



**TA Kaybob 3 Generation Facility Inc.  
Generation Facilities Applications**

**SemCAMS Midstream ULC  
Industrial System Designation Application**

**Kaybob 3 Generation Facilities Project**

**September 25, 2020**

**Alberta Utilities Commission**

Decision 25117-D01-2020: Kaybob 3 Generation Facilities Project

TA Kaybob 3 Generation Facility Inc.  
Generation Facilities Applications  
Applications 25117-A001 and 25117-A002

SemCAMS Midstream ULC  
Industrial System Designation Application  
Application 25117-A004

Proceeding 25117

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**Decision 25117-D01-2020**  
**Proceeding 25117**  
**Applications 25117-A001, 25117-A002 and**  
**25117-A004**

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## **1 Decision summary**

1. In this decision, the Alberta Utilities Commission considers whether to approve an application by TA Kaybob 3 Generation Facility Inc., to construct and operate a new 33-megawatt cogeneration power plant, a 9.75-megawatt reciprocating internal combustion engine (RICE) generator, and a substation. The proposed facilities would be located within the existing fenceline of the existing SemCAMS Midstream ULC Kaybob South No. 3 Sour Gas Processing Facility. The Commission also considers whether to approve an application by SemCAMS Midstream ULC to designate the cogeneration power plant, the RICE generator, an existing connection and a future connection as an industrial system.

2. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission finds that approval of the cogeneration power plant, the RICE generator and the substation is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

3. However, the Commission denies SemCAMS Midstream ULC's application for an industrial system designation because the proposed system does not meet the requirements of the *Hydro and Electric Energy Act*.

## **2 Introduction**

### **2.1 Project description**

4. SemCAMS Midstream ULC stated that it is the owner of the Kaybob South No. 3 Sour Gas Processing Facility (K3 Plant) near Fox Creek in Woodlands County. On November 25, 2019, TA Kaybob 3 Generation Facility Inc. (TAK3) applied to the Commission for approval under sections 11 and 14 of the *Hydro and Electric Energy Act* to construct and operate a 33-megawatt (MW) cogeneration power plant, designated as the Kaybob 3 Cogeneration Power Plant, a 9.75-MW RICE generator, designated as the Kaybob 3 RICE generator, and a substation within the existing fenceline of the K3 Plant. TAK3 is the General Partner of TA Kaybob 3 Generation Facility LP, a wholly-owned subsidiary of TransAlta Corporation. SemCAMS applied concurrently under Section 4 of the *Hydro and Electric Energy Act* to designate the K3 Plant, the proposed generation facilities, an existing connection and a future connection to the Alberta Interconnected Electric System (AIES) as an industrial system.

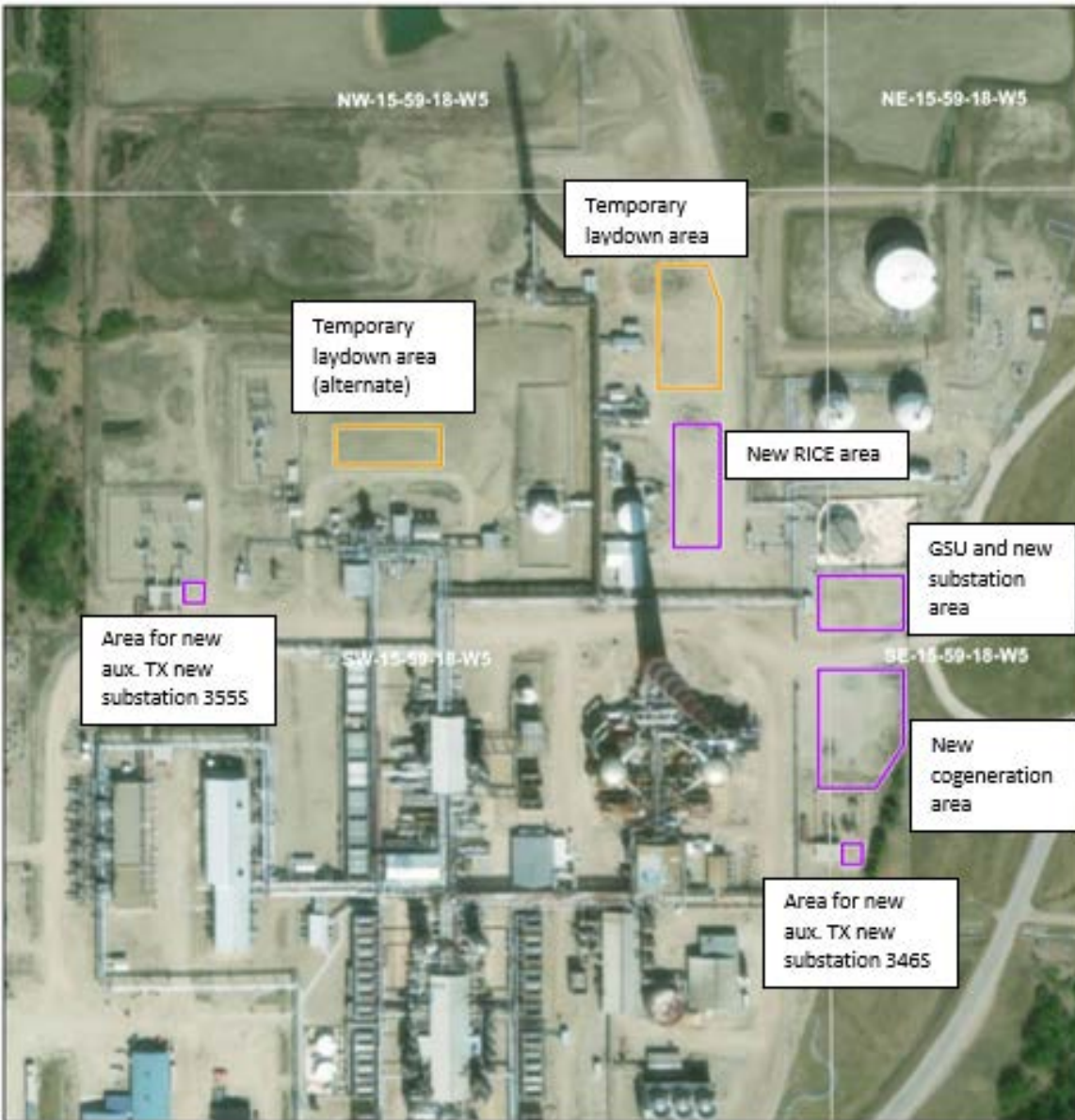
5. TAK3 stated that the K3 Plant's sour gas processing operations include amine sweetening and natural gas liquids recovery processes that require high-pressure steam. The proposed

cogeneration power plant would consist of two 16.5-MW gas turbine generators and a heat recovery steam generator. TAK3 stated that the cogeneration power plant would replace existing boilers at the K3 Plant that are nearing their end of life and would provide electricity and high-pressure steam to the K3 Plant. The RICE generator would provide black-start capability for the K3 Plant and firm excess generating capability for export to the AIES.

6. TAK3's proposed new substation would consist of two-18/24/30-megavolt ampere (MVA) generator step-up transformers, with secondary at 13.8 kilovolts (kV) and primary at 138 kV, and two 138-kV circuits. It would facilitate the export of electricity from the industrial system designation (ISD) to the AIES via the existing overhead 138-kV 864AL transmission line. SemCAMS stated that the Alberta Electric System Operator (AESO) will apply for approval of a needs identification document for a substation and transmission line to connect the cogeneration power plant and RICE generator to the AIES, and that AltaLink Management Ltd. will apply for any additional transmission substation equipment or infrastructure required to connect the cogeneration power plant and RICE generator to the AIES.

7. The layout of the proposed facilities within the existing fenceline of the K3 Plant is shown in Figure 1.

Figure 1: Layout of proposed facilities<sup>1</sup>



8. The applied-for industrial system designation would allow TAK3 to export excess electricity from the cogeneration power plant and RICE generator to the AIES.

**2.2 Hearing process**

9. The Commission issued a notice of applications on December 19, 2019, in accordance with Rule 001: *Rules of Practice* and received statements of intent to participate from Paramount Resources Limited, XTO Energy Canada (XTOC), Cenovus Energy Inc. and AltaLink Management Ltd.

<sup>1</sup> Exhibit 25117-X0012, Appendix C – PIP Summary and Materials, PDF page 29, modified by AUC staff by cropping and adding labels from Exhibit 25117-X0022, Plant Site Drawing with All Major Components, PDF page 2.

10. AltaLink, a transmission facility owner, stated that the K3 Plant is located in its service area. It expressed concern that the Commission's decision on the ISD application could have implications for the transmission system if approval of the ISD application facilitated uneconomic bypass of the system or otherwise allowed market participants to unfairly avoid transmission system costs.

11. Paramount, XTOC and Cenovus (the joint interest owners) each identified itself as a co-owner of the K3 Plant and the lands upon which the project is proposed to be built. Each also submitted that it had not been properly consulted on the project and was entitled to participate in decisions involving the use of the jointly owned assets (i.e., the K3 Plant and associated lands). They also expressed concerns about the potential economic impacts of the project and the ISD application on their respective interests as joint interest owners of the K3 Plant and as customers of that facility.

12. The Commission allowed each of the interveners the opportunity to participate fully in the proceeding.

13. The Commission held a written hearing that included interveners' information requests, interveners' written evidence, information requests to interveners, applicants' reply evidence, argument and reply argument.

14. TAK3 participated in the written hearing on behalf of the applicants.

### **2.3 Consideration of the applications**

15. Relevant to the Commission's consideration of the applications for the cogeneration power plant and the RICE generator is Section 11 of the *Hydro and Electric Energy Act* and Section 17 of the *Alberta Utilities Commission Act*. Relevant to the Commission's consideration of the application for the substation are sections 14 and 15 of the *Hydro and Electric Energy Act* and Section 17 of the *Alberta Utilities Commission Act*.

