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To: Oregon Energy Facility Siting Council

From: Sarah Esterson, Senior Siting Analyst

Date: June 15, 2018

Subject: Agenda Item F (Action Item):

Wheatridge Wind Energy Facility, Request for Amendment 2 -

Certificate Holder Referral to Council of Department's Type A Amendment

Process Determination for the June 29, 2018 EFSC Meeting

BACKGROUND

The Oregon Energy Facility Siting Council (Council) issued a site certificate for the Wheatridge Wind Energy Facility on April 28, 2017, authorizing construction and operation of a 500 megawatt (MW) wind energy generation facility (facility) to be located in Morrow and Umatilla counties. The approved but not yet constructed facility would consist of up to 292 wind turbines divided into two groups: Wheatridge West and Wheatridge East; and an interconnection corridor containing up to two parallel overhead 230-kilovolt (kV) transmission lines connecting Wheatridge West and Wheatridge East. In addition, the facility would include the following related and supporting facilities: 34.5 kilovolt (kV) collector lines and substations; meteorological towers; communication and supervisory control and data acquisition ("SCADA") system; operations and maintenance buildings; access roads; temporary construction areas; and temporary concrete batch plants.

The certificate holder is Wheatridge Wind Energy, LLC, (Wheatridge or certificate holder) which is wholly owned subsidiary of NextEra Energy Resources, LLC (NextEra). On May 18, 2018, the certificate holder submitted preliminary Request for Amendment 2 (pRFA2) and a Type B review amendment determination request (Type B Review ADR) pursuant to OAR 345-027-0057. The facility modifications included in pRFA2, as further described below, include changes in wind turbine dimension specifications, and two battery storage systems. The certificate holder requested that the Department consider whether Type B review would be appropriate for either or both proposed changes.

On June 14, 2018, the Department issued its determination that Type A review was appropriate for pRFA2. On May 21, 2018, prior to issuance of the Department's June 13, 2018 Type A review determination, the certificate holder preemptively requested to refer the Department's Type A review determination to Council. (see Attachments 1, 2 and 3)

PROPOSED FACILITY MODIFICATIONS

The proposed facility modifications in pRFA2 include a differing wind turbine model option that would increase turbine hub height from 278 to 291 feet, increase maximum blade tip height from 476 to 499 feet, and reduce minimum aboveground blade tip clearance from 83 to 70.5 feet. Additionally, pRFA2 seeks to construct, operate and retire two battery storage systems, one at 20 megawatts, the second 30 megawatts, which would be located adjacent to the previously-approved facility substation and operation and maintenance building sites within Morrow and Umatilla counties.

ASSESSMENT OF TYPE B REVIEW AMENDMENT DETERMINATION REQUEST

Overview

Site certificate amendment process rules are established in OAR 345-027-0011 to -0100, which includes three review process options ("Type A, B, and C"). Type A review is the default process, and includes a mandatory in-person public hearing on the draft proposed order (DPO), and an opportunity for a person to request a contested case proceeding on the amendment request. The Type A review process also includes longer maximum timelines for certain Department procedural steps (though the Department can complete procedural steps more expeditiously than the maximum time allowed and has already surpassed the maximum time allowed for both Type A and B review for pRFA2). The Type B review process does not include an in-person public hearing on the DPO, and does not have the opportunity for a person to request a contested case proceeding. The Type B review process also has shorter maximum timelines for certain Department procedural steps. The Type C process is only available during facility construction and is not at issue here.

If a certificate holder believes the Type B review is the justifiable amendment review process, it must submit the request pursuant to OAR 345-027-0057(8) and include supporting information to the Department.

Council Scope of Review

Pursuant to OAR 345-027-0057(8), in determining whether a request for amendment justifies review under the Type B Review process described in OAR 345-027-0051(3), the Council may consider factors including but not limited to:

- (a) The complexity of the proposed change;
- (b) The anticipated level of public interest in the proposed change;
- (c) The anticipated level of interest by reviewing agencies;
- (d) The likelihood of significant adverse impact; and
- (e) The type and amount of mitigation, if any.

Pursuant to OAR 345-027-0057(7), in the review of a certificate holder's request to refer the Department's determination, the Council may concur, modify or reject the Department's Type A review determination.

