



Fortuna GP, Inc.
Ghost Pine Wind Power Plant
Ghost Pine Substation

Alberta Electric System Operator
Ghost Pine Wind Power Project Interconnection
Need Identification Document

ATCO Electric Ltd.
New 144-kV Transmission Line 7LA16

July 23, 2010

ALBERTA UTILITIES COMMISSION

Decision 2010-338:

Fortuna GP, Inc.
Ghost Pine Wind Power Plant and Ghost Pine Substation
Application No. 1602573 and 1602574

Alberta Electric System Operator
Ghost Pine Wind Power Project Interconnection Need Identification Document
Application No. 1605728

ATCO Electric Ltd.
144-kV Transmission Line 7LA16
Application No. 1605746

Proceeding ID. 236

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**FORTUNA GP, INC.
GHOST PINE WIND POWER PLANT
AND GHOST PINE SUBSTION
ALBERTA ELECTRIC SYSTEM OPERATOR
GHOST PINE WIND POWER PROJECT
INTERCONNECTION NEED IDENTIFICATION DOCUMENT
ATCO ELECTRIC LTD.
144-kV TRANSMISSION LINE 7LA16**

Application Nos. 1602573 and 1602574

Application No. 1605728

Application No. 1605746

1 INTRODUCTION

1. Fortuna GP, Inc. (Fortuna) requested approval from the Alberta Utilities Commission (AUC or Commission) to construct and operate the Ghost Pine Wind Power Project (GPWPP) on January 14, 2009. The proposed GPWPP consists of an 81.6-megawatt (MW) wind power plant and a substation. The proposed GPWPP would be located approximately 6.5 kilometres (km) north of Trochu, Alberta, in Kneehill County.

2. Fortuna GP, Inc. is a wholly owned subsidiary of NextEra Energy Canada, ULC (formerly known as FPLE Canadian Wind, ULC). NextEra Energy Canada, ULC is an indirect, wholly owned subsidiary of NextEra Energy Resources, LLC.¹

3. Section 11 of the *Hydro and Electric Energy Act* requires a person proposing to construct or operate a power plant to obtain an approval from the Commission. Subsection 14(1) of the *Hydro and Electric Energy Act* requires a person proposing to construct a transmission line to obtain a permit to construct the line, while section 15 requires a licence to operate the transmission line. A “transmission line” includes substations, as defined in subsection 1(1)(o)(iii) of the *Hydro and Electric Energy Act*.

4. The GPWPP produces power. In order to sell this power, the GPWPP requires a connection to the Alberta Interconnected Electric System (AIES). In order to connect to any other transmission line, subsection 18(1)(a) of the *Hydro and Electric Energy Act* requires the owner or operator of a power plant or transmission line to obtain an order from the Commission.

5. Subsection 34(1)(c) of the *Electric Utilities Act* requires the Alberta Electric System Operator (AESO) to submit a Needs Identification Document (NID) application to the Commission which describes a need to respond to a request for system access service. Indeed, the AESO submitted an NID application for the necessary changes and additions to the transmission system near Trochu, Alberta in order to provide system access service for the GPWPP.

¹ Exhibit 022.00.FORTUNA-236.

6. ATCO Electric Ltd. (ATCO), upon direction from the AESO issued under section 35 of the *Electric Utilities Act*, requested approval to construct a new 144-kilovolt (kV) transmission line to connect the GPWPP to the AIES. ATCO proposes to build the transmission line such that it originates at the GPWPP substation and terminates 3.6 km east at existing 144 kV transmission line 7L16.

7. All of the above-mentioned applications were considered jointly as EPS Proceeding ID 236.

8. In making a decision on the applications submitted by Fortuna and ATCO, the Commission must consider:

- a) whether the power plant, substation, transmission line, and interconnection applications meet all the requirements of AUC *Rule 007 – Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations* (Rule 007);
- b) the potential direct and adverse impacts on the environment, nearby residents and landowners, and mitigation measures to address such impacts; and
- c) whether the approval of the applications is in the public interest.

9. Subsection 38(e) of the *Transmission Regulation* directs the Commission, when making a decision on an NID application submitted by the AESO, to consider the AESO's assessment of need to be correct, unless a person has satisfied the Commission that the AESO's assessment is technically deficient or not in the public interest.

