



**Alberta Pacific Forest Industries Inc.**

**Al-Pac Pulp Mill Industrial System Designation**

**August 12, 2022**

**Alberta Utilities Commission**

Decision 27522-D01-2022

Alberta Pacific Forest Industries Inc.

Al-Pac Pulp Mill Industrial System Designation

Proceeding 27522

Application 27522-A001

August 12, 2022

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The Commission may, no later than 60 days of the date of this decision and without notice, correct typographical, spelling and calculation errors and other similar types of errors and post the corrected decision on its website.

## 1 Decision summary

1. In this decision, the Alberta Utilities Commission approves an application from Alberta Pacific Forest Industries Inc. (Al-Pac) for an industrial system designation that encompasses all electric facilities at its pulp mill.

## 2 Introduction and background

2. Al-Pac operates a pulp mill facility in the Athabasca area, which began operating in 1993. Al-Pac has approval to own and operate electric facilities at the facility, including a 106-megawatt (MW) power plant<sup>1</sup> and the Grassland 282S Substation,<sup>2</sup> and to connect those facilities to the Alberta Interconnected Electric System (AIES).<sup>3</sup> The power plant, which initially consisted of only three generators, was added in 2001 to supply electric energy to the facility and to export excess energy to the AIES. The fourth generator and the Grassland 282S Substation were added in 2011. The facilities are located in Section 29 of Township 68, Range 19, west of the Fourth Meridian, approximately 16 kilometres northwest of Grassland, Alberta.

3. On July 15, 2022, Al-Pac filed an application with the AUC, registered as Application 27522-A001, requesting that the electric facilities at the pulp mill be designated as an industrial system.

4. Due to the nature of the application, a notice of application was not issued and a hearing was not required as the Commission considered that its decision or order would not directly and adversely affect the rights of a person pursuant to Section 9 of the *Alberta Utilities Commission Act*.

## 3 Does the Al-Pac pulp mill and associated electric facilities meet the requirements to be designated as an industrial system?

5. The Commission must consider Al-Pac's industrial system designation (ISD) application in accordance with the principles and criteria set out in Section 4 of the *Hydro and Electric Energy Act*. Subsection 4(2) sets out a number of principles that the Commission must have regard for when considering an application for an ISD; subsection 4(3) sets out specific criteria for determining whether a project should be designated as an industrial system; and

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<sup>1</sup> Power Plant Approval U2010-439, Proceeding 677, Application 1606265, December 24, 2010.

<sup>2</sup> Substation Permit and Licence U2010-437, Proceeding 586, Application 1606200, December 24, 2010.

<sup>3</sup> Connection Order U2010-436, Proceeding 586, Application 1606200, December 24, 2010.

subsections 4(4) and 4(5) set out further criteria for the Commission to consider when a project does not meet the criteria set out in subsection 4(3).<sup>4</sup>

6. For the reasons outlined below, the Commission finds that granting an ISD is consistent with the principles and criteria set out in Section 4 of the *Hydro and Electric Energy Act*.

7. The power plant at the pulp mill consists of two steam turbine generators, each with a peak capability of 38 MW, one gas turbine generator with a peak capability of 13 MW, and one condensing steam turbine generator with a peak capability of 17 MW. Al-Pac explained that nameplate capabilities of the generators are actually 41 MW, 41 MW, 17 MW, and 32.1 MW, respectively, but that steam generation at the pulp mill is limited so only a maximum of 106 MW can be generated.

8. Regarding the criteria required to be met, and starting with subsection 4(3)(a), the electric facilities include four generating units located on the pulp mill property. The pulp mill produces steam for its industrial operations and the steam-fuelled generators (i.e., the two 38-MW steam turbine generators and the 17-MW condensing steam turbine generator) make use of the excess steam. In addition, the steam production is fuelled by by-products of the industrial operations, in the form of black liquor and biomass. Accordingly, the Commission considers that there is a high degree of integration between the industrial operations and the steam-fuelled generators.

9. The Commission considers that there is not a high degree of integration between the industrial operations and the fourth generating unit, the 13-MW gas turbine generator. However, Al-Pac stated that this generator “is used to provide auxiliary electricity demand for outages, emergencies, and instances when electricity needs exceed production onsite”.<sup>5</sup> As this generator represents only a minor, infrequently-used component of the broader and integrated industrial system, the Commission finds that subsection 4(3)(a) has been met.

10. The Commission is satisfied that subsection 4(3)(b) has been met as the facility produces kraft pulp. It is also satisfied that subsection 4(3)(c) has been met as Al-Pac is the sole owner of the components of the industrial operations.

