



AUC

Alberta Utilities Commission

Fort Hills Energy Corporation and Suncor Energy Operating Inc.

**Fort Hills Industrial System Designation Amendment,
Power Plant and Transmission Facilities**

November 15, 2013

The Alberta Utilities Commission

Decision 2013-409: Fort Hills Energy Corporation and
Suncor Energy Operating Inc.
Fort Hills Industrial System Designation Amendment,
Power Plant and Transmission Facilities
Applications No. 1609268, No. 1609273 and No. 1609644
Proceeding ID No. 2440

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The Alberta Utilities Commission
Fifth Avenue Place, Fourth Floor, 425 First Street S.W.
Calgary, Alberta
T2P 3L8

Telephone: 403-592-8845

Fax: 403-592-4406

Website: www.auc.ab.ca

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1 Applications

1. On February 5, 2013, Suncor Energy Operating Inc. (Suncor) filed Application No. 1609268 with the Alberta Utilities Commission (AUC or the Commission), requesting approval to amend its industrial system designation (ISD). The application was made pursuant to Section 4 of the *Hydro and Electric Energy Act*.
2. On February 5, 2013, Suncor filed Application No. 1609273 with the AUC requesting approval to construct and operate a 170-megawatt (MW) power plant (previously approved at 130-MW). The application was made pursuant to Section 11 of the *Hydro and Electric Energy Act*.
3. On June 4, 2013, Suncor filed Application No. 1609644 with the AUC requesting approval to construct and operate a number of substation and transmission lines (transmission facilities) that would be included in its ISD. The application was made pursuant to sections 14, 15 and 18 of the *Hydro and Electric Energy Act*.
4. The Commission combined the ISD, power plant and transmission facility applications under Proceeding ID No. 2440. The ISD, power plant and transmission facilities form part of the Fort Hills oilsands project.
5. All three applications were submitted by Suncor, as the operator of the facilities, on behalf of Fort Hills Energy Corporation (FHEC), which is the general partner of the owner, Fort Hills Energy L.P.

2 Background

6. FHEC, pursuant to Approval No. [U2008-273](#),¹ has approval to operate a 130-MW power plant within the Fort Hills oilsands project.

¹ Power Plant Approval No. U2008-273, Application No. 1582136, August 19, 2008.

7. Petro-Canada Oil Sands Inc. (Petro-Canada) pursuant to Order No. [U2008-320](#),² was granted approval to designate the Fort Hills oilsands project as an industrial system pursuant to Section 4 of the *Hydro and Electric Energy Act*. The ISD approved under Order No. U2008-320 included the following transmission facilities as listed below:

- a 130-MW cogeneration power plant - Approval No. U2008-273
- Intertie substation 585S - Permit and Licence No. [U2008-321](#)³
- Central Plant substation - Permit and Licence No. [U2008-322](#)⁴
- transmission lines 265PLTG20001 and 265PLTG20002 - Permit and Licence No. [U2008-323](#)⁵
- Recycle Water Pond substation - Permit and Licence No. [U2008-341](#)⁶
- Coarse Tailings Booster Station 1 substation - Permit and Licence No. [U2008-342](#)⁷
- North Seepage Pond substation - Permit and Licence No. [U2008-343](#)⁸
- Coarse Tailings Booster Station 2 substation - Permit and Licence No. [U2008-344](#)⁹
- South Seepage Pond substation - Permit and Licence No. [U2008-345](#)¹⁰
- Ore Preparation Plant (OPP) substation - Permit and Licence No. [U2008-346](#)¹¹
- Hydrotransport Booster Station 1 substation - Permit and Licence No. [U2008-347](#)¹²

8. Suncor stated that the previously approved facilities listed above were not constructed and have undergone significant design changes. Suncor requested that the aforementioned permits and licences be rescinded.