2 APPLICATIONS

2.1 Power Plant

10. A power plant application was filed by Fortuna on January 14, 2009, as Application No. 1602573 and replaced by a revised application on January 16, 2009, (Power Plant Application). Subsequently, on May 3, 2010, Fortuna filed an amendment to its revised power plant application (Amended Power Plant Application).

11. Application No. 1602573 proposed the construction and operation of a power plant consisting of 54 wind turbine generators, each rated at 1.5 MW. The Amended Power Plant Application reduced the total number of wind turbines to 51 and changed the model of the proposed wind turbine to a General Electric (GE) 1.6 XLE. Each GE 1.6 XLE wind turbine is rated at 1.6 MW, for a total installed capacity of 81.6 MW (Power Plant).

12. The Power Plant would be called the Ghost Pine Wind Power Plant and would be located on the following lands:

- Sections 25, 26, 30, 31, 34, and 35, Township 33, Range 24, West of the 4th Meridian;
- Sections 3, 5, 8-10, 15, 18, 19, 22, and 27, Township 34, Range 24, West of the 4th Meridian; and
- Sections 2, 11, 14, and 23, Township 34, Range 25, West of the 4th Meridian.

13. The Commission notes that the wind turbines were renumbered as part of the Amended Power Plant Application. The maps submitted with the Amended Power Plant Application, however, show the original numbering scheme that was used in the Power Plant Application of January 16, 2009. A table comparing the wind turbine numbering can be found in Appendix 1.

14. The GPWPP is located on freehold land consisting of a combination of cultivated land, hay land, improved pasture, and native pasture.

15. Fortuna indicated that the potential impact on birds and bats were being investigated in consultation with Alberta Sustainable Resource Development (ASRD) and Canadian Wildlife Service. On January 16, 2009, Fortuna received a letter from ASRD agreeing to the proposed GPWPP based on the Wildlife Baseline Report submitted by Fortuna, the responses to information requests and a map of the project layout, turbine placements, roads, trails, the substation, collector lines, and wildlife survey locations. The letter added that ASRD and Fortuna would discuss a plan for the post construction monitoring. ASRD, therefore, provided its sign-off in the letter.

16. In regards to the application amendments, on June 18, 2010, by letter,² ASRD advised that it had “no objection to the change in turbine locations as [ASRD] believe[s] they are a net benefit to the wildlife resources of the area.” ASRD further advised that Fortuna had agreed to:

1) increase the cut in speed of the turbines if bat fatalities are excessive and 2) to shut down turbines at night during the fall bat migration if warranted.

17. In February 2009, Fortuna prepared an environmental impact statement, which it submitted to the Commission on June 9, 2009. The assessment of the environmental conditions of the area in proximity to the proposed GPWPP site included information on terrain and soil, vegetation, wildlife, and aquatic resources. In addition, the assessment also addressed historical and cultural resources, and social and economic effects, such as noise and visual impacts. Fortuna indicated that the GPWPP would have no air emissions during operations and no effect on surface water. Mitigation measures were also discussed in the assessment such as minimizing the impact to natural vegetation by locating all but four turbines on previously disturbed lands. Fortuna submitted that the GPWPP was predicted to have minimal to low level impacts on the environment and the public in the area of the project.

18. Fortuna advised that an approval for registration with Alberta Environment, under the *Environmental Protection and Enhancement Act*, is not required as wind power facilities are not a designated activity under that act.

19. Fortuna filed an archaeological Historic Resources Impact Assessment with Alberta Culture and Community Spirit (ACCS). On March 19, 2009, Fortuna received a Historical Resources Act Clearance from that agency. No historic resources sites were found. Fortuna expects to receive full clearance following the submission of final development plans to ACCS.

20. Fortuna also filed a Noise Impact Assessment (NIA) as part of the Power Plant Application of January 16, 2009. The NIA assessed the cumulative noise impact of the Power

² Exhibit 0276.01.FORTUNA-236.

Plant and proposed substation, discussed in section 2.2 below, as well as one gas plant and five compressors within two km of the proposed GPWPP site.

21. The assessment established 99 noise receptors (primarily residences) within two km of the GPWPP site at which to predict sound levels. On May 3, 2010, a new NIA was submitted as part of the Amended Power Plant Application.