16. The applications must meet the requirements set out in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*, which apply to the construction and operation of power plants, substations and transmission lines governed by the *Hydro and Electric Energy Act*. The power plant applications must also meet the requirements set out in Rule 012: *Noise Control*. Further, an applicant for a power plant must obtain all approvals required under other applicable provincial or federal legislation.

17. The Commission's consideration of the ISD application is grounded in Section 4 of the *Hydro and Electric Energy Act*. The principles and criteria set out in subsections 4(2) and 4(3) are discussed in detail below in the Commission's discussion and findings on the ISD application.

18. In the sections that follow, the Commission discusses and makes findings on (i) the application to construct and operate the proposed facilities: 33-MW cogeneration power plant, 9.75-MW RICE generator and substation; and on (ii), the application for an industrial system designation. The ownership of the K3 Plant and land, and the subsidization of the cogeneration power plant and RICE generator, were central issues identified by the interveners and are therefore discussed in Section 3 below.

### **3 Facilities application: the 33-MW cogeneration power plant, 9.75-MW RICE generator and substation**

19. In its application, TAK3 stated that the cogeneration power plant and RICE generator would require approximately 0.8 hectares within the previously developed area of the K3 Plant, which is approximately 40.7 hectares in size. It also stated that the addition of the cogeneration power plant and RICE generator is consistent with the applicable land use plan: the Town of Whitecourt Intermunicipal Development Plan, and confirmed that it received a municipal development permit for the project on March 24, 2020.<sup>2</sup>

20. In its ISD application, SemCAMS stated that the AESO would apply to the Commission for approval of a needs identification document for a substation and transmission line to connect the generators to the AIES, and that AltaLink would apply for any additional transmission substation equipment or infrastructure required to connect the cogeneration power plant and RICE generator.

21. In response to an information request, TAK3 confirmed that its references to the cogeneration power plant included the RICE generator.<sup>3</sup> It also stated that the RICE generator is an integrated component of the cogeneration power plant, without which the cogenerator would have to be dramatically re-designed.<sup>4</sup> The Commission will nevertheless distinguish the two assets and refer to the RICE generator separately from the cogeneration power plant, for the purposes of its analysis.

22. TAK3 retained Stantec Consulting Ltd. to prepare a noise impact assessment (NIA) for the addition of the cogeneration power plant, the RICE generator and the proposed substation to the K3 Plant. The NIA predicted the cumulative noise effects on the surrounding environment from several sources: the ambient sound level, the existing K3 Plant, new sources of noise from the proposed facilities and noise from other existing facilities within three kilometres of the K3 Plant.

23. Stantec found that there were no receptors within 1.5 kilometres of the facility fenceline and therefore determined, in accordance with Rule 012, that the daytime permissible sound level is 50 dBA and the nighttime permissible sound level is 40 dBA. Stantec selected five different locations at a distance of 1.5 kilometres from the proposed facilities from which to conduct noise measurements. The NIA indicated that the predicted cumulative sound levels at these locations would meet the permissible sound levels during daytime and nighttime hours and meet the requirements of Rule 012.

24. Stantec also completed an environmental evaluation for the proposed facilities, as required by Rule 007, and concluded that the potential adverse environmental effects associated with the project can be adequately mitigated with standard mitigation measures and industry best practices. Stantec predicted that the residual adverse environmental effects of the project would not be significant.

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<sup>2</sup> Exhibit 25117-X0125, Kaybob Final Argument, PDF page 5.

<sup>3</sup> Exhibit 25117-X0041, Round\_1\_IR\_Responses\_25117\_A001\_A002\_A004\_Jan\_2020, PDF page 17.

<sup>4</sup> Exhibit 25117-X0133, Kaybob Reply Argument, PDF page 2.



25. Stantec included the results of air dispersion modelling from the proposed generators in its environmental evaluation, and predicted that the nitrogen dioxide (NO<sub>2</sub>) levels would be in compliance with the *Alberta Ambient Air Quality Objectives*.

26. TAK3 stated that it had applied to the Alberta Energy Regulator (AER) for an update to its *Environmental Protection and Enhancement Act* approval to reflect the addition of the cogeneration power plant and the RICE generator, and confirmed that the amended approval was issued by the AER on April 2, 2020.

### 3.1 Participant involvement program

27. TAK3 stated that its participant involvement program (PIP) aligns and complies with the requirements in Rule 007, and that it provided public notification of the project to disposition holders within 2,000 metres from the edge of the proposed project site boundary (including industry and trappers) and to Woodlands County. TAK3 stated that no responses or concerns were received from any of the parties notified.

28. The joint interest owners asserted that that they were not properly consulted in relation to the project, and that TAK3 had not met the consultation requirements under Rule 007.

29. Cenovus submitted that the construction, ownership and operations agreement (CO&O) in place between the owners of the K3 Plant sets out a consent process that must take place as part of, and be incorporated into the PIP, stating:

as a joint owner in the K3 Plant there is a unique and high standard of consultation required as a result of these legal ownership and real property rights that has not been met. Under the CO&O the Cogen Plant requires more than consultation, rather 100% unanimous consent of the K3 Plant joint owners to the project is required, this has not occurred.<sup>5</sup>

30. TAK3 replied that it had met the PIP requirements in Rule 007, and that the discussions and subsequent consultations that took place with the joint owners of the K3 Plant regarding the proposed project were not in response to the PIP. TAK3 stated:

In any event, as Cenovus states, the purpose of the PIP is to ensure that “persons whose rights may be directly and adversely affected by a proposed development must be informed of the application, have an opportunity to voice their concerns and an opportunity to be heard.” Joint owners of the K3 Plant were informed of the Applications through the PIP and they have had the opportunity to voice their concerns and be heard throughout this Proceeding.<sup>6</sup>

### 3.2 Ownership of the K3 Plant and land

31. In its application, TAK3 stated that the existing K3 Plant is owned and operated by SemCAMS, and that the new project will be built and owned by TransAlta Corporation but operated by SemCAMS as part of the existing K3 Plant. TAK3 clarified ownership of the K3 Plant and the project in an information response, stating that SemCAMS “is the common

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<sup>5</sup> Exhibit 25117-X0128, CVE Written Argument, PDF page 2.

<sup>6</sup> Exhibit 25117-X0133, Kaybob Reply Argument, PDF page 26.

owner of the majority stake in Kaybob 3 South gas plant and is anticipated to become equal (50%) partner with TransAlta Corporation in the cogeneration facility and RICE.”<sup>7</sup>

32. In statements of intent to participate filed by Paramount, XTOC and Cenovus, each of those corporations indicated that it is one of nine joint interest owners of the K3 Plant, including the lands upon which the K3 Plant is located and the project is proposed to be located. They also stated that the project would be owned by TransAlta Corporation, through TAK3, and that TransAlta Corporation has no ownership interest in the K3 Plant, or in the lands on which the plant is located and the project is proposed to be located.<sup>8</sup>

33. In a letter filed on February 7, 2020, TAK3 asserted that the joint interest owners do not own any interest in the land on which the project will be located, and that they are merely three of nine joint interest owners of the K3 Plant.

34. The joint interest owners submitted that SemCAMS exhibited inappropriate behaviour with regard to the use of the lands on which the K3 Plant is located. XTOC stated that SemCAMS made the decision to lease the subject lands to TAK3 without obtaining consent from the owners of the K3 Plant. Cenovus stated that TAK3 and SemCAMS do not own the lands on which the proposed cogeneration power plant and RICE generator are to be constructed:

CVE argues that as an actual landowner, if the AUC approves the Applications it will effectively be tantamount to expropriation of Cenovus’s (and other K3 Plant joint owners) real property rights. The resulting loss of future use of the lands held by the K3 Plant joint owners lends itself to the highest level of stakeholder consultation and consensual resolution to the stakeholder concerns possible being required in these unique circumstances.<sup>9</sup>

35. TAK3 submitted that Rule 007 does not require that the joint interest owners be in support of the proposed facilities, and that the subject proceeding is not the proper forum in which to address issues around land ownership or compliance with the CO&O.<sup>10</sup>

### **3.3 Subsidization of the cogeneration power plant and RICE generator**

36. The joint interest owners asserted that if the project were approved, they would be inappropriately subsidizing the proposed facilities [REDACTED]

[REDACTED] XTOC explained that this tariff is paid by the producers who process feedstock gas at the K3 Plant, which includes XTOC, Paramount and Cenovus, but does not include SemCAMS because SemCAMS does not process any of its own natural gas through the K3 Plant. In addition to paying the tariff, XTOC stated that the K3 Plant will pay the operation and maintenance costs of the cogeneration power plant and that SemCAMS will not

<sup>7</sup> Exhibit 25117-X0041, Round\_1\_IR\_Responses\_25117\_A001\_A002\_A004\_Jan\_2020, PDF page 12.

<sup>8</sup> Exhibit 25117-X0037, Paramount Resources Ltd. Statement of Intent to Participate; Exhibit 25117-X0040, XTO Energy Canada Statement of Intent to Participate; Exhibit 25117-X0042, Cenovus Energy Inc. Statement of Intent to Participate.

<sup>9</sup> Exhibit 25117-X0128, CVE Written Argument, PDF page 3.

<sup>10</sup> Exhibit 25117-X0133, Kaybob Reply Argument, PDF page 26.

pay any portion of those costs.<sup>11</sup> Cenovus further argued that the application is inequitable for the K3 Plant joint owners and that the facilities would erode the value of the K3 Plant property.<sup>12</sup>

### 3.3.1 Commission findings on the cogeneration power plant and the RICE generator

37. The Commission considers that the public interest will be largely met if an application complies with existing regulatory standards and the project's benefits to the public outweigh its negative impacts. The Commission must take into account the purposes of the *Hydro and Electric Energy Act* and the *Electric Utilities Act* and determine whether an applicant has met the requirements of Rule 007 and Rule 012. An applicant must obtain all approvals required by other applicable provincial or federal legislation.

