

August 10, 2017

Decision 22668-D01-2017

TransCanada Energy Ltd.
450 First Street S.W.
Calgary, Alta. T2P 5H1

Attention: Beverly Robertson

**Mackay River Power Plant – Maximum Generating Capability Increase
Proceeding 22668
Application 22668-A001**

Letter of enquiry approval

1. TransCanada Energy Ltd. (TransCanada) filed a letter of enquiry with the Alberta Utilities Commission for approval of an increase of the maximum generating capability of the generating unit at the Mackay River Power Plant from 197 megawatts (MW) to 207 MW. The proposed work is in relation to facilities previously constructed and operating in accordance with Approval U2002-036.¹ Approval is required for this work under Section 11 of the *Hydro and Electric Energy Regulation*.
2. The existing power plant, located in the northwest quarter of Section 5, Township 93, Range 12, west of the Fourth Meridian, consists of one gas-fired turbine generator and one enhanced oil recovery once-through heat recovery steam generator, with a nominal generating capability of 165 MW.
3. TransCanada stated that the Alberta Electric System Operator (AESO) approved an increase of the maximum generating capability to 185 MW in the year of 2002 and a further increase to 197 MW in January 2014.
4. In its application, TransCanada submitted that it had applied to the AESO in August 2016 to increase the maximum generating capability of the existing power plant from 197 MW to 207 MW and that it expects approval from the AESO by September 2017. TransCanada explained that the approved nominal generating capability of 165 MW is intended to reflect an approximation of the power plant output during the project development and remains valid as a nominal capability.
5. TransCanada stated a software upgrade to the generating unit would improve the efficiency of the turbine combustion process, which will allow the turbine to increase its output at colder temperatures (i.e., at or below -18°C). It stated that that the proposed increase in the maximum generating capability would not require any physical changes to the approved generating unit at the existing power plant. It stated that no work was required outside of the

¹ Power Plant Approval U2002-036, Application 1246222, January 29, 2002.

existing facility and it would not have adverse land, visual or noise impacts. TransCanada submitted that the proposed increase in the maximum generating capability would only result in a two per cent increase in air emissions.

6. TransCanada stated that the existing power plant currently operates under *Environmental Protection and Enhancement Act* Approval No. 155746-01-00,² issued on January 20, 2012. The existing power plant is authorized to emit up to 150 kg/hr of nitrogen oxides (NO_x) under the *Environmental Protection and Enhancement Act* Approval No. 155746-01-00. The estimated air emissions from the proposed maximum generating capability increase would be 29.8kg/hr, which would continue to comply with the approved emission limit under the *Environmental Protection and Enhancement Act* Approval No. 155746-01-00.

7. TransCanada provided the maximum emission rates for nitrogen dioxide (NO₂), sulphur dioxide (SO₂), fine particulate matter 2.5 microns in diameter or less (PM_{2.5}), total particulate matter, and carbon monoxide (CO), at ambient air temperature of -18°C and 100 per cent load and confirmed these concentrations would continue to meet the current Alberta Ambient Air Quality Objectives.

8. TransCanada stated that it submitted a noise impact assessment (NIA)³ in October 2014, for the MacKay River Substation modification in Proceeding 3479. The 2014 NIA evaluated the cumulative sound levels with the existing and approved energy-related facilities including the MacKay River Power Plant at the nearest receptor, a trapper's cabin located approximately 860 metres south and at the 1,500-metre criteria boundary, as no closer dwelling existed. The 2014 NIA predicted that the cumulative sound levels would be less than the permissible sound levels for nighttime. Therefore, the noise contributions from the existing and approved energy-related facilities would be in compliance with Rule 012: *Noise Control*.

9. TransCanada submitted that an updated NIA was not completed because the proposed increase in the maximum generating capability would not require any physical changes to the existing generating unit at the power plant. TransCanada added that there would be no additional sources of noise associated with the software upgrade nor any resulting increase in electrical output and that no new receptors have been identified within 1,500 metres of the existing power plant since October 2014.

10. TransCanada stated that because the proposed increase in the maximum generating capability would not require any physical changes to the existing generating unit at the power plant and all related work would take place within the existing facility, it expects that the proposed project would have no impact to the stakeholders.

11. TransCanada also stated that the existing power plant is part of an industrial system designation and is located within the development area of Suncor's existing MacKay River Steam Assisted Gravity Drainage Operation. There are no permanent residences located within

² <https://aww.alberta.ca/pdf/00155746-01-00.pdf>.

³ Exhibit 0007.00.TCL-3479.

2,000 metres of the existing power plant. Given the reasons above, TransCanada concluded that a participant involvement program was not needed.

12. TransCanada has provided information respecting the need, nature, extent, land affected, land ownership and the timing of the work, in accordance with the requirements of Section 12 of the *Hydro and Electric Energy Regulation*. TransCanada has also stated that no adverse environmental impact will be caused by the proposed work.

13. With respect to noise, the Commission accepts TransCanada's assertion that the predicted cumulative sound level from the proposed increase in the maximum generating capability would comply with the requirements of Rule 012 and an updated NIA is not required because the proposed increase would not require any physical changes to the existing generating unit at the power plant and there would be no additional sources of noise associated with the software upgrade and any resulting increase in electrical output. In addition, no new receptors were identified.

14. The Commission finds that TransCanada's conclusion that a participant involvement program for the proposed project is not needed to be reasonable because all related work will take place within the existing facility, with no physical alteration to the approved generating unit. The Commission is satisfied that the proposed project would have no impact to stakeholders. The Commission did not issue a notice of application for this proceeding for this reason.

15. The Commission notes that the AESO has not approved the Behind the Fence Application to increase the maximum capability to 207 MW. As such, TransCanada shall not operate the power plant at its maximum generating capability of 207 MW until it has received an authorization from the AESO.

16. Based upon the information provided, TransCanada has demonstrated that the proposal is of a minor nature, no other person is directly and adversely affected by the proposal and no adverse environmental impact will be caused by the proposed alterations, thereby meeting the requirements of Section 11 of the *Hydro and Electric Energy Regulation*.

17. The Commission approves the application. Approval 22668-D02-2017 is attached.

Alberta Utilities Commission

(original signed by)

Wade Vienneau
Executive Director, Facilities Division
On behalf of the Alberta Utilities Commission

Attachment