22. The NIA indicated that cumulative noise levels during operation are predicted to meet the AUC *Rule 012 – Noise Control* (Rule 012), night-time Permissible Sound Level of 40 dBA L_{eq} for all receptors. The NIA identified the 11 most affected receptors (those with cumulative noise predictions above 39.5 dBA) as R27, R28, R30, R32, R33, R50, R73, R74, R89, R96, and R98. For the remaining receptors, the predicted sound levels range from 35 to 39.5 decibels. The NIA also stated that, according to Rule 012 guidelines, there would be little potential for low frequency noise to occur at the 11 most affected receptors.

23. An erratum was filed on June 3, 2010, correcting the values in two tables of the Amended Power Plant Application's NIA, but stated that the error did not affect the list of most affected receptors referred to above.

24. The NIA stated that follow-up for the NIA would include both baseline and compliance noise measurements at some representative receptors, focused on the most affected receptors identified through the NIA.

25. The proposed Power Plant includes a gathering system or collector system. The system consists of 34.5-kV power lines, mainly underground, for the purpose of collecting and transmitting electric power generated by each wind turbine to the proposed substation discussed in section 2.2 below. Fortuna provided a map of the location of these collector lines and cross-sectional drawings of locations where the collector lines would parallel or cross existing rights-of-way. With the exception of road crossings, the collector system is proposed to be located on privately-owned lands by way of agreement. Fortuna further indicated that as the GPWPP develops, all needed facility crossing agreements with affected persons would be obtained.

26. Fortuna stated that its Participant Involvement Program (PIP) included all parties whose rights may be directly and adversely affected by the proposed GPWPP, including landowners, nearby and other residents, and local and provincial government. Fortuna submitted that its PIP consisted of letters to landowners, ads in local area newspapers, public open houses, meetings with Kneehill County, and personal consultations with landowners within 2,000 metres (m) of the proposed project site. Fortuna stated that it had addressed all concerns of potentially directly affected parties.

27. Fortuna submitted that there would be benefits from the GPWPP to the broader community such as increased municipal tax revenues, increased local spending during construction, and job creation both during construction and for long term operational needs. As well, Fortuna submitted that the community would be direct participants in the reduction of carbon emissions.³

³ Exhibit 0012.00.FORTUNA-236.

28. For certain electric facility applications, the applicant must obtain specific approvals or letters from other entities prior to filing an application with the Commission. Fortuna submitted the following approvals or letters to the Commission:

- Kneehill County approval;
- Transport Canada Approval;
- NAV CANADA non-objection letter; and
- Alberta Transportation Approvals (for gathering system lines or turbines within 300 metres of numbered highway 587).

2.2 Substation

29. A substation application was filed by Fortuna on January 14, 2009, as Application No. 1602574 (Substation Application). Subsequently, on May 3, 2010, Fortuna filed an amendment to the Substation Application (Amended Substation Application).

30. Application No. 1602574 proposed the construction and operation of a 34.5/144-kV substation (Substation). The Substation would be equipped with step-up transformers to increase the 34.5-kV voltage of the energy coming from the wind turbines to 144 kV. The proposed Substation would be built, owned, and operated by Fortuna on privately-owned lands by way of agreement.

31. The Substation would be called the Ghost Pine 114S substation⁴ and would be located approximately eight km north of Trochu, Alberta on the Southeast Quarter of Section 3, Township 34, Range 24, West of the 4th Meridian.

32. The area required for the Substation would be approximately 90 m x 150 m (1.35 hectares (ha)). The temporary construction support facility allowances would increase the size of the Substation parcel to 180 m x 180 m (3.24 ha).⁵

33. The Substation would be located on non-irrigated, cultivated land. The site is bordered to the east and south by range and township roads which would be used for Substation access. There are no residents within 800 metres of the Substation boundary.

34. The Substation would consist of the following major equipment:

- one 144/34.5-kV, 125-MVA power transformer;
- one 144-kV circuit breaker;
- six 34.5-kV circuit breakers;
- a control house building; and
- a microwave tower and associated hut (built by ATCO) for substation communication.

35. An NIA was submitted as part of the Amended Power Plant Application. The NIA was an assessment of the cumulative noise impact within two km of the proposed GPWPP site and included the Substation (see paragraphs 20 – 24).

⁴ Exhibit 0142.00.AE-236.