38. For the following reasons, the Commission considers the approval of the cogeneration power plant and the RICE generator to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*, and approves their construction and operation.

39. The Commission is satisfied that TAK3 completed project notification in accordance with the requirements in Rule 007. TAK3 provided notification to stakeholders within 2,000 metres from the edge of the project site boundary. However, TAK3's assertion that no responses or concerns were received from any of the stakeholders notified is not an entirely accurate characterization of the feedback it had received from potentially affected parties. While the Commission recognizes that the objections filed by the joint interest owners about the proposed facilities relate primarily to an alleged non-compliance with the terms of a commercial agreement or agreements, TAK3 has demonstrated that it was aware of those objections when it filed the applications but it did not identify them.

40. Although a failure to disclose concerns or objections to a project that are known to an applicant is a contravention of Rule 007 requirements that could result in the project applications being closed, in the circumstances of this proceeding the joint interest owners who objected to the applications are gas producers and customers of the K3 Plant, and are parties to the CO&O that governs the K3 Plant's operations; the Commission is accordingly satisfied that the joint interest owners were adequately informed of the applications and that each joint interest owner had an opportunity to voice its concerns and participate fully in the Commission's proceeding.

41. The Commission finds that the evidence and arguments advanced by the interveners in relation to the applications for the cogeneration power plant and the RICE generator largely relate to disputes with the applicant over the terms of and compliance with the CO&O.

42. The joint interest owners do not allege that SemCAMS is not an owner of the lands upon which the project is proposed to be located; rather, they assert that SemCAMS has leased the project lands to TAK3 in contravention of the terms and requirements of the CO&O. In other words, this is not a case in which TAK3 has not demonstrated *any* right to the land proposed for the facilities. Keeping in mind the purposes of its inquiry into the issue of ownership, the Commission is satisfied that SemCAMS has an ownership interest in the lands upon which the project is proposed to be built and operated. And in this regard, it reiterates its ruling of May 1, 2020 in which it stated that if the joint interest owners dispute that the grant of lease for

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<sup>11</sup> [REDACTED]

<sup>12</sup> Exhibit 25117-X0128, CVE Written Argument, PDF page 2.

the project lands was not made in accordance with the CO&O, they can pursue that issue in a civil action.

43. Similarly, the assertion made by the joint interest owners, that as customers of the K3 Plant they would be inappropriately paying for the proposed facilities, does not sway the Commission into denying the facilities application. As joint owners and customers of the K3 Plant, their rights and obligations in relation to the plant are set out in the various agreements (including but not limited to the CO&O) they have made amongst them, and with the other joint interest owners and SemCAMS. Such agreements were freely entered into by commercially sophisticated parties who are assumed to accept the anticipated (and sometimes unanticipated) outcomes of those arrangements. It is not the Commission's role in this proceeding to resolve disputes that arise under the CO&O or a customer agreement.

44. From a noise perspective, the Commission is satisfied that the NIA submitted by TAK3 fulfills the requirements of Rule 012. The NIA did not identify any receptors within 1.5 kilometres of the facility fenceline. The noise measurements that were taken at locations at a distance of 1.5 kilometres from the proposed facilities show that the facilities are expected to meet the permissible sound level during daytime and nighttime hours.

45. The environmental evaluation report indicates that the potential adverse effects associated with the facilities can be adequately mitigated with standard mitigation measures and industry best practices, and that the residual adverse effects of the project are predicted to be insignificant. The air dispersion modelling shows that the project's NO<sub>2</sub> levels will be in compliance with the *Alberta Ambient Air Quality Objectives*. In addition, the AER has approved an amendment to the K3 Plant's *Environmental Protection and Enhancement Act* approval that reflects and incorporates the addition of the cogeneration power plant and the RICE generator. As a result, the Commission considers that there will not be significant adverse effects from the cogeneration power plant and the RICE generator.

### **3.3.2 Commission findings on the substation**

46. The Commission has determined that the application for a new substation meets the technical requirements for a substation. TAK3's participant involvement program has been satisfactorily conducted and there are no outstanding technical, routing, environmental or noise concerns associated with the substation, nor are there any outstanding public or industry objections or concerns specific to the substation application.

47. Subject to the condition noted below, the Commission considers approval of the substation application to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act* and approves its construction and operation.

48. Because the substation has not yet been assigned a name and electric facility ID by the AESO, the Commission imposes the following as a condition of its approval:

- a. TAK3 shall submit confirmation of the substation name and facility ID once those have been assigned by the independent system operator. The permit and licence for the substation will be issued once written confirmation of the substation name and facility ID has been filed with the Commission.

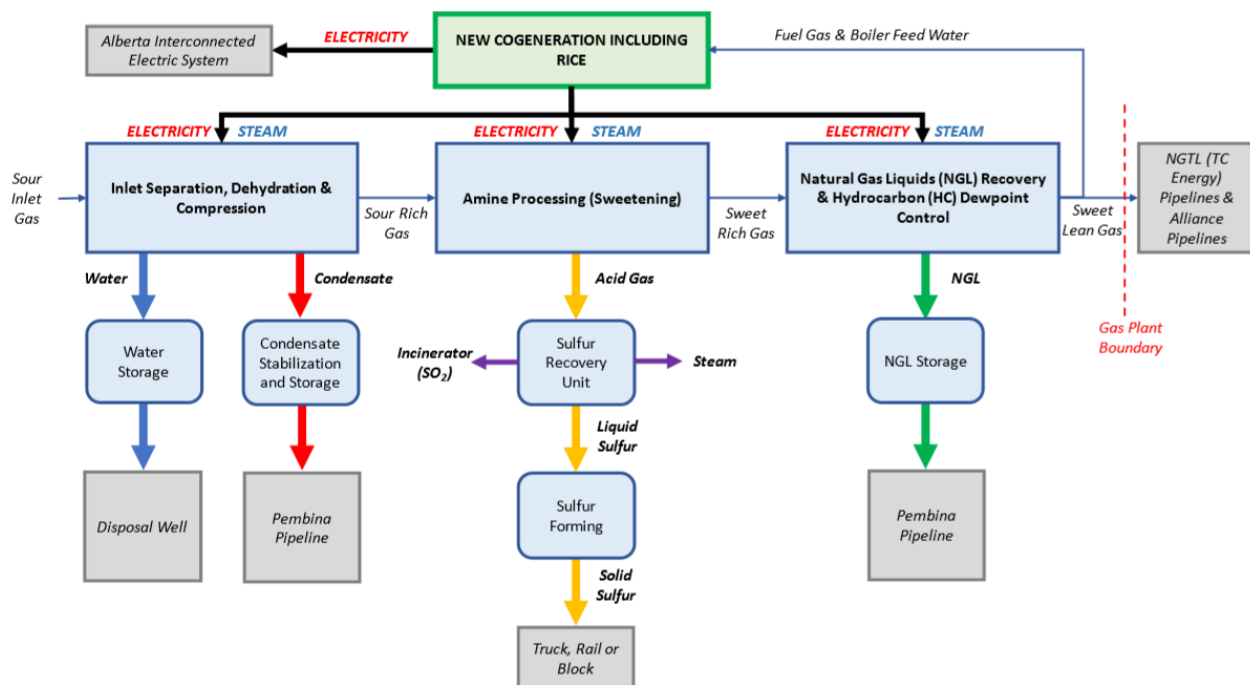
#### 4 Application for an industrial system designation

49. SemCAMS applied for an industrial system designation that would include the following facilities and infrastructure:

- The K3 Plant and all associated facilities and industrial processes used to convert raw sour gas into sales gas.
- The proposed cogeneration power plant.
- The proposed RICE generator.
- Two 13.8-kV/138 kV generator step-up transformers.
- A future 13.8-kV interconnection between the cogeneration power plant and the AIES.
- An existing interconnection to the K3 Plant’s 4.16-kV electric system and legacy 2 x 13.8-kV/4.16-kV step-down transformers.

50. SemCAMS stated that the cogeneration power plant would supply the K3 Plant with electricity and high-pressure steam, and the RICE generator would provide black-start capability to the K3 Plant. The RICE generator would also provide firm excess generation capacity for export to the AIES. In an answer to an AUC information request, SemCAMS filed the following figure to illustrate the integration of the cogeneration power plant and RICE generator with the K3 Plant processes.

Figure 2: Integrated process diagram<sup>13</sup>



<sup>13</sup> Excerpted from Exhibit 25117-X0041, Round 1 IR Responses, PDF page 20.

#### 4.1 Legislative scheme for industrial system designations

51. The principles and criteria the Commission must have regard for when considering an ISD application are found in Section 4 of the *Hydro and Electric Energy Act*. Subsection 4(2) lists the principles the Commission must consider. Subsection 4(3) sets out specific criteria for determining whether a project should be designated as an industrial system. The Commission has stated that read broadly, Section 4 permits an ISD where the development of on-site generation is a component of an efficient, highly integrated industrial process where on-site generation represents the most economical source of generation for on-site operations.<sup>14</sup>

52. Although it was not filed in this proceeding, XTOC and AltaLink both referred to the Government of Alberta's June 1997 *Industrial Systems Policy Statement* in their respective written arguments. TAK3 also referred to the document in its reply argument. The Commission has considered relevant portions of this document in the course of interpreting and applying the principles and criteria in Section 4 of the *Hydro and Electric Energy Act*. Consequently, for ease of reference, the government's statement and Section 4 are attached as appendices C and D to this decision.

#### 4.2 Ownership and operation of the proposed generation facilities

53. Subsection 4(3) of the *Hydro and Electric Energy Act* sets out the criteria that must be met before the Commission can issue an ISD. Two of those criteria are particularly relevant to the industrial system proposed in this proceeding: that there must be common ownership of all of the components of the industrial operations, and a high degree of integration of the management of the components and process of the industrial operations.