9. Suncor indicated that in August 2009, Petro-Canada merged its assets and operations with those of Suncor. Suncor stated that the ISD encompasses all facilities within the Fort Hills lease boundary. These facilities would be located in Townships 96 and 97, Ranges 10 and 11, west of the Fourth Meridian, approximately 35 kilometres north of Fort McKay and approximately 90 kilometres north of Fort McMurray.

3 Discussion

Application No. 1609268 - ISD amendment

10. The Fort Hills oilsands project was previously designated as an industrial system pursuant to Order No. U2008-320. The major changes to the ISD include increasing the capacity

² Industrial System Designation Order No. U2008-320, Application No. 1571279, November 20, 2008.

³ Substation Permit and Licence No. U2008-321, Application No. 1571279, November 20, 2008.

⁴ Substation Permit and Licence No. U2008-322, Application No. 1571279, November 20, 2008.

⁵ Transmission Line Permit and Licence No. U2008-323, Application No. 1571279, November 20, 2008.

⁶ Substation Permit and Licence No. U2008-341, Application No. 1571279, November 20, 2008.

⁷ Substation Permit and Licence No. U2008-342, Application No. 1571279, November 20, 2008.

⁸ Substation Permit and Licence No. U2008-343, Application No. 1571279, November 20, 2008.

⁹ Substation Permit and Licence No. U2008-344, Application No. 1571279, November 20, 2008.

¹⁰ Substation Permit and Licence No. U2008-345, Application No. 1571279, November 20, 2008.

¹¹ Substation Permit and Licence No. U2008-346, Application No. 1571279, November 20, 2008.

¹² Substation Permit and Licence No. U2008-347, Application No. 1571279, November 20, 2008.

of the previous approved power plant from 130 MW to 170 MW and redesigning a number of transmission facilities within the ISD.

11. The requirements to designate an electric system as an industrial system are set out in Section 4 of the *Hydro and Electric Energy Act*. Section 4(2) of the *Hydro and Electric Energy Act* sets out the principles that the Commission must have regard to when considering an ISD application. Section 4(3) sets out the criteria for evaluating an ISD application.

12. Suncor stated that the Fort Hills ISD amendment was being sought in order to address the revised electric load forecast and steam requirements for the Fort Hills oilsands project, and associated electric transmission, distribution and cogeneration facility modifications. Suncor advised that the Fort Hills oilsands project consists of an open-pit mine, extraction facilities, plant site and supporting utilities and other off-site facilities. The mine development area is approximately 15 kilometres by 20 kilometres in size. The ISD would include the 170-MW power plant and transmission facilities as listed below.

Application No. 1609273 – power plant and Application No. 1609644 – transmission line and substations

13. The proposed cogeneration power plant would consist of two 85-MW natural gas turbine generators each equipped with a heat-recovery steam generator. Suncor stated that the power plant would be located in LSD 13 of Section 4, Township 97, Range 10, west of the Fourth Meridian and would have a total generating capacity of 170 MW. Suncor indicated that the power plant would be commissioned in the second quarter of 2017.

14. Suncor proposes to install the following transmission facilities to be included in the ISD:

- one 260-kilovolt (kV) substation to be designated as Main 505S substation
- four 144-kV substations to be designated as Central substation 805S, OPP substation 1105S, Cogen substation 1005S and Cogen substation 1205S
- two 144-kV transmission lines, designated as 635PL7-1000 and 635PL7-1001, that connect Main substation 505S to Central substation 805S, both lines would be approximately 1.5 kilometres in length
- two 144-kV transmission lines, designated as 635PL7-1002 and 635PL7-1003, that connect Main substation 505S to OPP substation 1105S, both lines would be approximately 500 metres in length
- one 144-kV transmission line, designated as 635PL7-1004, that connects Central substation 805S to Cogen substation 1005S, approximately 350 metres in length
- one 144-kV transmission line, designated as 635PL7-1005, that connects Central substation 805S to Cogen substation 1205S approximately 350 metres in length
- two 260-kV transmission lines, designated as 635PL9-1000 and 635PL9-1001, that connect Main substation 505S to the Alberta Interconnected Electric System by way of an ATCO Electric Ltd. switching substation, designated as Secord substation (the Secord substation has not been approved by the Commission)