⁵ Exhibit 0193.01.FORTUNA-236, page 5 (AUC-FORTUNA-34).

2.3 Needs Identification Document

36. An NID application was filed by the AESO on December 16, 2009, as Application No. 1605728 (NID Application). The NID Application identified the need to connect the Ghost Pine 114S substation to the Alberta Interconnected Electric System (AIES).

37. The GPWPP is in the AESO's Hanna planning area. The AESO submitted that by applying its transmission reliability criteria, and using reasonable load forecast and generation assumptions, it was able to test the existing Hanna Region transmission system for acceptable performance and to determine its present and future adequacy. System studies were carried out for two scenarios, with and without the 81.6-MW GPWPP.

38. The system prior to the interconnection of the GPWPP was shown to have two transmission elements being overloaded under certain contingencies. In addition, several voltage range violations occurred under certain contingencies in summer and winter peak cases, which would affect the 144-kV and 72-kV systems in the study area. The connection of the GPWPP, however, did not introduce any additional transmission overload or voltage violations under both normal and contingency conditions.

39. The AESO stated that the GPWPP could be connected to the AIES in two different ways. At Fortuna's request, however, the AESO only analyzed and evaluated one alternative. This alternative considered tapping onto the existing 144-kV transmission line 716L. The proposed connection for the GPWPP would tap the existing transmission line approximately 17 km north of the Three Hills 770S substation.

40. In light of the various factors taken into account by the AESO, and as required by subsection 11(3)(h) of the *Transmission Regulation*, the AESO determined that the connection of the GPWPP would be feasible at the proposed interconnection point and could be integrated into the existing system.

41. The AESO stated that, in addition to the appropriate protection, control and communication facilities needed to support the Power Plant, a Phasor Measurement Unit (PMU) would be required to satisfy AESO interconnection requirements for the incorporation of the GPWPP. The cost of this PMU would be deemed a customer cost.

42. The total capital cost associated with interconnection of the GPWPP to the AIES was estimated to be \$2.12 million in 2008 dollars with a 30% margin of error. The system portion would be \$104,500 and the customer portion would be \$2,016,000.

43. The AESO directed ATCO to assist with its PIP. From September to November 2009, ATCO notified stakeholders about the need for the transmission reinforcement, as guided by Rule 007. This included a one-page overview document describing the need for the connection of the GPWPP to the AIES. The document also provided a description of the AESO, its responsibilities, and contact information for questions or concerns. The AESO submitted that it did not know of any outstanding issues or concerns regarding the NID Application.

2.4 Transmission Line and Interconnection

44. An electric facility application was filed by ATCO on December 21, 2009, as Application No. 1605746. The application proposed to meet the identified need by requesting approval to build a transmission line to connect the Ghost Pine 114S Substation to the AIES (Facility Application).

45. Specifically, ATCO requested approval of the following developments:

- a) construction of a 144-kV transmission line designated as 7LA16;
- b) alteration of existing 144-kV transmission line 7L16;
- c) connection of 144-kV transmission line 7LA16 to proposed Ghost Pine 114S substation; and
- d) operation and maintenance of the aforementioned transmission facilities.

46. ATCO proposed to construct approximately 3.6 km of 144-kV single-circuit transmission line from the proposed tap point on existing 144-kV transmission line 7L16, extending west, to the proposed Ghost Pine 114S substation (Transmission Line). The T-tap would be located approximately 16.1 km north of the Three Hills 770S substation.

47. The existing 144-kV transmission line 7L16 operates between Three Hills 770S substation and Nevis 766S substation, which is near Stettler, Alberta (Permit and Licence No. AP 74-8). ATCO proposed to connect the new transmission line 7LA16 to a tap on transmission line 7L16 at LSD 4 in the Southwest Quarter of Section 6, Township 34, Range 23, West of the 4th Meridian (Interconnection).

48. The proposed route for the Transmission Line would follow a developed road allowance and would be the shortest line length possible. ATCO submitted that this routing minimized the potential footprint of the transmission line, impacted the least number of landowners, and allowed for maintenance access to the line. ATCO argued that alternative routings would impact more landowners, be less accessible for maintenance, and require a longer line length with no apparent advantage relative to the proposed route.