11. Subsection 4(3)(d) has been met. The Commission is satisfied that the whole of the output of each component within the industrial operation is used by the operation and is necessary to constitute the pulp mill’s final products. While the facility exported 175,458 megawatt-hour (MWh) to the AIES in 2021, approximately 27 per cent of the power plant’s total generation, the Commission recognizes that this export was a result of maximizing the use of the steam produced, which in turn is a result of maximizing the black liquor and biomass used to produce the steam. As such, the Commission accepts that the power plant is reasonably sized to meet the needs of the industrial operation and further, finds that the designation supports the efficient exchange with the AIES of electric energy that is in excess of the industrial system’s own requirements.

12. The Commission finds that subsection 4(3)(e) has been met as Al-Pac owns and operates both the pulp mill and the electric facilities. Hence, there is a high degree of integration of management of both the components and the processes of the industrial operations.

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<sup>4</sup> Subsections 4(2) to 4(5) of the *Hydro and Electric Energy Act* have been attached as Appendix A.

<sup>5</sup> Exhibit 27522-X0002, Attachments, PDF page 19.

13. While typically a proponent applies for an ISD at the time it applies for approval of the power plant, there is nothing preventing a proponent from applying for an ISD subsequently, as Al-Pac has in this case. In assessing the requirements of subsection 4(3)(f), the Commission finds that significant investment to the extension of the industrial operation and the development of the electricity supply was made when the power plant and substation were approved and constructed. Accordingly, subsection 4(3)(f) has been met.

14. A river pump house is located off the main mill site by the Athabasca River. Al-Pac stated that the pump house provides water to the pulp mill, and is an integral part of the components of the industrial operations. The pump house receives power from the pulp mill facility. Subsection 4(3)(g) requires that: “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.” Al-Pac did not provide any evidence to support that the costs of providing power to the pump house from the pulp mill are lower than the tariffs applicable for distribution or transmission in the service area. The Commission recognizes that the configuration to serve the pump house from the electric facilities at the pulp mill are existing and the pump house is in relatively close proximity to the pulp mill. The Commission accepts that the pump house is an integral part of the industrial operations. Further, the pump house appears to represent a minor portion of the overall load associated with the pulp mill. Based on the above, the Commission finds that subsection 4(3)(g) has been substantially met.

15. Subsection 4(5) states that the Commission may make an industrial system designation if the Commission is satisfied that the criteria have been substantially met and that “there is a significant and sustained increase in efficiency in a process of the industrial operation or in the production and consumption of electric energy by the industrial operation as a result of the integration of the electric system with the industrial operations the electric system forms part of and serves”. As outlined above, the Commission considers that all of the criteria have been met, with the exception of subsection 4(3)(g), which has been substantially met. Using the excess steam to power the steam-fuelled generators represents a significant and sustained efficiency in the production of electric energy as a result of the level of integration between the generators and the industrial operations. In addition, there are considerable efficiencies gained from the fact that the steam-fuelled generators are ultimately fuelled by the by-products of the mill operations.

16. The Commission considers that a participant involvement program was not required because approval of the application would not alter the operation of the facilities, nor the facilities themselves, or otherwise affect any other person’s rights.

17. Having considered all of the principles and criteria set out in Section 4 of the *Hydro and Electric Energy Act*, the Commission finds that Al-Pac’s application substantially meets all the principles and criteria for designation and demonstrates significant and sustained increased efficiency.

#### 4 Decision

18. 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 application and grants to Alberta Pacific Forest Industries Inc. an industrial system designation as set out in Appendix 1 – Industrial System Designation Order 27522-D02-2022 (Appendix 1 will be distributed separately).

Dated on August 12, 2022.

#### Alberta Utilities Commission

*(original signed by)*

Renée Marx  
Commission Member

## Appendix A – Subsections 4(2) to 4(5) of the Hydro and Electric Energy Act

(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.

(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.
- (4) Where the Commission is not satisfied that subsection (3)(c) or (d) has been met, the Commission may make a designation under subsection (1) if the Commission is satisfied that all of the separately owned components and all of the industrial operations are components of an integrated industrial process.
- (5) Where the Commission is not satisfied that all of clauses (a) to (g) of subsection (3) have been met, the Commission may make a designation under subsection (1) if the Commission is satisfied that
- (a) all of clauses (a) to (g) of subsection (3) and subsection (4) have been substantially met, and
  - (b) there is a significant and sustained increase in efficiency in a process of the industrial operation or in the production and consumption of electric energy by the industrial operation as a result of the integration of the electric system with the industrial operations the electric system forms part of and serves.