NaturEner

June 18, 2013

VIA ELECTRONIC FILING

Alberta Utilities Commission
Attention: Wade Vienneau
Fifth Avenue Place
4th Floor, 450 – 1 Street SW
Calgary, AB T2P 3L8

Dear Mr. Vienneau:

Subject: Letter of Enquiry for NaturEner Wild Rose 1 Wind Power Plant
Power Plant Approval No. U2010-372 ("AUC Permit")
Decision No. 2010-498 dated October 19, 2010

BACKGROUND

NaturEner Wild Rose 1 Wind Energy Inc. ("NaturEner") recently entered into agreements with Alstom Power ("Alstom") pursuant to which Alstom has agreed to supply its ECO110 3.0 megawatt (MW) turbines (the "Alstom Turbine(s)") to the NaturEner Wild Rose 1 Wind Power Plant project ("Wild Rose 1" or the "Project").

NaturEner is filing this Letter of Enquiry ("LOE") with the AUC pursuant to Section 1.4 of AUC Rule 007: *Applications for Power Plants, Substations, Transmission Lines, and Industrial System Designations*[1] ("Rule 007"),[2] and Sections 11 and 12 of the *Hydro and Electric Energy Regulation*[3] (the "*Regulation*").[4] NaturEner respectfully requests amendments to the AUC Permit. The amendments are required due to a proposed change from the currently approved Acciona AW-77 1.5 MW turbines (the "Acciona Turbine(s)") to the Alstom Turbines.

Approval of the Alstom Turbines for the Project, will result in:

- A reduction in turbines from 136 to 70;
- A reduction in turbines located on native pasture from 43 to 20;

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1 June 12, 2013 version.

2 Section 1.4 of Rule 007 provides: "If an applicant is proposing alterations to existing electric facilities and considers the alterations to be minor, the applicant must comply with sections 11, 12 and 18.2 of the *Hydro and Electric Energy Regulation*. The Commission's guidance is provided in the Electric Power Plant Facilities Process Guidelines – June 12, 2013 …" (the "Guidelines").

3 AR 409/83.

4 Section 11 of the *Regulation* provides: "A person proposing minor alterations to a power plant, transmission line or distribution system may submit a letter of enquiry to the Commission requesting approval of the proposal without a formal, detailed application if, in the Commission's opinion, (a) the proposal is of a minor nature, (b) no other person is directly affected by the proposal, and (c) no adverse environmental impact will be caused by the proposed alterations."

Section 12 of the *Regulation* provides: "A letter of enquiry shall contain information respecting the following, where applicable: (a) the need for the proposed work; (b) the nature and extent of the proposed work; (c) the land affected by the proposed work, and its ownership; (d) the timing of the proposed work; (e) any environmental impact that may result from the proposed work."

- A reduction in the overall disturbance to native pasture by 25%;
- A reduction in the Project area from 75 quarter sections to 56 quarter sections;
- A reduction in the visual impact of the Project due to removal of 66 turbines;
- A reduction in the noise levels at previously modeled receptors; and
- An increase in the utilization of the Project area's specific wind regime, resulting in an increase of projected annual energy production from the Project and the nameplate rated capacity from 204 MW to 210 MW.[5]

As described in greater detail below, the Alberta Electric System Operator ("AESO") and Alberta Environment and Sustainable Resource Development ("AESRD") Fish and Wildlife Division ("AESRD – FWD"), among others, support the amendments sought herein.

NaturEner respectfully requests that the AUC approve the replacement of the Acciona Turbines with the Alstom Turbines and the minor amendments to the approved Project layout[6] (the "Permitted Layout") to accommodate the replacement of the Acciona Turbines with the Alstom Turbines.

NaturEner, submits that pursuant to Section 11 of the Regulation:

(a) the requested changes are minor in nature;

(b) no person is directly affected by the requested changes; and

(c) no adverse environmental impact will be caused by the requested changes.