49. The Facility Application stated there are three occupied residences within 400 to 800 m of the proposed transmission line. ATCO undertook a PIP to notify residents, landowners, agencies, and industry within 800 m of the proposed right-of-way for the new 144-kV transmission line 7LA16. This consisted of project information packages (including the AESO overview document) being sent to 35 stakeholders and was followed up by one-on-one discussions with stakeholders along the proposed route. These stakeholders included government departments, agencies, and organizations that are landholders; private landowners and occupants; business/industry landholders; and First Nations communities. ATCO submitted that there were no unresolved landowner questions or concerns regarding the Facility Application.

3 APPLICATION REVIEW PROCESS

50. The Power Plant and Substation applications were reviewed and in a series of information requests, the Commission requested additional information from Fortuna about the proposed GPWPP.⁶ The information requested related to environmental and noise impacts, the gathering system, the proposed design, and the Substation.

51. The Commission issued a Notice of Applications and Hearing to all interested parties and landholders within two kilometres (km) of the proposed GPWPP on January 5, 2010. The notice was directly mailed to parties within two kilometres of the Power Plant site and within 800 m of the Substation. The notice was also posted on the AUC website and published in the *Drumheller Mail*, the *Three Hills Capital*, and the *Innisfail Province*. The notice requested interventions be submitted to the AUC by 2:30 pm on January 28, 2010.

52. In response to the initial notice, nine parties objected to the GPWPP, and eight parties supported the GPWPP. The objectors formed a group represented by Mr. Gavin Fitch, legal counsel (Fitch group).

53. The NID Application and Facility Application for the interconnection between the GPWPP and the AIES were filed approximately 11 months after the Power Plant Application and Substation Application. The need for the interconnection was based on the assumption that Fortuna's GPWPP would be approved. Subsequent to the initial notice, the Commission decided to add the NID Application and the Facility Application to Proceeding ID 236.

54. An Amended Notice of Applications and Hearing was issued by the Commission on February 9, 2010, setting a hearing date of April 26, 2010, to consider all four applications. The amended notice was issued in the same manner as the previous notice and requested interventions by February 28, 2010.

55. In response to the Amended Notice of Applications and Hearing, ATCO Power Ltd. submitted a statement of intent to participate, which was limited to the NID application. ATCO Power Ltd. submitted information requests to the AESO in order to understand any potential impacts to their generation facilities named within the NID Application.

56. ATCO Power Ltd. also submitted an information request to Fortuna on March 5, 2010, and Fortuna replied on March 18, 2010. The Commission received no further submissions from ATCO Power Ltd.

57. Also in response to the Amended Notice of Applications and Hearing, a new interested person in proximity to the proposed GPWPP filed an objection to the Amended Power Plant Application. No objections were received regarding the NID Application or the Facility Application.

⁶ Information requests (deficiency questions) dated February 19, 2009; May 13, 2009; May 27, 2009; July 14, 2009; August 21, 2009; August 24, 2009; September 15, 2009; December 1, 2009; February 16, 2010 and March 5, 2010.

58. The Commission issued an information request to ATCO on March 5, 2010, regarding the equipment proposed to be installed in the Three Hills 770S substation, as part of the Facility Application. ATCO's response was received on March 24, 2010.

59. The Commission also issued a final information request to Fortuna on March 5, 2010. The Power Plant Application and the Substation Application were deemed to be complete on March 19, 2010, when Fortuna submitted their final information response.

60. The Amended Notice of Applications and Hearing included a proceeding schedule, which specified the deadline for information responses from Fortuna to interveners. Following receipt of responses, the Fitch group, on March 22, 2010, submitted a motion to compel Fortuna to provide better responses to the group's questions and requested an extension to the deadline for submitting intervenor evidence. The Commission suspended the hearing schedule on March 23, 2010, and issued a letter to inform the participants of the process for addressing the interveners' motion.

61. Fortuna responded to the AUC letter, on March 25, 2010, by informing the Commission that, in an effort to address interveners' concerns, discussions with the interveners were still ongoing. For that reason Fortuna requested the Commission suspend ruling on the motion until the discussions could be completed.

62. By April 13, 2010, the parties had not yet come to a resolution. Since a number of process steps remained to be completed before a hearing could commence, the Commission issued a letter informing parties that the April 26, 2010, hearing would not proceed as scheduled. The letter also specified that a new hearing date would be determined if the parties did not come to a resolution by April 30, 2010.