54. In its facilities application, TAK3 stated that the K3 Plant is owned and operated by SemCAMS, and the cogeneration power plant and RICE generator will be built and owned by TransAlta Corporation but operated by SemCAMS as part of the K3 Plant. In the application for an industrial system designation, SemCAMS stated that it and TransAlta Corporation will eventually co-own the proposed cogeneration power plant and RICE generator, once facilities reach commercial operation and that they have entered into a commercial agreement to manage the various aspects of operating and maintaining the facilities.

55. SemCAMS stated that it and TransAlta Corporation will carefully co-ordinate all operating and maintenance activities related to the K3 Plant to ensure seamless operations between the on-site organizations. It also stated that the joint ownership arrangement for the cogeneration facility will require the owners to meet regularly to make operational and business decisions and for planning purposes related to the cogeneration facility. SemCAMS added that all responsibility related to the cogeneration facility will be delegated in accordance with the operational agreements between the two owners.

56. In response to an information request, TAK3 clarified that SemCAMS and TransAlta Corporation have entered into a commercial agreement that allows SemCAMS to acquire up to a 50 per cent ownership stake in the cogeneration power plant and RICE generator upon achieving commercial operations. TAK3 submitted that "it is expected that the applied for

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<sup>14</sup> Decision 25044-D01-2020: Horseshoe Power GP Ltd., Gull Lake Cogeneration Power Plant Expansion Project, Proceeding 25044, Applications 25044-A001 to 25044-A003, August 6, 2020, paragraph 86.

industrial system will satisfy the requirement in section 4(3)(c) of the HEEA that ‘there is common ownership of all the components of the industrial operations’.”<sup>15</sup>

57. As mentioned earlier, in statements of intent to participate filed by Paramount, XTOC and Cenovus, each indicated that it is one of nine joint interest owners of the K3 Plant, including the lands upon which the plant is located and the project is proposed to be located.<sup>16</sup> They also stated that TransAlta Corporation will be the owner of the proposed cogeneration plant and RICE generator, but that because TransAlta Corporation has no interest in the K3 Plant, there will not be common ownership of those two aspects of the proposed industrial system.

58. In its argument, XTOC referenced the Government of Alberta’s June 1997 *Industrial Systems Policy Statement*, as it relates to the issue of ISD qualification when industrial system has multiple owners. XTOC submitted that the components of TAK3’s proposed industrial system have multiple owners and that TAK3 has not met the elevated burden of demonstrating the degree of integration described in the policy statement.

59. XTOC added that there are several examples of supplier-customer relationships in the proposed industrial system, in addition to a lack of coordination of management of the various operations. XTOC stated that the K3 Plant provides a gas processing service to K3 Producers, and the plant receives a fee or compensation in return for the service. It also stated that the K3 Plant will buy electricity and steam from TAK3, which indicates that this is a supplier-customer relationship and not a joint venture or partnership. XTOC further submitted that the RICE generator will be managed largely independently from the K3 Plant, in terms of when and at what capacity it operates, and where its output is directed.<sup>17</sup>

60. In response, TAK3 stated that the requirement for common ownership is at least substantially met because SemCAMS is the common owner of the majority stake in the K3 Plant and it intends to become an equal partner with TAK3 in the cogeneration power plant and RICE generator by the commercial operation date. TAK3 submitted that all of the components and industrial operations are components of an integrated industrial process.

61. Concerning the supplier-customer relationships asserted by XTOC, TAK3 submitted that operations with multiple owners are necessarily integrated through commercial arrangements, and that if the existence of commercial arrangements were considered to mean that an integrated process did not exist, no arrangements with multiple ownership could ever be the subject of an ISD.<sup>18</sup>

#### 4.2.1 Commission findings

62. As mentioned above, subsections 4(3)(c) and 4(3)(d) of the *Hydro and Electric Energy Act* are of particular relevance to the Commission’s consideration here. Their requirements have to be met, otherwise the applicant must satisfy the Commission that the proposed ISD meets the additional factors set out in subsections 4(4) or 4(5).

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<sup>15</sup> Exhibit 25117-X0125, Kaybob Final Argument, PDF page 25.

<sup>16</sup> Exhibit 25117-X0037, Paramount Resources Ltd. Statement of Intent to Participate; Exhibit 25117-X0040, XTO Energy Canada Statement of Intent to Participate; Exhibit 25117-X0042, Cenovus Energy Inc. Statement of Intent to Participate.

<sup>17</sup> Exhibit 25117-X0126, XTOC Final Argument, PDF page 12.

<sup>18</sup> Exhibit 25117-X0133, Kaybob Reply Argument, PDF page 21.

63. The evidence before the Commission demonstrates that the K3 Plant is owned by nine joint interest owners, including SemCAMS, XTOC, Cenovus and Paramount Resources. The proposed generation facilities would initially be owned entirely by TransAlta Corporation but operated by SemCAMS. TAK3 stated that SemCAMS intends to acquire a 50 per cent ownership of the cogeneration power plant and RICE generator once those generation facilities achieve commercial operations.

64. The Commission is not satisfied, on the basis of this evidence, that the K3 Plant and the proposed cogeneration plant and RICE generator have common ownership. Further, even if SemCAMS were to obtain ownership in the generation facilities as contemplated by its agreement with TransAlta Corporation, such ownership is not sufficient to establish common ownership of the proposed industrial system: TransAlta Corporation will retain at least 50 per cent ownership of the generating facilities and has no ownership interest in the K3 Plant. In addition, the minority interest owners of the K3 Plant will have no ownership interest in the proposed generation facilities. Subsection 4(3)(c) is therefore not met, nor is it substantially met as that phrase is used in Subsection 4(5) of the *Hydro and Electric Energy Act*.

65. The *Industrial Systems Policy Statement* addressed the matter of multiple ownership of the components of an ISD as follows:

- Multiple ownership of operations is suggestive that the operations are distinct and non-integrated, and that a supplier-customer relationship exists rather than an integrated industrial process. While it is possible for an industrial system to have multiple owners, there is a greater burden on demonstrating that the assets are, in fact, all components of an integrated industrial process, and not simply examples of supplier-customer relationships. (emphasis added)
- For operations with multiple owners to be considered an integrated process, the outputs and management of the operations must be coordinated in a way that contributes to the production of the final output(s) of the process. A system which has multiple owners with a supplier-customer relationship between all operations is not an industrial system.<sup>19</sup>

66. The Commission agrees with the government's position, expressed in its statement, that operations with multiple owners may bear a greater burden to demonstrate that the assets are, in fact, components of an integrated industrial process. The RICE generator, in particular, requires enhanced scrutiny of the degree to which it is integrated with the other industrial operations and the industrial process. In that regard, Subsection 4(3)(d) of the *Hydro and Electric Energy Act* is relevant to the Commission's analysis, because that provision requires that the whole of the output of each component within the industrial operation be used by that operation and be necessary to constitute its final products.

67. TAK3's evidence is that under normal operating conditions the cogeneration power plant would provide all of the electricity and steam required by the K3 Plant, and all of the electric energy from the RICE generator would be exported to the AIES. It also stated that the RICE generator would provide many reliability benefits, including backup and emergency power

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<sup>19</sup> *Government of Alberta*, Industrial Systems Policy Statement, June 1997, online: <https://open.alberta.ca/dataset/472de409-6000-4941-a37b-f9a301f5b7a3/resource/71e5c77d-7508-48f3-af2c15998d360de3/download/industrialsystemspol97.pdf>, PDF page 3.



generation, gas balancing, black-start capability, and dependable and firm excess generation capability. TAK3 submitted that the RICE generator is an integral part of the cogeneration power plant and that its integration with the proposed industrial system should be considered in that context.

68. The evidence before the Commission is that the RICE generator's only output is electric energy, that under normal operating conditions all of that energy will be exported to the AIES, and that none of it will be needed or used by the industrial operation to constitute the K3 Plant's final products. The Commission consequently finds that Subsection 4(3)(d) is not met if the RICE generator is included in the proposed industrial system.

#### **4.3 Integration of the components and operations of the industrial process**

69. While the Commission has found that subsections 4(3)(c) and 4(3)(d) are not met, it must also consider Subsection 4(4), which authorizes the Commission to designate an industrial system if it is satisfied that all of the separately owned components and all of the industrial operations are components of an integrated industrial process.

70. The Commission considers that Subsection 4(4) is consistent with the *Industrial Systems Policy Statement*, that where there is not common ownership of components, there is greater burden on applicants to demonstrate that the separately-owned assets are all components of an integrated industrial process.

71. SemCAMS stated that the K3 Plant's steam requirement is between 155,000 and 190,000 kg/hour, and the average daily electricity requirement is approximately 16 MW. In the event that one unit of the cogeneration power plant is off, the plant will be supplied its full steam requirement using one unit and the auxiliary boiler.

72. SemCAMS stated that the cogeneration power plant would produce up to 190,000 kg/hour of steam using two 16.5-MW gas turbine generators and two heat recovery steam generators in a 2-on-2 configuration. The cogeneration power plant would have a generation capability of 33 MW and the RICE generator would have a capability of 9.75 MW. The cogeneration power plant and RICE generator would use pressurized natural gas produced from the K3 Plant for fuel, or use natural gas obtained from TC Energy's system.

73. In response to an information request, TAK3 stated that under average load operations the K3 Plant's electricity and steam requirements would be met by the cogeneration power plant. It also stated that the plant's electricity requirements would not be met without the RICE generator if at least one unit of the cogeneration power plant was out of service or both units were de-rated. It added that the RICE generator would provide the necessary backup to ensure reliable plant operations as plant output increased over time. TAK3 further stated that the RICE generator would be used to limit, when necessary, the volume of sales gas delivered to the pipeline system.