Summary of Staff Evaluation of Type B Review ADR

Based on consideration of the OAR 345-027-0057(8) factors and the analysis and reasoning presented in the Department's June 14, 2018 Type A review determination, incorporated by reference and provided as Attachment 2 to this staff report, the Department determined that pRFA2 be processed under Type A review. The Department based its determination of Type A review on the following:

- The proposed battery storage systems are considered complex; there is an anticipated level of public and reviewing agency interest; and, the likelihood of a significant adverse impact is uncertain.
- There is an anticipated level of interest from members of the public and reviewing agencies in the proposed larger turbines.

Recommended Council Action

The Department recommends the Council conclude, based on the reasoning and analysis provided in the June 14, 2018 determination, that the proposed battery storage systems be considered complex; there is an anticipated level of interest from members of the public and reviewing agencies; and, the likelihood of potential significant adverse impacts is uncertain. The Department also recommends the Council conclude, based on the reasoning and analysis provided in the June 14, 2018 determination, that there is an anticipated level of interest from members of the public and reviewing agencies in the proposed larger turbines. The Department then recommends that Council concur with the Department's June 14, 2018 Type A review determination.

Attachments:

Attachment 1: Wheatridge Wind Energy Facility, LLC's Type B Review Amendment

Determination Request for Request for Amendment 2 (May 18, 2018)

Attachment 2: Department's Type B Review ADR Evaluation and Determination (June 14,

2018)

Attachment 3: Wheatridge Wind Energy Facility, LLC's Referral of Department's June 14,

2018 Type A Review Determination to Council (May 21, 2018)

Attachment 1:

Wheatridge Wind Energy Facility, LLC's Type B Review Amendment Determination Request for Request for Amendment 2 (May 18, 2018)

*Please note: The Type B Review Amendment Determination Request and preliminary Request for Amendment 2 are provided in this attachment. The supporting attachments to pRFA2 have not been included to reduce printed materials, but are available with the pRFA2 documentation provided on the Department's website at: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/WRW.aspx

ESTERSON Sarah * ODOE

From: Pappalardo, Mike < MIKE.PAPPALARDO@nexteraenergy.com>

Sent: Friday, May 18, 2018 3:30 PM **To:** ESTERSON Sarah * ODOE

Cc: Marshall, Jesse; Castro, Scott; Carrie Konkol (carrie.konkol@tetratech.com); Curtiss, Sarah

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CORNETT Todd * ODOE

Subject: Submittal of RFA 2 for Wheatridge Wind Energy Facility, and Request for

Reconsideration for the Wheatridge Wind Energy, LLC's Amendment Determination

Request

Attachments: Final_Wheatridge Request for Amendment 2_05-18-2018.compiled.pdf

Dear Ms. Esterson:

Attached please find a second Request for Amendment ("RFA 2") for the Wheatridge Wind Energy, LLC ("Wheatridge"), Wheatridge Wind Energy Facility ("Project"). In RFA 2, Wheatridge seeks concurrence on a modified range of turbine specifications for use at the Project. In addition, Wheatridge seeks to add energy storage as a related and supporting facility. With this submittal, we are also formally requesting that the Oregon Department of Energy ("Department") reevaluate its April 25, 2018 determination ("Department Response") that RFA 2 should be subject to the Department's Type A amendment review process.

Please feel free to contact me at any time if you have any questions or concerns regarding this submittal.

Sincerely,

Mike Pappalardo | Environmental Manager

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May 18, 2018

VIA ELECTRONIC MAIL

Ms. Sarah Esterson, Senior Siting Analyst 550 Capitol St. N.E., 1st Floor Salem, OR 97301

Re: Submittal of RFA 2 for Wheatridge Wind Energy Facility, and Request for Reconsideration of Department's April 25, 2018 Response to Wheatridge Wind Energy, LLC's Amendment Determination Request

Dear Ms. Esterson:

On behalf of Wheatridge Wind Energy, LLC ("certificate holder" or "Wheatridge), please find enclosed a second Request for Amendment ("RFA 2") for the Wheatridge Wind Energy Facility ("Project"). In RFA 2, the certificate holder seeks concurrence on a modified range of turbine specifications for use at the Project. In addition, the certificate holder seeks to add energy storage as a related and supporting facility. Energy storage will be included within the site boundary in existing micro-siting corridors adjacent to the Project substations.