63. On April 30, 2010, Fortuna advised the AUC that the concerns of the Fitch group had been resolved. On May 3, 2010, the Fitch group withdrew their objection.

64. Fortuna submitted the Amended Power Plant Application on May 3, 2010, as a result of an agreement with the Fitch group. The amendment to the Power Plant Application resulted in the removal of three of the original potential turbine locations that were close to these interveners. As mentioned above, Fortuna's Amended Power Plant Application is for approval to construct and operate 51 wind turbines. The Amended Substation Application increased the voltage of the power transformer from 90-Megavolt-amperes (MVA) to 125-MVA in order to allow for a potential future expansion of the proposed Power Plant.

65. On May 7, 2010, the Commission verified that the remaining interested person intended to submit evidence and participate in an oral hearing.⁷

66. The Commission issued a Notice of Amended Applications on May 18, 2010, notifying parties of the changes to the Power Plant Application and the Substation Application and requesting submissions arising from the amendments by June 7, 2010. On June 7, 2010, the remaining interested person withdrew his objection.

⁷ Exhibit 0266.01.AUC-236 and 0267.01.AUC-236.

67. In response to the Notice of Amended Applications, however, legal counsel for a new interested person, Ms. Winter, submitted an objection to three wind turbines located in the vicinity of her land, namely turbine numbers 25, 27, and 28 from the Power Plant Application of January 16, 2009. She did not oppose any other aspects of Application Nos. 1602573 and 1602574.

68. Also in response to the Notice of Amended Applications, on June 18, 2010, the Commission received an objection from a landowner who was a member of the Fitch Group. His objection as an individual claimed that Fortuna did not follow the ASRD protocol with regards to studying bat populations. The landowner subsequently submitted a report and email as evidence. On June 22, 2010, however, the landowner withdrew his objection. In a letter of June 30, 2010, the AUC advised this landowner that the evidence filed would not be considered by the Commission since he was no longer an intervener in the proceeding.⁸

69. On June 22, 2010, the Commission received a letter from legal counsel for Fortuna requesting the Commission dismiss the remaining objection since Ms. Winter had not filed a submission by the February 28, 2010, deadline as set out in the Amended Notice of Applications and Hearing. Fortuna further argued that the latest notice and its deadline for filing objections to the Amended Power Plant Application and the Amended Substation Application (June 7, 2010) was as a result of the settlement between Fortuna and the Fitch group and the three turbine locations in question had not been changed. Alternatively, Fortuna requested that a hearing be scheduled to consider the three turbines in question and that the Commission issue a decision on all other aspects of the Amended Power Plant Application and the Amended Substation Application.

70. Subsequently, a new legal counsel for Ms. Winter submitted a letter objecting to the GPWPP as a whole and reiterating the objection to the above-mentioned three turbines.

71. On June 28, 2010, the Commission issued a letter with regards to standing.⁹ The Commission ruled as follows:

The Commission is of the view that Ms. Winter's objection to the above-mentioned applications is out of time as it should have been filed by February 28, 2010, when the Notice of Applications was issued by the Commission in relation to these applications. However, the Commission decided to consider whether to grant Ms. Winter standing because it had not made a decision on the applications.

...

the Commission finds that Ms. Winter has a legal interest in land. ...The Commission finds that Ms. Winter's land is in close proximity to turbines 25, 27 and 28 and that she has shown that these turbines may directly and adversely impact her legal interest in land. ...As a result, the Commission grants Ms Winter standing in relation to the three turbines and will hold a hearing to decide this part of the application.

⁸ Exhibit 0285.01.AUC-236.

⁹ Exhibit 0286.01.AUC-236.

72. In the June 28, 2010, letter the Commission also decided “not to hold a hearing in relation to the rest of the applications because it appears to the Commission that there are no persons who may be directly and adversely affected by the other aspects of the proposed wind power plant and substation.”

73. A Notice of Revised Hearing was issued by the AUC on July 9, 2010. The hearing is scheduled for August 30, 2010, in Trochu, Alberta.

