submitted to BCH upon request to ensure the project schedule is maintained, please refer to the attached Project Interconnection Requirements (PIR).

CHANGE IN WIND TURBINES

XXXXX, has informed BC Hydro of a change in wind turbine manufactures. This change will result in restudy work and may impact the results of the project plan and project interconnection requirements. This Facilities Study Report will, if necessary, be modified to reflect updated requirements for the Meikle Terminal Station and the Meikle Wind Farm.

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(REDACTED)

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PROJECT PLAN

(REDACTED)