With this submittal, we are also formally requesting that the Oregon Department of Energy ("Department") reevaluate its April 25, 2018 determination ("Department Response") that RFA 2 should be subject to the Department's Type A amendment review process. In the Department Response, Department staff noted that resubmittal of Wheatridge's Amendment Determination Request ("ADR") in conjunction with RFA 2 could support the Department's reevaluation of the applicability of Type B review and the OAR 345-027-0057(8) factors, as the RFA 2 provides additional information beyond the ADR. Having now finalized RFA 2 and carefully evaluated the proposal against the relevant regulatory standards, we believe the applicable rules support a conclusion that no site certificate amendment is required for the proposed changes. At the same

time, in the event the Department were to determine that an amendment is in fact required for one or both of the proposed changes, for the reasons outlined below and in RFA 2, we believe the Department's Type B review process is the more appropriate review path.

A. The language in OAR Chapter 345, Division 27 indicates that an amendment to the site certificate is not required.

Although RFA 2 analyzes the proposed changes under the applicable Energy Siting Council ("Council") standards, upon further review of OAR Chapter 345, Division 27, the proposed changes do not appear to trigger the need to amend the Project's site certificate in the first instance, because the proposed changes do not fall within the list of changes triggering the need for an amendment under OAR 345-027-0050. Specifically, the proposed changes do not involve: (1) a transfer of ownership, (2) the application of later adopted laws, or (3) an extension of the construction schedule. Likewise, the proposed changes do not (1) involve a proposal to design, construct, or operate a facility in a manner different from the description in the site certificate where the proposed change could result in a significant adverse impact not previously addressed by the Council, (2) impair the certificate holder's ability to comply with a site certificate condition, or (3) require a new condition. As detailed in RFA 2, there are no significant adverse impacts from the proposed changes that the Council has not addressed in an earlier order, and the proposed changes do not impact the certificate holder's ability to comply with any of the site certificate conditions. And although the Council may determine that clarification of certain existing conditions is helpful given the addition of the energy storage related and supporting facility, as outlined in RFA 2, the proposed changes do not require new conditions or changes to existing conditions.

Further, a comprehensive review of OAR Chapter 345, Division 27 demonstrates that the proposed changes are precisely the types of changes that should be authorized without an amendment. In particular, OAR 345-027-0053(1), Changes Exempt from Requiring an Amendment, provides that a site certificate amendment is not required if the proposed change is in substantial compliance with the terms and conditions of the site certificate and is a change:

"(a) [t]o an electrical generation facility that would increase the electrical generating capacity and would not increase the number of electric generators at the site, change fuel type, increase fuel consumption by more than 10 percent or enlarge the facility site."

Although the proposed changes outlined in RFA 2 would not increase the electrical generating capacity, the proposed changes otherwise satisfy the OAR 345-027-0053(1) requirements for proceeding without an amendment (*i.e.* the proposed changes are in substantial compliance with the terms of the site certificate as outlined in RFA 2, there is no increase in number of electrical

generators, there is no change in fuel type or fuel consumption, and the facility site will not be enlarged). Put simply, it would be absurd for the Department to conclude that an amendment is not required for a proposal that involves an *increase* in generating capacity but that an amendment is required for an identical project that does not involve an increase in generating capacity. For these reasons, we believe an amendment to the site certificate should not be required for the proposed changes.

B. Nevertheless, even if the Department were to determine that an amendment is required for one or both of the proposed changes, the Department's Type B process is the appropriate review path.

In the Department Response, the Department concluded that RFA 2 should be processed under Type A review because the proposed modifications are considered complex, there is an anticipated level of interest in the proposed modifications from members of the public and reviewing agencies, and the likelihood of potential significant adverse impacts from the proposed changes is uncertain, primarily resulting from components not previously evaluated (battery storage). For the reasons outlined below, we believe that these conclusions are erroneous and respectfully request that Department staff reconsider based on the information provided below and in RFA 2.

1. The proposed changes are not complex.

In the Department Response, the Department noted in response to the factor that directs the Department to evaluate the "complexity of the proposed change":

"because the proposed battery storage systems are new components not previously evaluated by Council for this facility or historically for any EFSC facility, the anticipated level of public and reviewing agency interest, and based on the uncertainty of potential adverse environmental impacts, the Department considers the proposed modifications to be complex." Department Response at 3.