74. The joint interest owners and AltaLink submitted that the proposed industrial system lacks the high degree of integration required by the *Hydro and Electricity Act*.

75. AltaLink submitted that the RICE generator appears to be integrated with the K3 Plant only with respect to supplying electricity in limited scenarios, and therefore it would not be integrated into the processes of the K3 Plant. It stated that the RICE generator would operate

independently from the K3 Plant, as a generator providing electricity to the AIES, except that it would use gas produced by the K3 Plant as feedstock. AltaLink concluded that the RICE generator is not primarily intended to serve the K3 Plant nor does it have a high degree of integration with the plant.

76. AltaLink referred<sup>20</sup> to the following parts of the *Industrial Systems Policy Statement*:

- The clearest case of an industrial system involves integrated industrial processes utilizing shared equipment and continuous product flow. Facilities are interconnected by substantial items of common site infrastructure, directly required by the industrial process, such as: process piping, and raw material and finished product lines or conveyors.
- Where the operations draw on a geographically contiguous resource (oil, gas or mineral pool), there is a strong indication of an integrated process if: ownership of the oil, gas or mineral reserves is the same, and there exists substantial common site infrastructure.
- Linkages based only on electric or thermal energy supply are not sufficient to define an integrated process which could be served by an industrial system.<sup>21</sup>

77. AltaLink stated that the feedstock for the K3 Plant is owned by several different producers, and that SemCAMS, TAK3 and TransAlta Corporation do not own the gas that is processed in the K3 Plant or the finished products from the K3 Plant. It submitted that there is not common ownership of the mineral reserves to be used in the proposed industrial system, and that the system lacks industrial process linkages between the RICE generator and the K3 Plant. AltaLink explained that the RICE generator's proposed function as a backup generator limits the linkage between it and the industrial process to providing electrical supply.

78. AltaLink indicated that the RICE generator's proposed use to manage gas volumes is related to TAK3's commercial obligations and is not a true process linkage. It also stated that the use of the RICE generator to provide firm excess generation capability is a function that is independent from the operation of the K3 Plant, with the exception of the sales gas produced by the K3 Plant as feedstock and used as fuel by the generator.<sup>22</sup>

79. XTOC stated that backup power for the K3 Plant is available from Transmission Line 864AL, which also provides black-start capability.<sup>23</sup> XTOC noted that the RICE generator was not included in TAK3's thermal energy balance, and submitted that the RICE generator's primary purpose is to supply power for export to the AIES.<sup>24</sup>

80. TAK3 replied to XTOC's submission by stating that the thermal energy balance that it filed is only supposed to reflect the expected normal operating condition of the cogeneration

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<sup>20</sup> Exhibit 25117-X0124.01, AML Argument, PDF page 7.

<sup>21</sup> *Government of Alberta*, Industrial Systems Policy Statement, June 1997, online: <https://open.alberta.ca/dataset/472de409-6000-4941-a37b-f9a301f5b7a3/resource/71e5c77d-7508-48f3-af2c15998d360de3/download/industrialsystemspol97.pdf>, PDF page 2.

<sup>22</sup> Exhibit 25117-X0124.01, AML Argument, PDF page 7.

<sup>23</sup> Exhibit 25117-X0126, XTOC Final Argument, PDF page 19.

<sup>24</sup> Exhibit 25117-X0126, XTOC Final Argument, PDF page 20.

power plant in its support of the requirements of the K3 Plant, and that the RICE generator is not required to supply the plant under normal operation conditions; it functions to ensure reliability in abnormal but expected operating conditions.<sup>25</sup>

81. TAK3 submitted that the cogeneration power plant and the RICE generator are integrated with each other and with the K3 Plant because the cogeneration power plant provides electricity and steam to the K3 Plant, and the RICE generator provides backup electricity to the K3 Plant. TAK3 also stated that the cogeneration power plant and the K3 Plant will share infrastructure and processes including boiler feed water, compressed air, and water treatment, and that the cogeneration power plant will use natural gas produced from the K3 Plant for fuel. TAK3 indicated that this is the “clearest case” of an industrial system as referenced in the *Industrial Systems Policy Statement* because it involves integrated industrial processes utilizing shared equipment and continuous product flow.<sup>26</sup>

82. In reply argument, XTOC submitted that the RICE generator is not integrated with the K3 Plant as described by TAK3 because it does not produce steam and will not be tied into the K3 Plant’s steam distribution system. XTOC submitted that unlike the fuel gas that will be provided by the K3 Plant to fuel the cogeneration power plant, [REDACTED] Finally, XTOC noted that there will not be continuous product flow between the RICE generator and the K3 Plant because during normal operating conditions the electricity produced by the RICE generator will be exported to the AIES.<sup>27</sup>

83. TAK3 disagreed that the RICE generator is not an integrated component of the cogeneration power plant and K3 Plant’s integrated operations. It stated that without the integration of the RICE generator, the cogeneration power plant would have to be dramatically re-designed. It added that the RICE generator addresses the operational risks that the cogeneration power plant cannot and it allows for a superior design of the cogeneration power plant, including smaller gas turbines, fewer cogeneration units, reduced size, scale, cost and complexity of the project, and optimized electricity and steam production.<sup>28</sup>

84. In response to the assertion that the primary purpose of the RICE generator is to export electricity to the AIES, TAK3 stated that the primary purpose of the RICE generator is to ensure the reliability of the K3 Plant’s integrated operations and to assist in gas balancing.<sup>29</sup>

#### 4.3.1 Commission findings

85. Subsection 4(4) of the *Hydro and Electricity Act* gives the Commission the discretion to approve an ISD where there is multiple ownership of the components, 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.

<sup>25</sup> Exhibit 25117-X0125, Kaybob Final Argument, PDF page 22.

<sup>26</sup> Exhibit 25117-X0125, Kaybob Final Argument, PDF page 23.

<sup>27</sup> Exhibit 25117-X0130, XTOC Reply Argument, PDF page 10.

<sup>28</sup> Exhibit 25117-X0133, Kaybob Reply Argument, PDF page 2 and 3.

<sup>29</sup> Exhibit 25117-X0133, Kaybob Reply Argument, PDF page 4.

86. In addition, Subsection 4(3) states that the Commission may designate an industrial system if it is satisfied that all of the criteria listed in the subsection have been met, including:

- (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;

87. The *Industrial Systems Policy Statement* identifies the criteria for industrial systems shown in Figure 3 below and distinguishes between an undisputed industrial system, one that requires close scrutiny by the Commission, and one that is not an industrial system. Although the Commission is not required to follow those criteria, the information is useful to the Commission’s consideration in its assessment of the requirements of Section 4 of the *Hydro and Electric Energy Act*.

Figure 3: Criteria for industrial systems<sup>30</sup>

Undisputed Industrial System	Close Scrutiny by EUB if Any of the Following	Not an Industrial System
<ul style="list-style-type: none"> <li>• Strong industrial process linkages:                             <ul style="list-style-type: none"> <li>- integrated process</li> <li>- common site infrastructure</li> <li>- significant new process investment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Limited industrial process linkages:                             <ul style="list-style-type: none"> <li>- not all components integrated</li> <li>- some common infrastructure</li> <li>- limited new process investment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Independent operation:                             <ul style="list-style-type: none"> <li>- no process linkages:</li> <li>- no new process investment</li> <li>- no common site infrastructure</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• All operations eligible as industrial customers</li> </ul>	<ul style="list-style-type: none"> <li>• One operation not eligible as industrial customer</li> </ul>	<ul style="list-style-type: none"> <li>• No operations eligible as industrial customer</li> </ul>
<ul style="list-style-type: none"> <li>• One owner or one management</li> </ul>	<ul style="list-style-type: none"> <li>• Different owners or managements</li> </ul>	<ul style="list-style-type: none"> <li>• Different owners with only a supplier-customer relationship and no process relationship</li> <li>• No management coordination</li> </ul>
<ul style="list-style-type: none"> <li>• Dedicated output of intermediate products</li> </ul>	<ul style="list-style-type: none"> <li>• Some intermediate outputs sold in the market</li> </ul>	<ul style="list-style-type: none"> <li>• All output sold in the market</li> </ul>

87. There are a number of reasons for which the Commission must carefully scrutinize SemCAMS’ application for an industrial system designation. It is clear to the Commission that the application has characteristics that indicate the application requires the Commission’s close scrutiny, and others that indicate the proposed system is not an industrial system. The degree to which the RICE generator is integrated with the K3 Plant is one concern, as is the applicant’s proposal to sell that unit’s output to the AIES during normal operating conditions at the

<sup>30</sup> *Government of Alberta*, Industrial Systems Policy Statement, June 1997, online: <https://open.alberta.ca/dataset/472de409-6000-4941-a37b-f9a301f5b7a3/resource/71e5c77d-7508-48f3-af2c15998d360de3/download/industrialsystemspol97.pdf> , PDF page 7.

K3 Plant. Further, as previously stated, the Commission has determined that there is not common ownership of the components and operations of the proposed industrial system, and as suggested in the *Industrial Systems Policy Statement*, the applicant bears a greater burden to demonstrate that the various ISD assets are all components of an integrated industrial process.

88. TAK3 stated that on an average day the K3 Plant requires between 155,000 and 190,000 kg/hour of steam and 16 MW of electricity, with a maximum historical demand of 22.2 MW. In comparison, the proposed cogeneration power plant has a generation capability of 33 MW, and the two units that comprise it will be able to supply the maximum amount of steam that the boiler feedwater system limits allow, 200,000 kg/hour of steam. The evidence before the Commission also shows that one 16.5-MW unit can supply the electricity needs of the K3 Plant under normal operating conditions and two units will generate approximately double the K3 Plant's normal electricity needs, with the excess being exported to the AIES. The RICE generator provides additional generation capability of 9.75 MW, with all of its output being exported to the AIES under normal operating conditions. As mentioned earlier, TAK3 confirmed that the RICE generator is required for backup electricity supply to the K3 Plant, and that it will provide firm excess capacity to the AIES when not being used to supply the plant.