In support of the requested amendment, NaturEner:

(a) Provides the Section 12 required information under the following headings:

(i) Need for Changes;

(ii) Nature and Extent of Changes;

(iii) Reduced Land affected by Changes and its Ownership;

(iv) Timing of the Proposed Changes; and

(v) Environmental Benefits;

(b) Attached as Appendix 1, is NaturEner's completed Checklist for Power Plant Facility Versus Letter of Enquiry Applications; and

(c) In further support of the amendments to the AUC Permit relief requested, NaturEner attaches:

Attachment A: A-1: Comparative Layout Map (Acciona Turbines and Alstom Turbines)

A-2: Proposed Layout Map (Alstom Turbines)

[5] Using Acciona Turbines, 1.5 MW x 136 = 204 MW. Using Alstom Turbines, 3.0 MW x 70 = 210 MW.

[6] As approved in the AUC Permit and shown in Attachment A-1 Comparative Layout Map "NaturEner Wild Rose 1 Energy Proposed ECO110 Turbine Locations vs Permitted AW77 Turbine Locations".

Attachment B:	AESO Support Letter
Attachment C:	Comparative and Revised Visual Simulations
Attachment D:	Alstom Turbine – Technical Specifications
Attachment E:	Revised Locations Chart (Alstom Turbines)
Attachment F:	Golder Evaluation of Changes Technical Memorandum and Supplemental Baseline Studies Report (Confidential)
Attachment G:	AESRD (Environmental Operations) Support Letter
Attachment H:	Cypress County Support Letters
Attachment I:	Written Confirmation of Support from Forty Mile Co-op, Telus and Economic Development Alliance of Southeast Alberta
Attachment J:	AESRD-FWD Sign-off Letter
Attachment K:	NAV CANADA Approval
Attachment L:	Transport Canada Approval
Attachment M:	Alberta Infrastructure and Transportation Approvals
Attachment N:	Revised Noise Impact Assessment

SECTION 12 REQUIRED INFORMATION

1. Need for Changes

During the time required to obtain necessary approvals for the Project and its interconnection,[7] the business climate for wind turbines has evolved significantly. Turbine suppliers are no longer marketing and/or manufacturing older models, such as the Acciona Turbine approved under the AUC Permit. Technology has developed in the direction of larger and more productive, more efficient, turbines.

Accordingly, since constructing the Project with the Acciona Turbine was no longer possible, NaturEner had to acquire different turbines for Wild Rose 1. After a thorough selection process, NaturEner entered into agreements with Alstom pursuant to which Alstom has agreed to supply the Alstom Turbine to the Project. As discussed in more detail below, the Alstom turbine, at 3.0 MW is larger than the Acciona Turbine, at 1.5 MW, but also more efficient for the wind regime in the Project area.

2. Nature and Extent of Changes

(a) Proposed Turbine Changes

The Project, as currently permitted, consists of 136 Acciona Turbines, for a total Project nameplate rated capacity of 204 MW. NaturEner is proposing to replace the 136 Acciona Turbines with 70 Alstom Turbines for a total Project nameplate rated capacity of 210 MW.[8]

Because the Alstom Turbine is a larger turbine with a higher nameplate rated capacity (3.0 MW) and better efficiency, a smaller number of turbines are required to produce the same total amount of (and consistently more) energy.

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[7] Permits for the interconnection of the Wild Rose 1 project were issued to AltaLink on May 30, 2012.

[8] The AUC Permit contemplates a Project with a 204 MW nameplate rated capacity. The Project has an approved interconnection for 200 MW. In order to accommodate for internal Project electrical line losses and for at least one turbine to be available for maintenance at all times, the AESO allows for the nameplate rated capacity of a wind generation project to exceed the approved interconnection capacity rating by 10% or 10 MW, whichever is less. Thus, the Project nameplate rated capacity of 210 MW is within the Project's interconnection approval.