4 FINDINGS

4.1 Legislative Framework

74. In considering the above-mentioned Amended Power Plant Application, Amended Substation Application, and Facility Application the Commission reviewed the *Hydro and Electric Energy Act*. The pertinent provisions are as follows: subsections 2(a), 2(b), 2(c), 11, 14(1), 14(2), 15, 15.4, 18(1)(a), 18(1)(b), and 19(1). Additionally, the Commission considered section 17 of the *Alberta Utilities Commission Act*, sections 34 and 35 of the *Electric Utilities Act*, as well as section 38 of the *Transmission Regulation*.

4.2 Ghost Pine Wind Power Project – Power Plant and Substation

75. The Commission determined that Fortuna’s Amended Power Plant Application and Amended Substation Application complied with the application requirements set out in Rule 007.

76. The Commission finds that Fortuna’s public consultation complied with notification and consultation requirements outlined in Rule 007. The Commission also finds that Fortuna’s consultation steps were adequate given the nature and scope of the project.

77. The Commission is satisfied that all sources of noise have been considered in the NIA. The NIA predicted that all receptors in the area are expected to receive sound exposure levels that are at or below the night-time permissible sound level of 40 dBA as set out in Rule 012.

78. The NIA concluded that eleven of the receptors would potentially be within 0.5 dBA of compliance with the permissible sound level. Considering this fact, the Commission finds that a post construction comprehensive noise study, in accordance with Rule 012, is needed when the Ghost Pine Wind Power Plant becomes operational. The study must be done under representative conditions to verify and ensure that the facility complies with Rule 012. Verification, however, will only be required for the eleven noise receptors identified in the NIA as R27, R28, R30, R32, R33, R50, R73, R74, R89, R96, and R98. The study must be completed within one year of the power plant becoming operational.

79. The Commission is satisfied that there are no persons with standing regarding 48 of the 51 wind turbines and the other aspects of the proposed Power Plant and Substation.

80. The Commission accepts that the locations of the proposed Ghost Pine Wind Power Plant and Ghost Pine 114S Substation were selected such that noise and visual impacts on landowners and impacts on the environment have been minimized. The Commission also accepts the findings of the Environmental Impact Statement which predicts the GPWPP will have minimal to low level impacts on environmental and social components in the project area.

81. The Commission took into account that ASRD has agreed to the proposed GPWPP. The Commission notes Fortuna's commitment that it will adhere to the approval conditions specified by the ASRD.¹⁰

82. The Commission finds that no evidence was presented that contradicted Fortuna's statements that the GPWPP would result in broader benefits to the communities surrounding the GPWPP in terms of municipal and local revenue, employment opportunities, and the generation of energy without carbon emissions.

83. For these reasons, the Commission has determined that approval of the GPWPP is in the public interest.

4.3 NID Application

84. The Commission finds that the NID Application submitted by the AESO regarding the need to connect the GPWPP to the AIES complied with the application requirements set out in Rule 007 for NID applications.

85. The Commission finds that the public involvement program for the NID Application, performed by ATCO on behalf of AESO, complied with the requirements outlined in Rule 007.

86. Pursuant to paragraph 38(e) of the *Transmission Regulation*, the Commission accepts that that NID Application is correct because no person objected to the NID. Therefore, pursuant to subsection 34(3) of the *Electric Utilities Act*, the Commission approves the AESO's NID application.

4.4 Transmission Line and Interconnection Application

87. The Commission finds that the Facility Application submitted by ATCO for the Transmission Line between the Ghost Pine 114S substation and existing transmission line 7L16 and its interconnection to the AIES complied with the application requirements set out in Rule 007 for transmission line and interconnection applications.

88. The Commission finds that ATCO's public consultation complied with notification and consultation requirements outlined in Rule 007. The Commission also finds that ATCO's consultation steps were adequate given the nature and scope of the project.

¹⁰ Exhibit 0276.01.FORTUNA-236.

89. The Commission finds that the potential impacts of the proposed Transmission Line on residents, landowners, and the environment are minimal since the shortest possible length of line would be used, the line routing parallels an existing road allowance, and existing roads would be used for maintenance access.

90. With regards to the connection order, online tests are required to demonstrate the ability of a wind power plant to provide continuous reactive power as per the AESO's requirements. While Fortuna submitted manufacturer specifications for the wind turbine generator being proposed, in order to ensure compliance of the Power Plant to these requirements a temporary connection order will be issued to ATCO. Upon validation of actual Power Plant performance that meets the requirement for continuous reactive power, ATCO may apply to the Commission for a permanent connection order.