89. Given the foregoing, the Commission finds that under normal operations, the proposed industrial system will consume most of the steam that can be supplied by the cogeneration power plant (due to feedwater system limitations), and 16 MW of the 33 MW of electric energy that the power plant is capable of generating. As a result, all of the approximately 9.75 MW of electric energy from the RICE generator will be available for export to the AIES, which is what the applicant stated it intends to do with that energy. In addition, the RICE generator does not provide any other output for use by the K3 Plant.

90. The Commission has also considered TAK3's assertion that the RICE generator would assist in balancing gas volumes and limiting the amount of sales gas delivered to the pipeline system, and finds that this function does not demonstrate integration of the RICE generator with the industrial operations. Although the operator of the K3 Plant may have a commercial obligation or incentive to manage gas volumes from the plant in that way, limiting excess sales gas from entering the pipeline system is not a function that is essential or integral to the operation of the K3 Plant, and in any event it does not represent a contribution by the RICE generator to the production of the K3 Plant's final products.

91. Given the lack of common ownership of the K3 Plant and the proposed generation facilities, the applicant in this proceeding must demonstrate that all of the separately owned components and all of the industrial operations are components of an integrated industrial process. While the Commission is satisfied that the proposed cogeneration power plant will have a high degree of integration with the industrial system and under normal operating conditions will supply all of the K3 Plant's electricity and steam requirements, it is not prepared to treat the proposed RICE generator as a part of the proposed cogeneration power plant and, by implication, find that it is integrated with the industrial system).

92. The Commission considers that the RICE generator's primary function during normal plant operations will be to generate electric energy for export to the AIES, with none of its output being used by the on-site industrial operations and processes. While TAK3 stated that the RICE generator is an integrated component of the cogeneration power plant and the K3 Plant's integrated operations to serve on-site reliability requirements, including backup and emergency

power generation, gas balancing, black-start capability and dependable and firm excess generation capability, TAK3 did not provide sufficient evidence to demonstrate the RICE unit's integration with the K3 Plant's industrial process. The Commission therefore finds that the applicant has not met the burden of demonstrating that the proposed RICE generator has a high degree of integration with the proposed industrial system.

93. Subsection 4(1) of the *Hydro and Electric Energy Act* authorizes the Commission to designate the whole or any part of an electric system as an industrial system. Having regard for the findings set out above, the Commission is satisfied that without the RICE generator, the proposed industrial system would meet or substantially meet (as the case may be) the requirements of subsections 4(3)(d) and 4(4) of the act. However, as TAK3 indicated that the proposed cogeneration power plant would have to be “dramatically re-designed” if the RICE generator were not “an integrated component of the Cogen and K3 integrated operations”<sup>31</sup> the Commission has not approved SemCAM's application for an industrial system designation. This decision is without prejudice to a future application for an ISD, either without the RICE generator, or with additional evidence on how the RICE generator is integrated into the industrial process.

## 5 Conclusion

94. For the reasons set out herein, the Commission is satisfied that TAK3's application for a 33-MW cogeneration power plant and a 9.75-MW RICE generator satisfy the requirements of Rule 007 and Rule 012, and that in accordance with Section 17 of the *Alberta Utilities Commission Act*, approval of the 33-MW cogeneration power plant and 9.75-MW RICE generator is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

95. The Commission also finds that TAK3's application for a substation satisfies the requirements of Rule 007 and that approval of the application is in the public interest.

96. The Commission is not satisfied that SemCAMS' application for an industrial system designation meets the requirements of Section 4 of the *Hydro and Electric Energy Act* and denies the application.

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<sup>31</sup> Exhibit 25117-X0133, Kaybob Reply Argument, PDF page 2.

## 6 Decision

97. Pursuant to Section 11 of the *Hydro and Electricity Act*, the Commission approves Application 25117-A001 and grants TA Kaybob 3 Generation Facility Inc. the following approvals:

- Power Plant Approval 25117-D02-2020 – September 25, 2020 (set out in Appendix 1)
- Power Plant Approval 25117-D03-2020 – September 25, 2020 (set out in Appendix 2)

98. The Commission will issue the permit and licence for the substation once written confirmation of the substation's name and facility ID have been filed with the Commission.

Dated on September 25, 2020.

### Alberta Utilities Commission

*(original signed by)*

Anne Michaud  
Vice-Chair

**Appendix A – Proceeding participants**

<b>Name of organization (abbreviation)</b>
TA Kaybob 3 Generation Facility Inc. (TAK3)
AltaLink Management Ltd. Paramount Resources Limited XTO Energy Canada Cenovus Energy Inc.

<p>Alberta Utilities Commission</p> <p>Commission panel Anne Michaud, Vice-Chair</p> <p>Commission staff Gary Perkins (Commission counsel) Meghan Anderson (Commission counsel) Laura Fukuda</p>
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## **Appendix B – Summary of Commission condition of approval**

This section is intended to provide a summary of all conditions of approval for the convenience of readers. In the event of any difference between the directions and conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following is a condition of Decision 25117-D01-2020 that requires follow-up with the Commission.

- TAK3 shall submit confirmation of the substation name and facility ID once they have been assigned by the independent system operator. The permit and licence for the substation will be issued once written confirmation of the substation name and facility ID has been filed with the Commission.

## Appendix C - Industrial Systems Policy Statement



Appendix C -  
Industrial Systems Pol  
(consists of 12 pages)

**Appendix D – Section 4 of *Hydro and Electric Energy Act*****Designation of electric system as industrial system**

**4(1)** The Commission may designate the whole or any part of an electric system as an industrial system.

**(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.
- (6) The Commission may make regulations
- (a) defining any word or expression used in this section but not defined in this Act;
  - (b) respecting how the criteria in subsection (5)(b) may be met where a generating unit uses solution gas that would otherwise be flared to produce electricity.
- (7) A regulation under subsection (6)(b) may be made only after the Commission has assessed the impact on consumers of electricity in Alberta of the costs associated with the designation as industrial systems of facilities containing generating units that use solution gas that would otherwise be flared.
- (8) In this section, “electric distribution system”, “electric energy”, “electricity”, “interconnected electric system” and “service area” have the meanings given to them in the *Electric Utilities Act*.

# Industrial Systems Policy Statement

June 1997

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## 1.0 INTRODUCTION

The purpose of this statement is to clarify the definition of industrial systems, and the policy objectives and implications of exempting such systems from the *Electric Utilities Act* (EUA).

## 2.0 OBJECTIVE OF INDUSTRIAL SYSTEM EXEMPTION

- The industrial system exemption has an objective (similar to the EUA section 2(b) self-generation exemption), to provide the correct economic signals which enable integrated industrial processes to develop their own internal electricity supply where that is the most economic source of generation. The exemption should support:
  - development of economic generation to supply the requirements of integrated industrial processes;
  - efficient exchange, with the interconnected electric system, of electric energy that is in excess of the industrial system's own generation or consumption; and,
  - generation and load location decisions which improve the efficiency of the interconnected electric system (e.g., voltage stability, reduction offline losses and congestion, etc.).
- The exemption is not intended to facilitate development of independent electricity systems driven by avoidance of system costs, therefore administration of the industrial system exemption should avoid un-economic system by-pass.

- Duplication of the interconnected electric system should be avoided where it is more economic to use utility-owned transmission or distribution facilities.

### **3.0 INDUSTRIAL SYSTEM**

An industrial system fits in a continuum between "self-generation" (Section 2(b) of the EUA) and a distribution system. All facilities that are electrically interconnected by an industrial system are integral parts of the same industrial process. An industrial system involves the production of electric energy as one element of the integrated industrial process and provision of the electricity to the associated components and facilities of that process.

A range is possible between what is clearly an industrial system, which the EUB could exempt under EUA section 2(d) without close scrutiny, and what is clearly not an industrial system. Between these clearly "white and black" extremes lies a "grey area" which would require close scrutiny by the EUB to determine whether an exemption could be provided under EUA section 2(d). The following list of characteristics describes the spectrum (white, grey and black areas, as illustrated in the attached charts).

An industrial system has the following characteristics:

#### **3.1 Strong Industrial Process Linkages**

- The clearest case of an industrial system involves integrated industrial processes utilizing shared equipment and continuous product flow. Facilities are interconnected by substantial items of common site infrastructure, directly required by the industrial process, such as: process piping, and raw material and finished product lines or conveyors.
- Where the operations draw on a geographically contiguous resource (oil, gas or mineral pool), there is a strong indication of an integrated process if: ownership of the oil, gas or mineral reserves is the same, and there exists substantial common site infrastructure.
- Linkages based only on electric or thermal energy supply are not sufficient to define an integrated process which could be served by an industrial system.
- A new application for an industrial system exemption would normally demonstrate significant investment in both the expansion (or extension) of the industrial process and the development of electricity supply.
- Operations which are independent or have no process linkage are evidence that a system is not an industrial system.

#### **3.2 Industrial Customer**

- To be eligible to be designated as an industrial system the integrated operations must process a feedstock, produce a primary product or manufacture a product.
- If no operations meet this criterion an application for exemption under EUA section 2(d) could not be approved.

#### **3.3 Common Ownership of Facilities**

- The clearest example of an industrial process involves common ownership, which is suggestive that the process may be integrated.
- Common ownership means that the various operations of the integrated process may be owned by a single person, including a joint venture or partnership. The term "multiple ownership," as used in this document, means that the different operations are owned by different persons.
- Generating facilities which produce electric energy for use by an industrial system may be owned by a person other than the owner of the various operations of the integrated process.
- Multiple ownership of operations is suggestive that the operations are distinct and non-integrated, and that a supplier-customer relationship exists rather than an integrated industrial process. While it is possible for an industrial system to have multiple owners, there is a greater burden on demonstrating that the assets are, in fact, all components of an integrated industrial process, and not simply examples of supplier-customer relationships.
- For operations with multiple owners to be considered an integrated process, the outputs and management of the operations must be coordinated in a way that contributes to the production of the final output(s) of the process. A system which has multiple owners with a supplier-customer relationship between all operations is not an industrial system.

