



Sunshine Oilsands Ltd.

Errata to Decision 2013-217

West Ells SAGD Project Industrial System Designation (ISD)

July 5, 2013

The Alberta Utilities Commission

Decision 2013-217 (Errata): Sunshine Oilsands Ltd.
West Ells SAGD Project Industrial System Designation (ISD)
Application No. 1608032
Proceeding ID No. 1655

July 5, 2013

Published by

The Alberta Utilities Commission
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1 Introduction

1. On June 12, 2013, the Alberta Utilities Commission (AUC or the Commission) issued Decision 2013-217 to Sunshine Oilsands Ltd.

2. In paragraph 3 and paragraph 43 of the decision, the application number was incorrectly shown as 1608302. The application number in these paragraphs has been corrected to read 1608032.

3. In paragraph 11 of the decision, two land locations were inadvertently omitted. The paragraph has been amended to include the following land locations:

- LSD 1 and LSD 2 of Section 5 of Township 95, Range 17, west of the Fourth Meridian

4. Section 48 of AUC Rule 001: *Rules of Practice* indicates that “[t]he Commission may correct typographical errors, errors of calculation and similar errors made in any of its orders, decisions or directions.” Accordingly, this errata decision is being issued to correct the aforementioned errors.

5. Decision 2013-217 has been amended and is attached to this Decision 2013-217 (Errata). The associated Appendix 1 – Industrial System Designation – Order No. U2013-288 has also been amended accordingly and Order No. U2013-288 (Errata) will be issued separately.

Dated on July 5, 2013.

The Alberta Utilities Commission

(original signed by)

Anne Michaud
Commission Member



Sunshine Oilsands Ltd.

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1 Introduction and background

1. Sunshine Oilsands Ltd. (Sunshine) received approval from the Alberta Utilities Commission (AUC or the Commission) on December 7, 2012, to construct and operate a 24-megawatt (MW) co-generation power plant (the power plant) in the West Ells area within the Regional Municipality of Wood Buffalo. Sunshine was granted Approval No. [U2012-627](#)¹ in Decision [2012-332](#).²
2. The power plant will provide power to Sunshine's West Ells steam-assisted gravity drainage (SAGD) project. The site is located approximately 88 kilometres northwest of Fort McMurray and 60 kilometres west of Fort McKay, Alberta. The power plant will be constructed within the central processing facility located within the SAGD project site, in the north half of Section 31, Township 94, Range 17, west of the Fourth Meridian.
3. Pursuant to Section 4 of the *Hydro and Electric Energy Act*, Sunshine filed an industrial system designation application (ISD application), registered as Application No. 1608032, with the AUC on January 4, 2012, requesting an AUC order to designate its 25-kilovolt (kV) power distribution system at the West Ells SAGD project site as an industrial system (the Industrial System), as defined in the *Hydro and Electric Energy Act*, to serve the SAGD project. The ISD application was filed concurrently with the power plant application, however Sunshine requested that the power plant application be reviewed separately.
4. The Commission issued a joint notice of application for both the power plant application and the ISD application on June 11, 2012, with a deadline of July 3, 2012, for submissions to the Commission. The notice was sent directly to those parties identified by Sunshine as parties who may be affected by or have an interest in either or both the power plant application and the ISD application.
5. On July 13, 2012, ATCO Electric Ltd. (ATCO) filed a submission stating that it had concerns with both of Sunshine's applications. In response, Sunshine requested that the Commission not proceed with any further regulatory process to allow Sunshine and ATCO to resolve the issues. ATCO withdrew its objection to the power plant application on October 31, 2012, but maintained its objection to the ISD application.

¹ Power Plant Approval No. U2012-627: Sunshine Oilsands Ltd. – 24-MW Co-generation Power Plant, Application No. 1608031, Proceeding ID No. 1654, December 7, 2012.

² Decision 2013-332: Sunshine Oilsands Ltd. – West Ells Co-generation Power Plant, Application No. 1608031, Proceeding ID No. 1654, December 7, 2012.