As an initial matter, it is unclear why the Department believes that the proposed addition of the energy storage facility is complex. By stating that the addition may be controversial and that the potential impacts are uncertain, the Department's conclusion seems to conflate other factors into the "complexity" factor. Beyond identifying the anticipated level of interest in the proposal, however, the Department provides no analysis of why the addition of energy storage within a previously approved micro-siting corridor or the proposed modifications to the turbine specifications are complex.

As outlined in RFA 2, the proposed modifications to the turbine specifications are not complex at all, and in fact, are the sorts of technological changes that are typical in an industry where turbine manufacturers offer new turbine models with improved technology and retire older models approximately every one to two years. In order to allow flexibility in the choice of wind turbines at the time of construction, Wheatridge analyzed impacts for two layouts using two different turbine models, while limiting the total generating capacity to 500MW. The purpose of this flexible approach was to allow Wheatridge to select the most appropriate turbine model available leading into construction. The proposed modifications to the turbine specifications described in RFA 2 are consistent with this overall approach and do not present any complexities that warrant application of the Type A review process.

With respect to energy storage, although not previously reviewed by the Council, energy storage as a related and supporting facility to an energy facility was submitted as part of an amendment request to the Montague Wind Project, which is currently under review. Moreover, although fairly new to Oregon, energy storage has been a growing trend in the energy industry to support the delivery of renewable energy, with more than 132 grid-scale lithium-ion systems operational in the U.S. as of mid-2016¹. Energy storage sites are not complex as they (a) have a relatively small footprint, typically between one and five acres; (b) have insignificant visual impact, particularly in the context of wind turbines, due to the low height of the energy storage site enclosures (usually between 15 and 20 feet); and (c) have less noise output compared to wind turbines. Existing site certificate conditions require development of a site-specific Emergency Management Plan and a site health and safety plan. Wastes generated by the energy storage facility will be handled by a licensed firm and disposed of at a facility permitted to handle them in accordance with applicable site certificate conditions, laws, and regulations. As described in RFA 2, provisions regarding the energy storage facility will be incorporated into these plans. Moreover, as outlined in RFA 2, because the energy storage facilities will be part of the substation sites, located within existing micro-siting corridors, and subject to existing site certificate conditions, the addition of the facilities to the Project is not complex and therefore does not warrant application of the Type A review process.

2. The is no evidence that there will be sufficient interest in the proposed changes from members of the public and reviewing agencies to warrant application of the Type A review process.

In the Department Response, the Department noted that it expects a "moderate level of interest" in the proposed amendment based on historic public interest in the Project's prior proceedings.

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¹ Hart and Sarkissian, *Deployment of Grid-Scale Batteries in the United States*. Prepared for Office of Energy Policy and Systems Analysis, June 2016.

The Department reasoned: "[b]ecause over 40 comments were received during the draft proposed order phase of the application and a contested case proceeding occurred, and 7 comments were received on the recent site certificate transfer request (RFA 1), the Department anticipates a moderate level of general public interest in EFSC proceedings for this facility." Department Response at 3-4. Likewise, the Department concluded that it anticipates a level of interest from several reviewing agencies.

Although the anticipated level of public and agency interest was not the only basis for the Department's determination that the proposed amendment should be subject to Type A review, we understand based on conversations with Department staff that even if Wheatridge opts to remove the addition of energy storage from RFA 2, Department staff nevertheless intends to subject the proposed amendment to the Type A review process based, in large part, on the previous level of public interest in and controversy surrounding the Project. We believe this is inconsistent with the plain language of the amendment rules.

OAR 345-027-0051(3) provides the Department and the Council may consider "the anticipated level of public interest *in the proposed change*," (emphasis added) not the level of interest in the facility itself or the previous proceedings related thereto. In the Department Response and subsequent conversations with Department staff, it appears that the Department is basing its conclusion, at least in part, on the level of public interest in prior proceedings and not on the anticipated level of interest in the proposed blade height change (or, for that matter, the proposed battery storage facility).