Apart from the differences in size and height, the Acciona Turbine and the Alstom Turbine use similar technology. Both models are variable speed wind turbines with double-fed induction generators ("DFIG") and back-to-back AC/DC/AC converters in the rotor circuit. The medium voltage switchgears, which protect the wind turbines against over-currents, short circuits and ground faults will be installed inside the base section of the Alstom Turbines, similar to the design of the Acciona Turbines.

NaturEner has advised the AESO of the proposed change to the Alstom Turbines and associated increase in nameplate rated capacity of the Project to 210 MW. By way of letter dated June 17, 2013, the AESO has confirmed that it does not have concerns. The AESO letter is included as Attachment B.

A comparison of the mechanical and electrical characteristics of the Acciona Turbine and the Alstom Turbine is outlined in Table 1 below. Additional information and specifications regarding the Alstom Turbine is included in Attachment D.

Table 1: Technical Overview of Acciona Turbine versus Alstom Turbine

Technical Specifications	**Acciona Turbine**	**Alstom Turbine**
Turbine Model	Acciona AW77 - 1.5 MW	Alstom ECO110 - 3.0 MW
Turbine Nominal Capacity	1.5 MW / 1.67 MVA	3.0 MW / 3.37 MVA
Type	Horizontal axis wind turbine with variable rotor speed	
Rotor Diameter	77 m	109.8 m
Rotor-swept-height	41.5 to 118.5 m	35.1 to 144.9 m
Rotor-swept area per turbine	4,657 m^2	9,469 m^2
Cumulative rotor-swept area	633,352 m^2	662,830 m^2
Power Regulation	Pitch control	
Hub Height	80 m	90 m
Operating Range Rotational Speed	11.7 - 18.3 rpm	7.7 - 13.6 rpm
Cut-In Wind Speed	3.5 m/s	3.0 m/s
Rated (Nominal Power) Wind Speed	11.3 m/s	11.5 m/s
Cut-Out Wind Speed	25 m/s	
Gearbox	Three-stages, 2 planetary / 1 helicoidally	
Generator	6 poles, Double-Fed Induction Generator (DFIG)	
Rated Voltages	Stator (Grid Voltage) 12,000 V, Rotor ≤ 760 V	Stator (Grid Voltage) 1,000 V, Rotor ≤ 760 V
Frequency	60 Hz	
Converter	Back-to-back AC-DC-AC converter, based in IGBT technology, in the rotor circuit	
Power Control Capabilities	Active power control capabilities. Reactive power control capabilities in the range from 0.93 lagging to 0.93 leading for nominal voltage ±10%.	
Low Voltage Ride Through Capability	LVRT capability as per ISO Rules 502.1 - Wind Aggregated Generating Facilities - Technical Requirements	
Braking System	Aerodynamic brake - full feathering	
Yaw System	Four (4) motors and planetary type gear reducers.	
Tower Design	3-section steel tower	4-section steel tower
Transformer	Pad-Mounted located near base of turbine	Contained within nacelle of turbine

The Alstom Turbine is equipped with a power transformer in a lateral housing in the nacelle,[9] whereas the Acciona Turbine uses pad-mount transformers near the base of the turbine. The main function of the power transformer is to step-up the turbine generator voltage to the wind farm internal collector system voltage. Placing the power transformers in the nacelles helps to reduce the power electrical losses in the wind turbine and eliminates the need for external pad-mount transformers. The nacelle transformers therefore also reduce both visual and surface disturbance impacts, as compared to the external pad-mount transformers.

(b) Associated Electrical Facilities Changes

Other than the turbine changes noted above (i.e. changing to the Alstom Turbine and reducing the number of turbines), the associated electrical facilities noted below remain exactly the same as that approved in the AUC Permit other than the number of turbines tied to each of the underground feeders.