6. On November 20, 2012, Sunshine submitted an amendment requesting that the industrial system be revised to include its 25-kV electric system in six additional legal subdivisions north of the SAGD project boundary.³ Topographic features and a pre-existing waterbody necessitated a move of the distribution power lines to a corridor immediately north of the SAGD project boundary. On January 25, 2013, Sunshine submitted a supplementary amendment requesting that the industrial system be revised to include its 25-kV electric system in its construction camp which will be constructed immediately to the west of the SAGD project boundary.⁴

7. On February 26, 2013, ATCO informed the AUC that, as a result of ensuing discussions with Sunshine, it had no further objections or concerns regarding the ISD application.

8. The Commission issued a second notice of application for the ISD application on February 20, 2013. This notice advised interested parties that the power plant application had been approved and that the ISD application had been amended.

9. In response to the second notice, the AUC received an objection from a trap line holder. On May 15, 2013, the objection was withdrawn.

10. Because there are no longer any objections to Sunshine's ISD application, the Commission is satisfied that its decision on the Sunshine application will not directly and adversely affect the rights of any person. Accordingly, the Commission decided not to hold a public hearing to consider the application in accordance with Section 9 of the *Alberta Utilities Commission Act*.

2 Discussion

11. The proposed industrial system includes electric systems in 6.5 sections of land as follows:

- sections 30, 31, 32 and 33 of Township 94, Range 17, west of the Fourth Meridian
- sections 25 and 36 of Township 94, Range 18, west of the Fourth Meridian
- LSD 1, LSD 2, LSD 3 and LSD 4 of Section 4 of Township 95, Range 17, west of the Fourth Meridian
- LSD 1 and LSD 2 of Section 5 of Township 95, Range 17, west of the Fourth Meridian
- LSD 16 of Section 26 of Township 94, Range 18, west of the Fourth Meridian
- LSD 1 of Section 35 of Township 94, Range 18, west of the Fourth Meridian

12. Sunshine explained that the electricity produced by the power plant will be used to power all electrical loads remote from the central processing facility that comprise the overall integrated system for the production and sale of bitumen. Sunshine asserted that the power plant is an integral part of the overall SAGD process at the site.

13. The total facility investment will be in excess of \$300 million.

³ Exhibit 31.

⁴ Exhibit 32.

14. Sunshine has proposed to distribute power at 25-kV to the remote water and production well sites to power submersible production pumps, transfer pumps from the production wells to the central procession facility and other loads such as electric heat tracing within the SAGD project area.

15. The following electrical facilities are proposed to be included in the industrial system:

- a 24-megawatt (MW) co-generation power plant and associated equipment
- other electric facilities operating at voltages of 25-kilovolts and below

16. Without the turbine generator and exhaust heat capture, Sunshine estimated that the West Ells SAGD project would allot an additional 11.9-megawatts (MW) of load to the Alberta Interconnected Electric System.

17. The SAGD facility is located in a remote area. Sunshine submitted that there are no electrical facilities within the area to serve the electrical loads required by the SAGD project⁵ and that the closest utility supply would be approximately 60 kilometres away.⁶

18. Sunshine stated that based on typical costs for electrical facilities, the construction of a 60-kilometre, 25-kV line and associated substation would cost approximately \$49 million.

19. Sunshine asserted that the efficiency of the Alberta Interconnected Electric System (AIES) would be improved by not having to serve the West Ells SAGD project load. In order to serve Sunshine's electric load from the AIES, electricity would have to be generated at a remote site and transferred over 60 kilometres of transmission or distribution line before reaching the site. Sunshine submitted that would result in high losses for the 25-kV line. It estimated that if a 25-kV line with large conductors to transmit the required power were used, approximately 1200 kilowatts of losses would be incurred.

20. Sunshine explained that the co-generation power plant has sufficient capacity to supply Sunshine's central plant site load, as well as the bitumen production pads and water well electrical loads.

21. Sunshine stated that the cost for electrical energy produced by the power plant is expected to be approximately 75 per cent to 85 per cent of that forecast for the electrical energy from the AIES. Sunshine asserted that a cost comparison showed that the use of the power plant at the SAGD project site resulted in a net cash flow improvement of approximately \$4.2 million per year.⁷

22. Sunshine indicated that it consulted with all parties with land interests within 800 metres of the power plant in person and notified all parties with an interest in lands within 2,000 metres of the power plant site and that it did not receive any concerns as a result of its participant involvement program.

⁵ Application, page 15, Section 3.2.16.

⁶ Application, page 13, Section 3.2.13, paragraph 2.

⁷ Application, page 12, Section 3.12.12, paragraph 4.