### **3.4 Dedicated Output**

- The clearest example of an industrial system is where 100% of the output of the facilities and operations are required by, or are the final product of, the integrated process. Each of the operations provides (or uses) inputs to production to (or from) the other facilities or operations that are part of the integrated process.
- Operations which have a supplier-customer relationship or where a substantial portion of the output of any operation is sold outside this arrangement are evidence that an integrated process may not exist.
- Sales of output from all operations (if that output is not the final product of the integrated process) to markets indicates the operations are not part of an integrated process and not an industrial system.

### **3.5 Integrated Management of the Process**

- The clearest demonstration of an industrial system is when operations are under one management, and changes in levels of output for one operation are directly reflected in comparable changes in other operations.
- Where operations are separately managed such that they operate at different levels for sustained periods, the basis for claiming to be an industrial system is weak.

### **3.6 Proximity**

- The closer together the operations and facilities are, the easier it is to identify the electric system as an industrial system.

- Industrial systems may cross a public highway (as defined in the *Hydro & Electric Energy Act*). However, where the site infrastructure extends beyond a single contiguous property, the burden of demonstrating that the system is an integrated industrial process becomes more onerous.
- To be eligible for an industrial system designation where site infrastructure extends beyond a single contiguous property, the applicant must demonstrate that it could provide its own technically feasible distribution and/or transmission facilities to interconnect the integral parts of the industrial process at an overall cost lower than, or equal to, the applicable distribution or transmission tariff(s) of the distribution system(s) in whose service area the integrated operations of the industrial process are located.

#### **4.0 Exemptions Conferred on Industrial Systems**

Only electric energy that is generated and consumed by the industrial system is exempt from the EUA. Exemption from the EUA means that for the exempted electric energy the industrial system does not have to:

1. exchange the exempted electric energy through the Power Pool of Alberta if the electric energy produced by the industrial system is not transmitted via facilities of the interconnected electric system;
2. purchase the exempted electric energy from the owner of the electric distribution system in whose service area the industrial system is located;
3. participate in obligations and entitlements (legislated hedges) for the exempted electric energy; or
4. participate in province-wide transmission tariffs for the exempted electric energy. Industrial systems which have a contract with an electric distribution system, or the Transmission Administrator, must either fulfill or pay-out such contracts. The EUB will determine that a pay-out does not result in undue re-allocation of costs to other customers of the interconnected electric system.

Where an application falls in the "grey" area and the preponderance of evidence suggests an integrated process may exist the EUB may take into account, as a final screening criterion, that a process results in a significant increase in energy efficiency. Energy efficiency is suggestive of an overall integrated process relationship but is not sufficient evidence, by itself, of such a relationship. Since the energy efficiency criterion is for projects on the right hand side of the grey area, the EUB may approve a partial sharing of system costs (legislated hedges and/or province-wide transmission) when the energy efficiency criterion moves the project into the white area.

#### **5.0 Relationship of Industrial System to Interconnected Electric System**

An industrial system that is interconnected is an eligible person for the purpose of exchanging electric energy or system support services with the interconnected electric system.



An arrangement may be negotiated with the distribution system or Transmission Administrator where it is more economic to use existing facilities of the interconnected electric system to exchange the electric energy produced and consumed by the operations of an industrial system.

- Where a rate or other contract terms are provided by a distribution system it must be transparent and no less favourable than the rate or terms provided affiliate companies.
- If a person has received an industrial system designation and applies to build transmission facilities under the *Hydro and Electric Energy Act*, as part of the industrial system, where the transmission line would cross a public highway but is otherwise situated on property of which that person is the owner or a tenant, the Department's intent is to amend legislation so that crossing a public highway would not prevent that person from being exempted under the *Hydro and Electric Energy Act* section 15(1).

Where the electric energy produced from an industrial system is exchanged through facilities of the interconnected electric system the electric energy produced and consumed by the industrial system must be exchanged through the power pool as required under sections 13(1)(a) and 14 . A pool trading charge and settlement with the Pool Administrator would be based on the net flow of electric energy.

- The settlement bill for the electric energy that is both generated and consumed by the industrial system would net zero if, during the period a pool price is determined, the amount of electric energy generated and exchanged at the pool price is the same as the electric energy consumed.
- For use of interconnected electric system facilities in exchanging through the power pool electric energy that is both generated and consumed by the industrial system, the owner of the industrial system would not be required to pay any charges other than those arising from the arrangement negotiated with the distribution system or Transmission Administrator.
- The industrial system, in its arrangement with the distribution system owner, could choose whether to pay the distribution system for this energy at a pool price pass through rate, or could purchase the energy from the pool as a pool price participant. Any load in excess of the exempted electric energy would be subject to the distribution system's normal tariffs.
- The intent is not to create an onerous burden in allowing industrial systems to use facilities of the interconnected electric system where it is economic to do so. If there is evidence that such a burden is created the Department of Energy will review this aspect of the policy.

## **6.0 Review Process**

The industrial system exemption is designed to be consistent with the overall direction in restructuring the electric industry. A review process is important during the transition, to ensure the purposes of the EUA are met, and the approach to exemption of industrial systems may need to be revised in future. The Department of Energy will continue to review the industrial systems policy to ensure that it is consistent with further developments in electric industry restructuring.

The EUB is asked to assist in the review process by advising the Department of Energy, on an ongoing basis, of any potential reallocation of costs to remaining customers.

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## Appendix A. **Illustrative Charts**

### A.1 Scope of the Industrial System Exemption

As illustrated in Chart 1, the industrial system exemption only applies to what is clearly an industrial system which falls in the "white" area, or is determined an industrial system after close scrutiny by the EUB (see Chart 3).

### A.2 Criteria for Determining the Scope of the Industrial System Exemption

Chart 2 illustrates criteria, or characteristics, which the EUB would assess in determining whether an application for industrial system designation would fall in the "white", "grey" or "black" areas. A project which meets all of the criteria of the "white" area, is clearly an industrial system and could receive an industrial system designation. Projects which have all of the characteristics described in the "black" area are clearly not industrial systems. Those projects which have any of the characteristics described in the "grey" area require close scrutiny by the EUB to determine whether they fall in the "white" area and can be designated an industrial system, or fall in the "black" area and not be designated an industrial system.

### A.3 EUB Close Scrutiny of "Grey" Area Projects

Chart 3 illustrates possible outcomes of EUB scrutiny for applications which fall in the "grey" area:

- A project would receive the full industrial system exemption if the EUB decided, upon close scrutiny, the project is an industrial system.
- As a final screening criterion, the EUB may consider energy efficiency. The EUB could designate a project as an industrial system and approve a partial sharing if the energy efficiency criterion was required to move a project into the "white" area.
- If the EUB decides the project does not fall in the "white" area after close scrutiny, the project could not be designated as an industrial system.

Link Reference Index

Chart 1: **Scope of Industrial System Exemption**

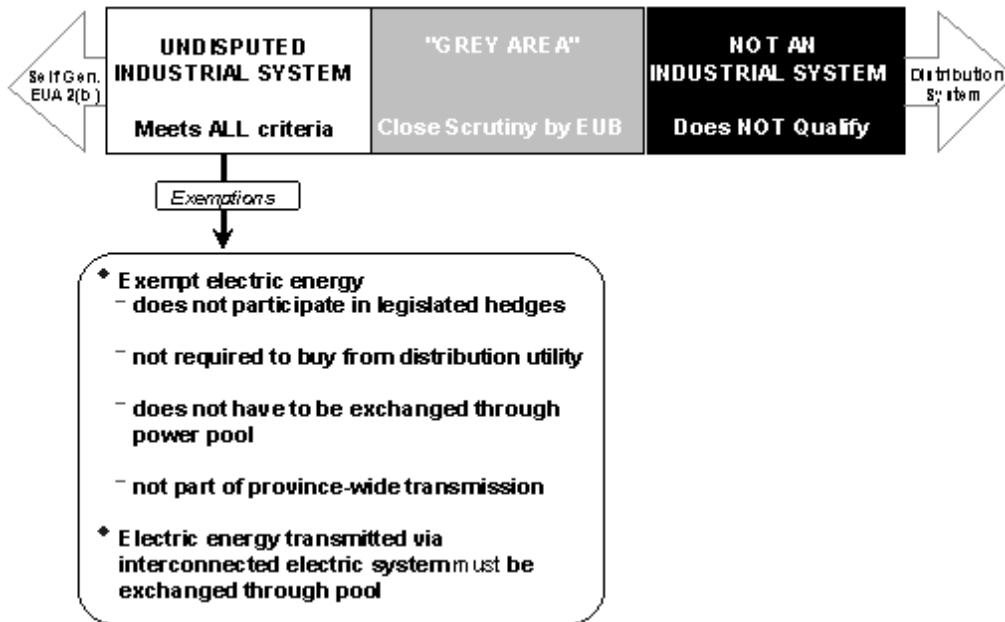
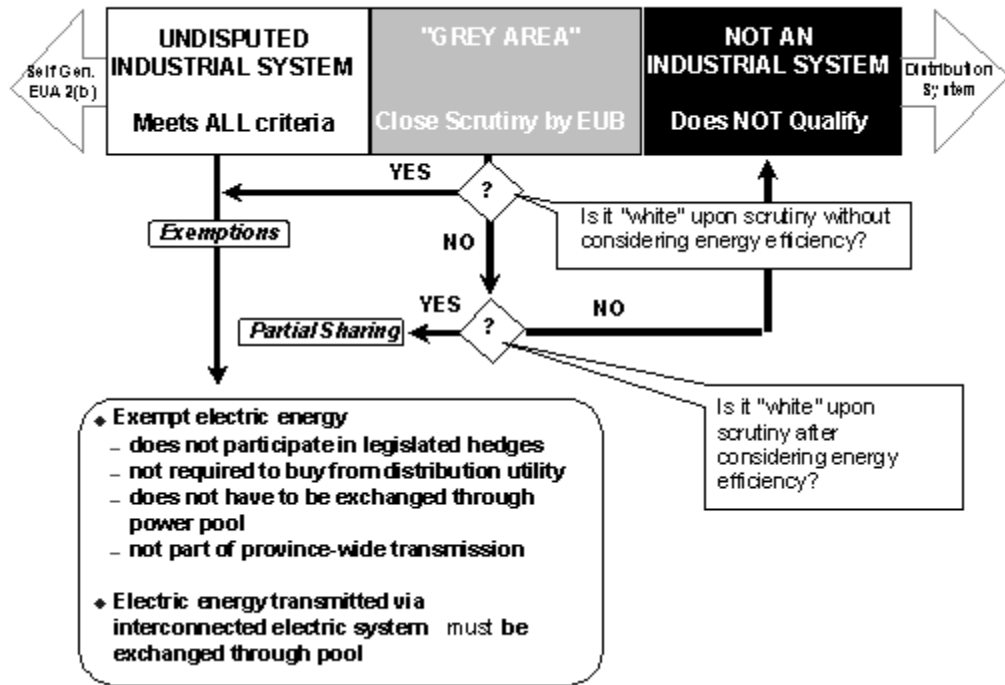