The 34.5 kV underground collector system will consist of a total of nine underground feeders which will terminate at the Project's 240 - 34.5 kV step-up substation. The underground cable utilized for the collector system layout will be rated 35 kV, 345 mils of insulation, XLPE insulation type, aluminum conductor with a copper concentric neutral. Cable sizes to be utilized throughout the collection system will include 1,250 kCM AL, 1,000 kCM AL, 500 kCM AL, #4/0 AWG AL and #1/0 AWG AL.

Also installed in a common trench with the collector cable will be a #4/0 Bare CU or Copper Clad Steel ground cable and a fiber optic cable buried in an inner ducting for interconnection for the wind turbines communication system. The underground power cables to be utilized for the collector system will be buried at a minimum depth of 990 mm (3 feet 3 inches) in 610 mm (2-foot) wide trenches.

The wind turbine grounding system will consist of two rings around the perimeter of the turbine foundation and turbine pedestal, each consisting of #4/0 AWG Bare copper or Copper Clad Steel conductor. The grounding system will be designed to limit the resistance for each wind turbine to 10 ohms as well as supply adequate step and touch potentials for the safety of personnel.

The Project substation will consist of two 240 - 34.5 kV transformers (Y-grounded/Y-grounded) 69/92/115 MVA at 65° C with a Delta buried tertiary. In addition, the Project substation will include two 240 kV outdoor type SF6 circuit breakers and four and five 34.5 kV outdoor type SF6 feeder breakers connected to each transformer, respectively, for a total of nine feeder breakers. Protective relaying will include primary and back up transformer differential protection, 34.5 kV bus differential protection, and over-current protection for each of the nine feeder circuits.

(c) Five Associated Turbine Location Amendments

NaturEner attempted, to the absolute extent possible, to plan the Project layout for the Alstom Turbines, based on the approved turbine locations set out in the AUC Permit (the "Permitted Layout"). NaturEner requires approval of amendments to *only* five of the 136 locations cited in the AUC Permit to accommodate its new proposed layout[10] (the "Proposed Layout") as follows:

(a) NaturEner requests re-location of three turbines onto nearby cultivated cropland, rather than on the previously approved native pasture locations; and

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[9] Power transformers located in the nacelle consist of 70 (one per turbine) 34.5 - 1.0/0.69/0.4 kV transformers (three-windings and a fourth auxiliary 400 V-tap shared with 690 V-winding).

[10] See Attachment A-2 map "NaturEner Wild Rose 1 Energy Proposed ECO110 Turbine Locations" showing the proposed lay out of the 70 Alstom Turbines.

(b) NaturEner requests moving two turbine locations greater than 50 metres from the AUC Permit approved turbine locations, while still within the same cultivated cropland field, in order to optimize and accommodate for turbine efficiency and wake effect.

The five requested turbine location changes are between 90 and 210 metres from the previous turbine locations approved in the AUC Permit and from and to the locations identified in Table 2 below.

Table 2: Listing of Current and Proposed Amended Turbine Locations

	AUC Permit Approved Layout with Acciona Turbine			Proposed Layout with Alstom Turbine				
Turbine Number	**Land Use Type**	**Easting (NAD 83)**	**Northing**	**Land Use Type**	**Easting**	**Northing**	**Change in Location**	**Reason for Change**
T14	native pasture	560678	5511051	cultivated	560699	5511201	moved approx. 151 metres	to avoid adverse effect on native pasture
T32	native pasture	561252	5512067	cultivated	561042	5512054	moved approx. 210 metres	to avoid adverse effect on native pasture
T35	cultivated	560797	5512570	cultivated	560949	5512638	moved approx. 167 metres	to accommodate amended layout
T57	cultivated	563209	5512514	cultivated	563299	5512517	moved approx. 90 metres	to accommodate amended layout
T86	native pasture	560411	5517543	cultivated	560362	5517630	moved to approx. 100 metres	to avoid adverse effect on native pasture

Other than these five location changes, NaturEner does not require amendments to any other approved turbine locations identified in the AUC Permit. NaturEner confirms that due to the reduction in the number of turbines, 66 of the 136 locations will no longer be used.