91. For these reasons, the Commission has determined that approval of the new 144-kV transmission line 7LA16 and its interconnection to the AIES is in the public interest.

5 DECISION

92. Pursuant to section 11 of the *Hydro and Electric Energy Act*, the Commission approves the Amended Power Plant Application in part and grants approval for 48 wind turbines set out in Appendix 2 – Power Plant – Approval No. U2010-274 to Fortuna GP, Inc. to construct and operate the Ghost Pine Wind Power Plant (Appendix 2 will be distributed separately).

93. Pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, the Commission approves the Amended Substation Application and grants the permit and licence set out in Appendix 3 – Substation – Permit and Licence No. U2010-275 to Fortuna GP, Inc. to construct and operate the Ghost Pine 114S substation (Appendix 3 will be distributed separately).

94. Pursuant to section 34 of the *Electric Utilities Act*, the Commission approves the NID Application and grants the approval set out in Appendix 4 – Needs Identification Document – Approval No. U2010-276 to the Alberta Electric System Operator (Appendix 4 will be distributed separately).

95. Pursuant to section 14, 15, and 18 of the *Hydro and Electric Energy Act*, the Commission approves the Facility Application and grants the permit and licence set out in Appendix 5 – Transmission Line – Permit and Licence No. U2010-277 and the temporary connection order set out in Appendix 6 – Temporary Connection – Order No. U2010-278 to ATCO Electric Ltd. to construct, connect to the AIES, and operate a new 144-kV transmission line designated 7LA16 (Appendices 5 and 6 will be distributed separately).

Dated on July 23, 2010.

ALBERTA UTILITIES COMMISSION

(original signed by)

Thomas McGee
Panel Chair

(original signed by)

Tudor Beattie, Q.C.
Commissioner

(original signed by)

Moin A. Yahya
Commissioner

APPENDIX 1

Table 1. Comparison of Turbine Numbers

Power Plant Application Number ¹¹	Amended Power Plant Application Number ¹²
Turbine 1	Removed
Not in original application	Turbine 1
Turbine 2	Turbine 2 (note: moved to LSD 9)
Turbine 3	Turbine 3 (note: moved to LSD 8)
Turbine 4	Turbine 4 (note: moved to LSD 1)
Turbine 5	Turbine 5 (note: moved to LSD 9)
Turbine 6	Turbine 6
Turbine 7	Turbine 7
Turbine 8	Removed
Not in original application	Turbine 8
Turbine 9	Turbine 9
Turbine 10	Turbine 10
Turbine 11	Turbine 11
Turbine 12	Turbine 12
Turbine 13	Turbine 13
Turbine 14	Removed
Not in original application	Turbine 14
Turbine 15	Turbine 15
Turbine 16	Turbine 16
Turbine 17	Turbine 17
Turbine 18	Turbine 18
Turbine 19	Removed
Turbine 20	Turbine 19
Turbine 21	Turbine 20
Turbine 22	Turbine 21
Turbine 23	Turbine 22
Turbine 24	Removed
Turbine 25	Turbine 23
Turbine 26	Turbine 24
Turbine 27	Turbine 25
Turbine 28	Turbine 26
Turbine 29	Turbine 27
Turbine 30	Turbine 28
Turbine 31	Turbine 29
Turbine 32	Turbine 30 (note: moved to LSD 12)
Turbine 33	Turbine 31
Turbine 34	Turbine 32
Turbine 35	Turbine 33
Turbine 36	Turbine 34 (note: moved to LSD 15)
Turbine 37	Turbine 35
Turbine 38	Turbine 36 (note: moved to LSD 8)
Turbine 39	Turbine 37
Turbine 40	Turbine 38
Turbine 41	Turbine 39
Turbine 42	Turbine 40 (note: moved to LSD 14)
Turbine 43	Turbine 41

¹¹ Exhibit 0020.00.FORTUNA-236.

¹² Exhibit 0257.00.FORTUNA-236.

Turbine 44	Turbine 42
Turbine 45	Turbine 43
Turbine 46	Turbine 44
Turbine 47	Turbine 45
Turbine 48	Turbine 46
Turbine 49	Turbine 47
Turbine 50	Removed
Turbine 51	Turbine 48
Turbine 52	Turbine 49
Turbine 53	Turbine 50
Turbine 54	Turbine 51