23. Initially, Sunshine did not intend to export any power to the AIES. However, in its supplemental filing on November 20, 2012, it indicated that it would be willing to connect to ATCO's facilities when such facilities are constructed in close proximity to the West Ells SAGD project site. Sunshine explained that, in the interim, it needed to move ahead with building its power plant and distribution facilities to meet its mid-2013 start-up schedule.

24. The West Ells SAGD project is located in the Lower Athabasca Regional Plan (LARP) area in north-eastern Alberta. In response to an information request from the AUC, Sunshine indicated that the West Ells SAGD project power plant is not located within any new conservation or provincial recreation areas within the LARP region. The ISD application for the distribution system to supply power to the West Ells SAGD project does not change this.

3 Findings

25. The Commission considered the ISD application pursuant to the principles and criteria set out in Section 4 of the *Hydro and Electric Energy Act*. Section 4(2) sets out the principles the Commission shall have regard to when considering an ISD application and states:

(2) Where the Commission is considering an application for designation as an industrial system, the Commission shall have regard to the following principles:

(a) the designation must be consistent with the objective of giving appropriate economic signals so that integrated industrial processes can develop their own internal supply of electricity where that is the most economical source of generation;

(b) the designation must support

(i) the development of the economical supply of generation to meet the requirements of integrated industrial processes,

(ii) the efficient exchange, with the interconnected electric system, of electric energy that is in excess of the industrial system's own requirements, and

(iii) the making of decisions respecting the location of generation and consumption facilities so that the efficiency of the interconnected electric system is improved, including improved voltage stability and reduction of losses and congestion on transmission lines;

(c) the designation must not facilitate

(i) the development of independent electric systems that attempt to avoid costs associated with the interconnected electric system, and

(ii) uneconomical by-pass of the interconnected electric system;

(d) duplication of the interconnected electric system must be avoided where it is more economical to use the transmission facilities or electric distribution systems owned by persons in whose service area the industrial system is or will be located.

26. The Commission agrees with Sunshine's assessment that the electrical requirements for its West Ells SAGD project could not be economically met from the Alberta wholesale electricity market because the Alberta Interconnected Electric System is approximately 60 kilometres away. Sunshine presented a pro-forma cost comparison between self-generation on site and purchasing power from the Alberta wholesale electricity market via new transmission facilities. The result indicates that self-generation of on-site power is the most economic source of power available to Sunshine.

27. The Commission is satisfied that both the electrical and steam requirements of Sunshine's West Ells SAGD project are met by its 24-MW co-generation power plant. Given the remoteness of the project and the distance to the AIES, the Commission finds that the proposed on site generation is the most economic source of generation in the circumstances.

28. The Commission finds that the approval of the proposed ISD supports the development of an economical supply of generation to meet the requirements of Sunshine's industrial process for its SAGD facility.

29. However, because Sunshine's electric system at its West Ells SAGD project is isolated from the AIES, the principle listed in subsection 4(2)(b)(ii) does not apply to this project. Regarding subsection 4(2)(b)(iii), the Commission observes that the location of Sunshine's generating unit and its proposed industrial system is determined by the location of the resources it aims to extract. The Commission accepts that, because of its remoteness, it may not be connected to the AIES for some time.

30. Having regard to the principles described in subsections 4(2)(c) and (d), the Commission is satisfied that Sunshine's proposed industrial system is not being developed to avoid costs associated with the interconnection and will not result in an uneconomical bypass of the system. Likewise, the Commission finds that approval of the proposed industrial system will not result in duplication of the interconnected system. Rather, the Commission accepts that the industrial system was proposed by Sunshine as the most economical way to power its operations given the remote location and distance from the rest of the interconnected system.

31. Section 4(3) of the *Hydro and Electric Energy Act* sets out the criteria that must be met prior to the Commission making a designation and states:

(3) The Commission may make a designation under subsection (1) if the Commission is satisfied that all of the following criteria have been met:

(a) the electric system includes a generating unit located on the property of the one or more industrial operations it is intended to serve, there is a high degree of integration of the electric system with one or more industrial operations the electric system forms part of and serves, and there is a high degree of integration of the components of the industrial operations;

(b) the industrial operations process a feedstock, produce a primary product or manufacture a product;

- (c) there is a common ownership of all of the components of the industrial operations;
- (d) the whole of the output of each component within the industrial operation is used by that operation and is necessary to constitute its final products;
- (e) there is a high degree of integration of the management of the components and processes of the industrial operations;
- (f) the application to the Commission for a designation under subsection (1) demonstrates significant investment in both the expansion or extension of the industrial operations processes and the development of the electricity supply;
- (g) where an industrial operation extends beyond contiguous property, the owner of the industrial operation satisfies the Commission that the overall cost of providing the owner's own distribution or transmission facilities to interconnect the integral parts of the industrial operation is equal to or less than the tariffs applicable for distribution or transmission in the service area where the industrial operation is located.