A listing of all 70 locations for the Alstom Turbines is included as Attachment E.

A layout map showing the relative locations of the Acciona Turbines in the Permitted Layout and the proposed locations of the Alstom Turbines in the Proposed Layout is included as Attachment A-1.

3. Reduced Land Affected by Changes and its Ownership

(a) Changes to the Project Layout and Size of the Project Area[11]

While ownership of land is not affected by the change in wind turbines, the selection of a new turbine requires the stated changes to the overall layout of the Project to optimally use the wind resource to develop power and ensure Project viability.

A smaller Project area has been defined for the Proposed Layout compared with the previous Project area. The new Project area includes approximately 56 quarter sections of land (3,700 hectares) (hereinafter referred to as the "Proposed Project Area"),[12] compared to the original Project area of approximately 75 quarter sections (5,054 hectares) (hereinafter referred to as the "Permitted Project Area"). The quarter sections of the Permitted Project Area that have been removed in the Proposed Project Area are shown in black shading in Attachment A-1.

The lands affected by the proposed changes continues to be owned by the same landowner group. The removal of 19 quarter sections from the project does not result in landowners under the Permitted Project Area no longer being involved in the Proposed Project Area. As a benefit, the slight increase in the

[11] See Attachment F, Golder Evaluation of Change Document, Section 3.0, page 8.

[12] See Attachment A-2 map "NaturEner Wild Rose 1 Energy Proposed ECO110 Turbine Locations" showing the Proposed Project Area.

nameplate rated capacity of the Project means that the Project will be able to generate additional energy, which results in higher payments to the Project landowners despite significant reductions in the overall disturbance to Project landowners.

Changes related to the Project characteristics are listed in Table 3 below.

Table 3: Comparison of the Acciona Turbine Layout and Alstom Turbine Layout and Certain Features of Impact on Land and Landowners

Project Characteristic	**Permitted Layout(1)**	**Proposed Layout(2)**
Number of turbines	136	70
Total nameplate capacity	204 MW / 227 MVA	210 MW / 236 MVA
Projected annual electric energy production (at 240 kV Substation Bus)	723.6 GWh/year	748.8 GWh/year
Total Project Area	5,054 ha	3,700 ha
Turbine hub height	80 m	90 m
Rotor diameter	77 m	109.8 m
Area of turbine during operations	14.6 m radius	15.9 m radius
Total permanent disturbed area around wind turbines	9.11 ha	5.56 ha
Width of permanent access roads	5 m	5.5 m
Total permanent access roads disturbance	24.5 ha	19.8 ha
Number of turbines on cultivated	76	37
Number of turbines on tame pasture	17	13
Number of turbines on native prairie or pasture	43	20

Note 1: Permitted Layout using Acciona Turbines as per the AUC Permit
Note 2: Proposed Layout using Alstom Turbines

(b) Consultation with Landowners, Residents, Occupants

Based on the proposed change in turbine and the amended layout, NaturEner confirms there are no adversely affected parties within 2,000 metres of the Project boundary. Notwithstanding this, NaturEner has updated all stakeholders who were previously included in the Participant Involvement Program.

The most recent round of consultation for the Project occurred during Spring 2013, beginning with the mailing of the Project Update Notification Information Package on March 26, 2013. The package included a cover letter explaining the change in turbines and included the proposed amended layout. The letter also indicated that NaturEner would be meeting with all landowners and residents within 800 m of the Project boundary, or as defined earlier as the Proposed Project Area.

During the consultations that followed, only three people had questions or expressed concerns regarding the change in layout. Follow up consultation was conducted with these landowners and NaturEner was advised that all questions had been answered and concerns satisfied.

NaturEner received no other follow up feedback in response to its Project Update Information Package. NaturEner is not aware of any other stakeholder concerns with the proposed turbine and layout changes.