Wheatridge acknowledges that the level of interest in past proceedings may be an indication of interest in the proposed change, but if that is the case, the nature and extent of the previous interest is necessarily relevant. Although the Department Response indicates that 40 comments were received during the draft proposed order phase of the application, a contested case proceeding occurred, and seven comments were received on the recent site certificate transfer request, further review of those comments reveals that the majority of the comments were actually in favor of the Project, with only a fraction opposed. For example, of the 52 comments filed during the application for site certificate, 33 were in favor of the Project, eight were opposed to the Project, seven were neutral, and four unknown. Likewise, of the seven comments submitted during the first request for amendment, one was in favor of the project, one was against, four were neutral, and one was unknown. Thus, even if the level of interest in past proceedings may be an indication of potential interest (and again, the plain language requires the Department to evaluate the anticipated level of public interest in the *proposed change*), the record demonstrates that the majority of the "interest" in the project was favorable and it would not be reasonable to subject the amendment to a Type A process based on favorable or neutral interest.

Moreover, the issue raised in many of the comments and evaluated in the contested case was whether the applicant was required to propose its gen-tie line as part of its application for site certificate or whether the gen-tie line could be permitted through a separate local process. That issue has now been conclusively resolved by the Council and, on May 2, 2018, Morrow County issued a decision granting approval of the Project's gen-tie. Thus, the primary issue raised in prior proceedings is neither related to the proposed change nor is it a "live" issue of controversy that could be raised in a proceeding on the proposed amendment. And in any event, the Department should not defer to a Type A process in anticipation of public interest around issues that are not germane to the amendment request.

Further, if the Department bases its amendment path determination solely on prior interest in proceedings related to the Project rather than the nature of the proposed change itself, the Department risks applying differing procedural requirements (Type A or Type B) to different projects bringing forth *identical* amendment requests. Not only would this lead to an arbitrary application of the amendment rules, it would allow project opponents to force certificate holders into Type A processes for all requested amendments by simply opposing a project during the initial siting process. Such application of the rules would be arbitrary and capricious and contrary to the plain language of the amendment rules, which provide a more streamlined process for less complex changes.

3. There will be no significant impacts from the proposed changes.

In the Department Response, the Department noted that the ADR did not include an impact assessment to support the Department's review of the proposed modifications to the turbine specifications and the proposed addition of energy storage under applicable Council standards. The Department concluded that it was uncertain if there would be potential adverse impacts from the proposed changes. However, as outlined in RFA 2, there will be no significant impacts from the proposed changes. At a minimum, there is not a sufficient likelihood of significant adverse impact to warrant application of the Type A review process.

C. Conclusion.

For the aforementioned reasons, we respectfully request Department staff to reconsider its determination that RFA 2 should be subject to the Type A review process and instead conclude that an amendment to the site certificate is not required for either of the proposed changes. In the

event the Department does conclude that an amendment is required for one or both of the proposed changes, we respectfully request Department staff to conclude that the Department's Type B process is the appropriate review path.