Chart 2: **Criteria For Determining Scope of Industrial System Exemption**

<b>Undisputed Industrial System</b>	<b>Close Scrutiny by EUB If Any of the Following</b>	<b>Not an Industrial System</b>
<ul style="list-style-type: none"> <li>♦ <b>Strong Industrial process linkages:</b> <ul style="list-style-type: none"> <li>- Integrated process</li> <li>- common site infrastructure</li> <li>- significant new process investment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>♦ Limited industrial process linkages:                             <ul style="list-style-type: none"> <li>- not all components integrated</li> <li>- some common infrastructure</li> <li>- limited new process investment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>♦ Independent operation:                             <ul style="list-style-type: none"> <li>- no process linkages:</li> <li>- no new process investment</li> <li>- no common site infrastructure</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>♦ All operations eligible as industrial customers</li> </ul>	<ul style="list-style-type: none"> <li>♦ One operation not eligible as industrial customer</li> </ul>	<ul style="list-style-type: none"> <li>♦ No operations eligible as industrial customer</li> </ul>
<ul style="list-style-type: none"> <li>♦ One owner or one management</li> </ul>	<ul style="list-style-type: none"> <li>♦ Different owners or managements</li> </ul>	<ul style="list-style-type: none"> <li>♦ Different owners with only a supplier-customer relationship and no process relationship</li> <li>♦ No management coordination</li> </ul>
<ul style="list-style-type: none"> <li>♦ Dedicated output of intermediate products</li> </ul>	<ul style="list-style-type: none"> <li>♦ Some intermediate outputs sold in the market</li> </ul>	<ul style="list-style-type: none"> <li>♦ All output sold in the market</li> </ul>

Chart 3: **EUB Close Scrutiny of "Grey" Area Projects**



# Link Reference Index

The following list provides background on the links established in the Industrial Systems Policy Statement. The intent of the list to provide additional background on the content of some of the terms used in the policy statement. The list should not be interpreted as providing clarification on any part of the of the Industrial Policy Statement.

## **1. Electric Utilities Act (EUA)**

The EUA is the framework for the Alberta's new electric industry structure which came into effect on January 1, 1996.

## **2. Section 2(b) of the EUA**

Section 2(b) of the EUA reads as follows:

This Act does not apply:

2(b) to electric energy produced on property of which a person is the owner or a tenant, for use solely by that person and solely on that property,

## **3. Interconnected Electric System**

Section 1(1)(p)of the EUA defines an interconnected electrical System as follows:

"interconnected electric system" means all transmission facilities and all electric distribution systems in Alberta that are interconnected, but does not include an electric distribution system or a transmission facility that is owned by the City of Medicine Hat or a subsidiary of that municipality unless that municipality passes a bylaw under section 59;

## **4. Energy Resources Conservation Board (ERCB) and the Alberta Utilities Commission (AUC)**

On January 1, 2008, the Alberta Utilities Commission Act split the Energy Utilities Board (EUB) into two new regulatory bodies. The ERCB is responsible for the development of Alberta's oil and gas resources and the AUC is responsible for the distribution and sale of electricity and natural gas to Alberta consumers.

## **5. Section 2(d) of the EUA reads as follows:**

This Act does not apply:

2(d) to electric energy exempted by the Board pursuant to section 73(4).

Section 73(4) reads as follows:

4) The Board may make rules

1. exempting any facility or class of facilities, other than regulated generating units listed in the Schedule, from the definition in section 1(1)(f), and
2. exempting from the operation of this Act the electric energy produced from an industrial system.

#### **6. A Public Highway (as defined in the Hydro and Electric Energy Act)**

The Hydro and Electric Energy Act defines a public highway as follows:

"public highway" means any land owned by the Crown or a local authority that is used or surveyed for use as a public highway, road, street or lane, or other public way;

#### **7. Power Pool of Alberta**

Section 1(1)(w) of the EUA defines the power pool as follows:

"power pool" means the scheme operated by the persons appointed under section 9(1)b and (c) for the dispatch and exchange of electric energy and financial settlement for the exchange of electric energy.

For more information on the power pool visit the homepage of the Power Pool of Alberta

#### **8. Obligations and Entitlements (legislated hedges)**

Alberta's new industry structure ensures that the costs and benefits of Alberta's existing regulated utility generating units are shared by all customers in the province. The mechanism for achieving this objective is a set of legislated financial hedges between distributors and owners of existing generating units.

More information on Alberta's new electric industry structure is available in the Department's guide: *Moving to Competition: a guide to Alberta's new electric industry structure*.

#### **9. Transmission Administrator**

The Transmission Administrator is responsible under the EUA for the overall coordination of the transmission system. As discussed in the Department's guide: *Moving to Competition: a guide to Alberta's new electric industry structure*, some of these functions include:

- Contracting with individual transmission owners to provide services.
- Acting as the financial clearing house between the buyers of transmission services (generators, distributors, importers and exporters) and the transmission owners.
- Setting province-wide tariffs for system access.
- Interacting with the power pool on issues such as the generation required for operating reserve.

Information about other functions of the Transmission Administrator is available from the Recommendations and Final Report on The Alberta Transmission Administrator Function.

## **10. Hydro and Electric Energy Act section 15(1)**

Section 15(1) of the Hydro and Electric Energy Act reads as follows:

### **Exemption**

15(1) Sections 12 to 14 do not apply to a person transmitting or proposing to transmit over his own land electric energy solely for his own use by means of a line that does not cross a public highway, unless the Board otherwise directs.

(2) Notwithstanding subsection (1), a person transmitting or proposing to transmit electric energy solely for his own use shall, where required by regulation to do so, immediately notify the Board of the use or proposed use and provide any details of the transmission and use that the Board requires.

RSA 1980 cH-13 s15

Section 12 of the Hydro and Electric Energy Act reads as follows:

### **Permit**

12(1) No person shall construct a transmission line or any part of a transmission line, or undertake any operations preparatory to the construction of a transmission line, unless he is the holder of a permit issued by the Board.

(2) No person shall make a significant extension or alteration of a transmission line unless the Board has amended his permit or issued a new permit to cover the extension or alteration.

(2.1) Where the Board is considering an application under subsection (1) or (2), the Board shall consider whether the facility for which approval is sought is and will be required to meet present and future public convenience and need.

(3) This section does not preclude a person proposing to apply for a permit or his agents from

1. entering on any Crown or other land lying in the intended route of the transmission line to make surveys or examinations, or
2. negotiating for the acquisition of interests in land that may be required for the transmission line. RSA 1980 cH-13 s12;1995 cE-5.5 s82

Section 14 of the Hydro and Electric Energy Act reads as follows:

Licence 14 No person shall operate a transmission line unless he is the holder of a subsisting licence to operate the transmission line, issued by the Board.

RSA 1980 cH-13 s14

## **11. EUA sections 13(1)(a) and 14**

Section 13(1)a of the EUA reads as follows:

Participation in power pool after December 31, 1995

13(1) After December 31, 1995,

(a) all electric energy entering or leaving the interconnected electric system shall be exchanged through the power pool,

Section 14 of the EUA reads as follows:

Prohibition

14 After December 31, 1995, no person shall intentionally cause or permit electric energy or system support services produced by a generating unit in Alberta to enter the interconnected electric system except in accordance with dispatch.

## **12. Pool Trading Charge**

In Alberta, only a pool participant (eligible person) can buy and sell electricity through the power pool. Anyone wishing to participate must: pay a trading charge (proportional to volume of activity)

More information about how to participate in the power pool is available from the Power Pool's web site.

A description of the pool charge is located in the Power Pool rules.

An "eligible person" is defined in section 1(1)(h) of the EUA

## **13. Power Pool Administrator**

The Power Pool Administrator is responsible for carrying out the financial transactions and general operations of the pool. Some of the duties of the Power Pool Administrator, as discussed in the Department's guide: Moving to Competition: a guide to Alberta's new electric industry structure, include:

- Managing the bid-offer process, in which participants submit their prices for supplying to and receiving power from the pool.
- Determining the — merit order the ranking of units according to the price they offer into the pool — and working out the overall schedule for which units should run when.
- Scheduling units to provide system services, such as operating reserve.
- Carrying out all the financial settlements, so that distributors pay for the power they purchase and generators receive their payment.
- Determining the costs of running the pool and recovering these costs through membership fees charged to pool participants.