32. In this case, the SAGD project will be equipped with one 24-MW co-generation power plant, which will provide power and steam for the industrial operations. The West Ells SAGD project, owned by Sunshine, is a commercial project for the recovery of bitumen from an oil sands reservoir, using thermal in-situ steam-assisted gravity drainage technology. Steam from the co-generation power plant will be injected into wells to heat the bitumen and allow it to flow out of the formation, along with gas and any water from the condensation of injected steam. At the central plant facilities, water and gas are separated from the bitumen. The gas produced is processed and used as a fuel for the power plant. The water produced will be treated and used for steam generation. The power plant will provide power to the central processing facility, production well pads, three source water wells to the east of the central processing facility and a work camp by way of a 25-kV distribution electric system.

33. Based on the above information, the Commission considers that there is a high degree of integration of the components for the industrial operations proposed by Sunshine. Accordingly, the Commission is satisfied that the proposed industrial system meets the criterion set out in subsection 4(3)(a).

34. Regarding criterion 4(3)(b), Sunshine uses the steam-assisted gravity drainage process to produce bitumen, which is transported to an upgrader and ultimately sold as Premium Synthetic Crude or bitumen.⁸ Based on this process, the Commission finds that criterion 4(3)(b) is met.

35. The criterion in 4(3)(c) requires that there is common ownership of all the components of the industrial operations. In this case, all equipment and facilities are owned by Sunshine. Therefore, the Commission considers that criterion 4(3)(c) is met.

36. Criterion 4(3)(d) states that the whole of the output for each component within the industrial operation is used by that operation and is necessary to constitute its final products. The whole of the output for each component within Sunshine's industrial operation to obtain reservoir fluid from production wells is used by the operation and is necessary to constitute the final bitumen product. Therefore, the Commission finds that criterion 4(3)(d) is met.

⁸ Application 1608302, page 9, Section 3.2.6, paragraph 1.

37. Criterion 4(3)(e) requires a high degree of integration for management of the components and processes of the industrial operations. In this case, the Commission finds that criterion 4(3)(e) is met because the West Ells SAGD project is owned entirely by Sunshine.

38. Criterion 4(3)(f) requires an application for industrial system designation to demonstrate significant investment in both the expansion and extension of the industrial operations processes and development of the electricity supply. In this case, the Commission finds that criterion 4(3)(f) is met because the total facility investment will be in excess of \$300 million and is necessary for the development of Sunshine's industrial operations.

39. Regarding criterion 4(3)(g), Sunshine's facilities are located within the West Ells SAGD project site on contiguous property. Sunshine has provided evidence to support that self-generation and self-distribution will be the most economic means to provide power to the project. Therefore, the Commission finds that Sunshine's industrial system designation request does not contravene criterion 4(3)(g).

40. The Commission finds that the application meets the requirements of AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations* (AUC Rule 007).

41. The Commission finds that Sunshine has complied with the consultation and notification requirements contained in AUC Rule 007.

42. With respect to the requirements of the Lower Athabasca Regional Plan, the Commission relies on Sunshine's evidence that the West Ells SAGD project power plant would align with the desire to achieve the regional outcomes outlined in the LARP and finds that designating the West Ells SAGD project as an industrial system would not change this.

4 Decision

43. Pursuant to Section 4 of the *Hydro and Electric Energy Act*, sections 2(1)(d) and 117 of the *Electric Utilities Act*, the Commission approves Application No. 1608032 and grants to Sunshine approval for the West Ells ISD as set out in Appendix 1 – Industrial System Designation – Order No. U2013-288 – June 12, 2013 (Appendix 1 will be distributed separately).

Dated on June 12, 2013.

(original signed by)

Anne Michaud
Commission Member