(c) Support from Organizations and Agencies

Support from organizations and agencies is further discussed specifically under Section 5(b) below.

4. Timing of the Proposed Changes

The works for the Project are currently expected to commence during the last quarter of 2013. The proposed implementation schedule is based on the agreed-upon turbine delivery schedule, the timeframe within which AltaLink has indicated completion of the local interconnection, as well as commitments made to parties providing financing and ongoing construction planning work for the Project. To achieve the schedule outlined, approval of this LOE is requested by August 15, 2013.

NaturEner would appreciate consideration by the AUC of its minor requested amendments to the AUC Permit to allow sufficient time to complete all due diligence requirements for financing in time to preserve the Project schedule.

NaturEner additionally requests a one year extension to complete construction under the AUC Permit, from December 31, 2014 to December 31, 2015.

5. Environmental Benefits

(a) Golder Evaluation of Changes

NaturEner engaged Golder Associates Ltd. ("Golder") to prepare an "Evaluation of Changes" document in connection with the proposed changes to the Project, which report is included as Attachment F (hereinafter referred to as the "Golder Evaluation"). The Golder Evaluation provides a concise description of the proposed changes and includes an assessment of the residual effects, in accordance with the *Wildlife Guidelines for Alberta Wind Projects* (ASRD 2011a), as compared to the 2010 Environmental Impact Statement, also conducted by Golder (the "2010 Golder EIS").

Golder determined that, "[w]ith the proposed changes to the Project, specifically the use of larger turbines, there will be fewer turbines and associated Project components required, therefore, the likely adverse environmental effects predicted for the Project are expected to be less".[13]

(b) AESRD and Other Support, Approvals or Non-Objections

All relevant government and non-government organizations and agencies previously consulted with were again consulted. Indications of support or non-objection were received from AESRD – FWD, AESRD (Environmental Operations),[14] AESO,[15] Cypress County,[16] Economic Development Alliance of Southeast Alberta, Telus, Forty Mile Gas Co-op Ltd.,[17] Fortis Alberta Inc. and Elkwater Water Co-op Ltd.

With respect to AESRD – FWD, NaturEner consulted extensively with the Medicine Hat regional office regarding the amendments requested herein and AESRD – FWD provided its sign-off for the revised Project on June 14, 2013. See attached sign-off letter from AESRD - FWD included as Attachment J.

Even though a larger turbine, in general, potentially may create an increased risk for bird and bat mortalities, the removal of 66 turbines from the Project and increased spacing between turbines creates larger flight-path areas for the movement of bats and birds through the Project area. AESRD – FWD

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13 See Attachment F, Golder Evaluation, p 1, para 3.

14 See Attachment G.

15 See Attachment B.

16 See Attachment H.

17 See Attachment I for written confirmation of support from Telus, Forty Mile Gas Co-op Ltd. and Economic Development Alliance of Southeast Alberta.

noted that, in total, the cumulative rotor windswept area of the Project is not materially different and represents an increase of less than 5%.

On May 30, 2013, NaturEner submitted a request for an updated clearance letter from ACCS based upon the Proposed Layout. Golder advised ACCS that no new historical or cultural sites or artifacts were identified during the latest round of field work (as discussed further below). The clearance letter from ACCS is expected to be received by August 2013.

Accordingly, the proposed changes have received all required support, approval, and/or indications of non-objection, as applicable, from AESRD - FWD[18] and Environmental Operations,[19] AESO,[20] Cypress County,[21] Alberta Parks, NAV CANADA,[22] Transport Canada,[23] Alberta Transportation,[24] Economic Development Alliance of Southeast Alberta, Telus, Forty Mile Gas Co-op Ltd.,[25] Fortis Alberta Inc., Elkwater Water Co-op Ltd. and area landowners.