15. Suncor submitted a noise impact assessment update for the proposed power plant and transmission facilities. The noise impact assessment concluded that upon the completion of the project, the transmission facilities would meet the noise requirements as prescribed by AUC Rule 012: *Noise Control* (AUC Rule 012).
16. Suncor indicated that the proposed power plant and transmission facilities would be located within the boundaries of the Lower Athabasca Regional Plan (LARP); but would not be within a conservation area or provincial recreation area established under LARP. Suncor stated that the Fort Hills oilsands approval granted by Alberta Environment and Sustainable Resources (AESRD) requires the installation of an ambient air monitoring station once operations commence. The power plant is not expected to affect the air quality assessments which were completed for original Fort Hills oilsands project.
17. Suncor indicated that the primary source of water for the Fort Hills oilsands project is the Athabasca River, and authorization from AESRD under the *Water Act* was acquired previously. Suncor stated that the Fort Hills oilsands project would operate within the framework of the current phase 1 water management framework for the Lower Athabasca River.
18. Suncor conducted a participant involvement program for the original Fort Hills Oil Sands project, including stakeholder notifications and consultation regarding the overall oilsands development, and the proposed power plant and transmission facilities. As the scope of project's electrical facilities has changed, Suncor advised that consultations have been ongoing, including consultations and notifications of design changes. Additionally, Suncor also stated that there are no residences or dwellings within two kilometres of the proposed power plant, or within 800 metres of any of the proposed substations or transmission lines.
19. The routes of the transmission facilities are within the project footprint of the Fort Hills oilsands project. A number of factors were considered in the siting of infrastructure, including the presence of mineable resources, soil storage and environmental considerations and, where possible, locations were selected to avoid sensitive environmental features.
20. Suncor stated that right-of-way clearing, construction, reclamation and subsequent activities for the proposed power plant and transmission facilities would be in accordance with the Government of Alberta's Environmental Protection Guidelines for Electric Transmission Lines.
21. Suncor stated that the transmission line rights-of-way are expected to regenerate naturally to pre-disturbance conditions. Suncor also stated that a re-vegetation program would be implemented only on areas where high erosion potential exists on the right-of-way.
22. The Commission issued a notice of applications on August 9, 2013, with a deadline for submissions of August 26, 2013. The Commission did not receive any submissions in response to the notice.

4 Findings

23. The Commission is satisfied with Suncor's participant involvement program and notes that there are no outstanding public or industry objections or concerns. The Commission issued the notice of applications and no objections were received.

24. The Commission is satisfied that the submitted noise impact assessment demonstrates compliance with the requirements of AUC Rule 012.
25. The Commission is satisfied that the proposed project would be in compliance with the LARP as detailed in Suncor's applications, and the environmental aspects described in the applications are current, and that AESRD has no outstanding concerns.
26. The Commission has reviewed Application No. 1609273 relating to the 170-MW power plant and Application No. 1609644 relating to the transmission facilities proposed by Suncor, and determined that the technical, siting and environmental requirements of the *Hydro and Electric Energy Act* and AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations* (AUC Rule 007), have been met.
27. Based on the foregoing, in accordance with Section 17 of the *Alberta Utilities Commission Act*, the Commission finds that construction and operation of the proposed power plant and transmission facilities are in the public interest having regard to the social and economic effects of the facilities, and the effects on the environment.
28. The Commission has reviewed the ISD amendment Application No. 1609268 and has determined that the technical aspects of the amended power plant have been met for the ISD. The Commission finds that the applicant has demonstrated that on-site generation is the most economic and efficient source of power for the industrial system, that the efficiency of the interconnected electric system is improved, that there is no duplication of the interconnected electric system and that a significant investment is being undertaken.
29. In making its decision on Suncor's application for an industrial system designation, the Commission has considered the principles, criteria and legislative framework contained in the *Hydro and Electric Energy Act* and the *Electric Utilities Act*.
30. The Commission finds the ISD amendment application, the power plant application, and the transmission facility application meet the requirements as specified in AUC Rule 007.
31. The Commission finds it appropriate to rescind all permits and licences for the previously approved transmission facilities which were not constructed. Industrial System Designation Order No. U2008-320 will be rescinded and a new ISD order, power plant approval and transmission facility approvals will be issued.
32. The Commission finds it premature to approve the 260-kV transmission lines 635PL9-1000 and 635PL9-1001 because the Secord substation, which is to be owned and operated by ATCO Electric Ltd. and which the Main substation will connect to, has yet to be approved. Therefore, the aspects of Suncor's application related to the 260-kV transmission lines 635PL9-1000 and 635PL9-1001 will be held in abeyance, under the existing Proceeding ID No. 1908, until such time as ATCO receives approval for the Secord substation.
33. Having considered the social, economic, and environmental impacts of the proposed project, the Commission considers the project to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