Very truly yours,

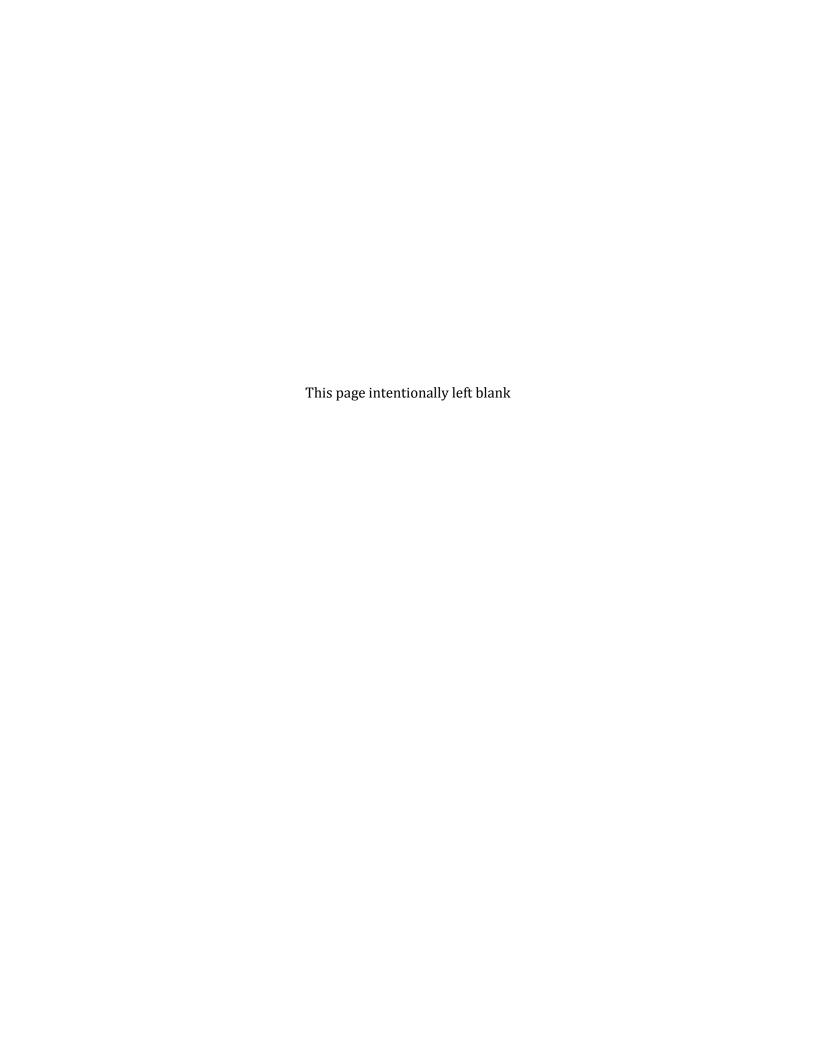
Sarah Stauffer Curtiss

SSC:pjn

cc: Mr. Jesse Ratcliffe

Mr. Maxwell Woods Mr. Todd Cornett Mr. David Filippi

Client



Request for Amendment #2 for the Wheatridge Wind Project

Prepared for



Prepared by





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Figure 1. Project Facilities Overview

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Attachment 1. Redlined Site Certificate

Acronyms and Abbreviations

ADR Amendment Determination Request

ASC Application for Site Certificate

dBA A-weighted decibels

EFSC Energy Facility Siting Council
FAA Federal Aviation Administration

MW megawatt

NEER NextEra Energy Resources, LLC
OAR Oregon Administrative Rules

ODFW Oregon Department of Fish and Wildlife

ODOE Oregon Department of Energy

ORS Oregon Revised Statutes

Project Wheatridge Wind Energy Facility

RFA 2 Request for Amendment 2

Wheatridge Wheatridge Wind Energy, LLC



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1.0 Introduction

Wheatridge Wind Energy, LLC (certificate holder or Wheatridge) is submitting a second Request for Amendment (RFA 2) for the Wheatridge Wind Energy Facility (Project). The Project is a wind energy facility approved by the Energy Facility Siting Council (EFSC) with a capacity to generate up to 500 megawatts (MW) of electricity with up to 292 wind turbines. The Project has not yet been built; consistent with the conditions of the site certificate, construction will begin by May 24, 2020, and be completed by May 24, 2023.

The Project is divided into two sections, Wheatridge West and Wheatridge East. Wheatridge West is located entirely within Morrow County, bisected by Oregon Highway 207, and is approximately 5 miles northeast of Lexington and approximately 7 miles northwest of Heppner. Wheatridge East is located approximately 16 miles northeast of Heppner, and includes land in both Morrow and Umatilla counties. Wheatridge West and Wheatridge East are connected via a 230-kilovolt transmission line (Intraconnection Line). Additional related and supporting facilities to the Project will include an electrical collection system, collector substations, meteorological towers, communication and supervisory control and data acquisition systems, operations and maintenance buildings, new or improved access roads, and temporary construction areas.

The primary purpose of RFA 2 is to take advantage of technological advances, including turbine and battery technology. Therefore, Wheatridge proposes to:

- 1. Clarify the range of turbine specifications analyzed.
- 2. Add energy storage as a related and supporting facility.

1.1 Existing Site Certificate and Prior Amendments

The site certificate for the Project was issued in April 2017 and became effective May 24, 2017. On May 17, 2017, the certificate holder provided notice, pursuant to Oregon Administrative Rules (OAR) 345-027-0100(2), to the Oregon Department of Energy (ODOE) of a transfer of ownership of the certificate holder. On June 14, 2017, the certificate holder filed a Request for Transfer of the Wheatridge Wind Energy Facility Site Certificate; this was Request for Amendment 1. The First Amended Site Certificate for the Wheatridge Wind Energy Facility was approved in July 2017 and became effective August 11, 2017.