(c) Additional Wildlife Surveys Conducted in Connection with Proposed Turbine Change

In addition to environmental surveys previously conducted, supplemental environmental surveys to support an anticipated turbine change were completed during Spring 2012 and Spring 2013, spanning the entire Proposed Project Area. A Supplemental Wildlife Baseline Report for these Spring 2012/2013 surveys was completed by Golder and submitted to AESRD as an Appendix to the Golder Evaluation.[26] During 2010, the wildlife studies conducted within the Proposed Project Area included a fall bat utilization study and fall avian use study ("AUS"). In 2012, the environmental studies conducted within the Proposed Project Area included a spring AUS, a Richardson's ground squirrel survey, a sharp-tailed grouse lek survey, a raptor survey and a habitat mapping survey. During 2013, the wildlife studies conducted within the Proposed Project Area included a raptor nest verification survey and a sharp-tailed grouse lek survey. All surveys were conducted by Golder using standardized techniques during appropriate time periods to allow repeat surveys in subsequent years, or potentially during post-construction.

Overall, based on the findings of the various wildlife surveys conducted since those detailed within the 2010 Golder EIS, wildlife use of the Proposed Project Area appears to remain consistent. There are several constraints that affect development within the Proposed Project Area, including three northern leopard frog breeding sites, one sharp-tailed grouse lek, one ferruginous hawk nest, two red-tailed hawk nests and one Swainson's hawk nest. The location of these nest and breeding sites have been incorporated by NaturEner into the design of the Proposed Layout. As a result, no proposed turbine locations occur within any of the AESRD recommended setbacks for these nest and breeding sites. In addition, with the decision to select a larger, more efficient turbine than was previously proposed, NaturEner has substantially reduced the number of turbines from 136 turbines to 70 turbines. Of these 70 turbines, only 20 are proposed for native pasture, as compared to 43 turbine locations approved for native pasture in the AUC Permit.

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18 See Attachment J.

19 See Attachment G.

20 See Attachment B.

21 See Attachment H.

22 See Attachment K.

23 See Attachment L.

24 See Attachment M.

25 See Attachment I for written confirmation of support from Telus, Forty Mile Gas Co-op Ltd. and Economic Development Alliance of Southeast Alberta.

26 See Attachment F, Golder Evaluation, Section 5.0, page 10.

(d) Summary of Environmental Effects

The predicted residual effects of the environmental assessment considered the location of the Project, scheduling of construction, method of construction and the mitigation measures applied. This includes the incorporation of setbacks for identified environmental sensitivities, as recommended by AESRD (ASRD 2011a). The Proposed Layout is located within the same area as the Permitted Layout described in the 2010 Golder EIS. The Proposed Layout will be constructed using the same techniques and during the same time frame as was planned for the Permitted Layout. The Proposed Layout will also use the same mitigation strategies and commitments as outlined for the Permitted Layout. Considering this:

- For the Valued Ecosystem Components ("VECs") identified in the 2010 Golder EIS and of AESRD jurisdiction and/or concern, the majority of the conclusions reached in the 2010 Golder EIS regarding the likely residual adverse effects of the Permitted Layout on the different VECs remain unchanged for the Proposed Layout.
- Lower adverse effects are predicted for the Proposed Layout, as compared to the Permitted Layout, for the Soil Quality VEC, Native Pasture VEC and Listed Plants VEC, primarily related to the reduction in the number of turbines and less infrastructure (i.e., reduced surface disturbance).
- Minimal increases in adverse residual effects are expected for the Bird and Bat Species VEC, due to a minimal increase in the rotor-swept area for the Proposed Layout (i.e., mostly offset by the reduction in the number of turbines and the increased spacing between turbines creating larger flight-path areas for the movement of bats and birds through the Project area); this difference is not significant.
- The differences between the Proposed Layout and the Permitted Layout will result in changes that are positive (i.e. reduced habitat loss) and adverse (i.e. minimal increase in rotor-swept area) for the Listed Wildlife Species VEC; these differences are not significant.