5 Decision

34. The Commission hereby rescinds Permits and Licences No. U2008-321, No. U2008-322, No. U2008-323, No. U2008-341, No. U2008-342, No. U2008-343, No. U2008-344, No. U2008-345, No. U2008-346 and No. U2008-347.

35. Pursuant to Section 4 of the *Hydro and Electric Energy Act* and sections 2(1)(d) and 117 of the *Electric Utilities Act*, the Commission approves the ISD amendment application and grants to Suncor and FHEC the approval set out in Appendix 1 – Industrial System Designation Order No. U2013-577 – November 15, 2013, to amend the Fort Hills industrial system designation as set out in Appendix 1.

36. Pursuant to Section 11 of the *Hydro and Electric Energy Act*, the Commission approves the power plant application and grants to Suncor and FHEC the approval set out in Appendix 2 – Power Plant Approval No. U2013-578 – November 15, 2013, to construct and operate a 170-MW cogeneration power plant as set out in Appendix 2.

37. Pursuant to sections 14, 15, and 19 of the *Hydro and Electric Energy Act*, the Commission approves the facility application in part, and grants to Suncor and FHEC the following approvals:

- Permit and Licence No. U2013-548 – November 15, 2013, to construct and operate Main substation 505S as set out in Appendix 3.
- Permit and Licence No. U2013-549 – November 15, 2013, to construct and operate Central substation 805S as set out in Appendix 4.
- Permit and Licence No. U2013-550 – November 15, 2013, to construct and operate OPP substation 1105S as set out in Appendix 5.
- Permit and Licence No. U2013-551 – November 15, 2013, to construct and operate Cogen substation 1005S as set out in Appendix 6.
- Permit and Licence No. U2013-552 – November 15, 2013, to construct and operate Cogen substation 1205S as set out in Appendix 7.
- Permit and Licence No. U2013-553 – November 15, 2013, to construct and operate 144-kV transmission line 635PL7-1000 as set out in Appendix 8.
- Permit and Licence No. U2013-554 – November 15, 2013, to construct and operate 144-kV transmission line 635PL7-1001 as set out in Appendix 9.
- Permit and Licence No. U2013-555 – November 15, 2013, to construct and operate 144-kV transmission line 635PL7-1002 as set out in Appendix 10.
- Permit and Licence No. U2013-556 – November 15, 2013, to construct and operate 144-kV transmission line 635PL7-1003 as set out in Appendix 11.

- Permit and Licence No. U2013-557 – November 15, 2013, to construct and operate 144-kV transmission line 635PL7-1004 as set out in Appendix 12.
- Permit and Licence No. U2013-558 – November 15, 2013, to construct and operate 144-kV transmission line 635PL7-1005 as set out in Appendix 13.

38. The appendices will be distributed separately.

Dated on November 15, 2013.

The Alberta Utilities Commission

(original signed by)

Henry van Egteren
Commission Member