Follow-up measures will consist of monitoring to assess the accuracy of predictions made in both the 2010 Golder EIS and the Golder Evaluation. Follow-up programs will occur for site reclamation (soil quality and land use), and Post-construction Monitoring Plans will be conducted to assess effects on birds and bats during the first two years of operation, as developed in consultation with AESRD.

Project activities during construction, operations and decommissioning phases detailed in the 2010 Golder EIS will remain the same. There will, however, be some minor differences with respect to the Project infrastructure (e.g. access roads, turbine footprint, etc.).

(e) Visual Considerations

The effect of the proposed change in turbines was also assessed from the standpoint of visual impact. Although the Alstom Turbine has a taller hub height and a larger rotor diameter than the Acciona Turbine, the decrease in the overall number (by almost half) of turbines materially decreases the visual impact.

To illustrate how approval of the requested amendments will result in reduced visual impacts, two sets of visual simulations were prepared. One set of visual simulations, simulate the Project using Acciona Turbines and the Permitted Layout in accordance with the AUC Permit. The other set of visual simulations uses the Alstom Turbines and the Proposed Layout. The comparative visual simulations use the same vantage points and are included in Attachment C.

(f) Noise Impact Assessment

A Noise Impact Assessment ("NIA") was conducted for the Project, using the methods and criteria described in AUC Rule 012: *Noise Control*. The NIA is included in Attachment N. Noise modeling was completed for the 70 Alstom Turbines in the Proposed Layout configuration.

The NIA concludes that the predicted sound level produced by the Project, combined with ambient sound levels, is lower than the permissible sound level of 40 dBA at all noise receptors (residences) in the area. In addition, the NIA also shows a reduction of the noise level at each of the receptors shown in Table 4 below.

Table 4: Comparison of Predicted Sound Levels at Receptors using Acciona Turbines and Permitted Layout and using Alstom Turbines and Proposed Layout

Receptor ID	Land Owner	Acciona Turbines and Permitted Layout Predicted Sound Level (dBA)	Alstom Turbines and Proposed Layout Predicted Sound Level (dBA)
NR001	Flaig	39.2	38.5
NR003	Ziegenhagel	38.2	37.9
NR004	Good	36.1	35.9
NR004A	Good	See Note 1	36.0
NR006	Elkwater Colony	38.8	38.0
NR007	Elkwater Colony Rental #2	38.9	37.8
NR008	Reesor East	37.4	See Note 2
NR009	H & E Ziegenhagel	36.8	36.2
NR010	Janke North	37.7	36.7
NR011	Janke South	37.5	36.5
NR012	Reesor Ranch West	38.1	37.7
NR013	Freimark	37.5	37.0
NR014	Lutz	37.3	36.7

Note 1: NR004A is a new construction not in place at the time the previous study was done. Predicted sound level at this new construction is, in any case, lower than the AUC permit predicted sound level at NR004 that belongs to the same land owner, and which are located adjacent to one another.
Note 2: There is no longer a residence at NR008 and therefore it has not been considered in the NIA for the new proposed layout.

RELIEF REQUESTED

NaturEner submits that: (i) the requested changes are minor in nature; (ii) no person is directly affected by the requested changes; and (iii) no additional adverse environmental effects will be caused by the requested changes.

NaturEner accordingly respectfully requests consideration and approval of its proposed changes to the AUC Permit by August 15, 2013 and respectfully requests:

(a) Changing the turbines from the Acciona Turbines to the Alstom Turbines;

(b) Reducing the number of turbines from 136 to 70;

(c) Changing the nameplate rated capacity from 204 MW to 210 MW;

(d) Amending the Permitted Layout to the Proposed Layout;

(e) Amending the Permitted Project Area to the Proposed Project Area; and

(f) Extension of the construction deadline in the AUC Permit from December 31, 2014 to December 31, 2015.

If you have any questions or require additional information, please contact me at 403-705-0693 or eyoung@naturener.net.

Yours truly,

Erica Young
VP & General Counsel
Attach.