1.2 Amendment Required under OAR 345-027-0050 & Review Process under OAR 345-027-0051

The certificate holder submitted an amendment determination request for a Type B review to ODOE on April 9, 2018. On April 25, 2018, ODOE responded, after reviewing the Amendment Determination Request (ADR) and considering the OAR 345-027-0057(8) factors, that the RFA 2 should be processed under Type A review. ODOE noted in its letter that submittal of an ADR in conjunction with the preliminary RFA could support the Department's reevaluation of Type B

review and the OAR 345-027-0057(8) factors by providing the full information as required in an RFA, in accordance with OAR 345-021-0100, and the certificate holder's evaluation of compliance with Council standards. Therefore, the certificate holder is submitting this supplemental amendment determination request and preliminary RFA (RFA 2) to provide the necessary information for a finding: (1) that no site certificate amendment is required or (2), in the alternative, if an amendment is required for the proposed clarification of turbine specifications or the addition of energy storage or both, the Type B process is the appropriate review path.

Changes that automatically follow the Type A process are described in OAR 345-027-0051(2), (3), and (4). The changes proposed in RFA 2 do not meet these criteria. The proposed changes do not transfer ownership of the facility; no later-adopted laws apply to the proposed modified facility; and there is no change to the construction deadlines. As demonstrated in this RFA 2, there are no significant adverse impacts from the proposed changes that the Council has not addressed in an earlier order, and the proposed changes do not impact the certificate holder's ability to comply with a site certificate condition. Although the certificate holder believes that the proposed changes do not require new conditions or changes to existing conditions, with the addition of the energy storage facility, the Council may determine that clarification of certain existing conditions is helpful as referenced in RFA 2.

The certificate holder understands that under OAR 345-027-0057(8), the Department considered the anticipated level of public interest in the proposed change when it made its initial determination regarding Type A vs. Type B process. The certificate holder has reviewed prior public comments made during the application phase and Request for Amendment 1 and none of these comments related to the types of impacts that could change as a result of the proposed modifications (i.e. visual impact and waste handling). In addition, the proposed changes are not complex, are unlikely to result in significant adverse impacts, and there is little anticipated interest by reviewing agencies in the proposed change. No new mitigation will be required as a result of the proposed changes.

As part of the Application for Site Certificate, in order to allow flexibility in the choice of wind turbines at the time of construction, Wheatridge analyzed impacts for two layouts using two different turbine models, while limiting the total generating capacity to 500MW. The purpose of this approach would allow flexibility for Wheatridge to select the most appropriate turbine model available at the time the turbines are acquired so long as the turbines are of no greater impact than allowed for in the Site Certificate and satisfy all the pre-construction conditions of Site Certificate. This flexibility was required because turbine manufacturers offer new turbine models with improved technology and retire older models approximately every 1 to 2 years.

In the Application for Site Certificate (ASC), Wheatridge analyzed Turbine layout Option 1 that utilizes 292 1.7MW GE turbines, and Turbine layout Option 2 that utilizes 200 2.5MW GE turbines. This approach of analyzing impacts for two turbine types allows for the representation of a range of turbine technologies currently available and forecasted across all turbine vendors and their corresponding impacts in the Project. However, Wheatridge requested micrositing flexibility within the Site Boundary in regard to the final layouts for any turbine model whose impacts are less than

or equal to these two studied layouts and their associated facilities. There would be no greater impact from the modified turbine dimensions than those that were previously analyzed. Wheatridge analyzed visual impacts for turbines with maximum blade tip height of up to 525 feet in the ASC. In addition, updated noise modeling confirms that noise impacts would be similar to those reviewed in the ASC.

As described in the Final Order on the ASC, the Council recognized the requested need for the certificate holder and wind energy developers to have flexibility to "microsite" the final location of wind turbines and related infrastructure after issuance of a site certificate, based on final turbine selection, geotechnical constraints, site-specific wind resource factors, avoidance of high-value wildlife habitat, and the desire to reduce conflict with farming practices. The site certificate conditions were developed in consideration of micrositing which allows for flexibility in turbine selection and turbine placement. The site certificate conditions that were imposed on the wind generation facility were also developed to ensure compliance with Council standards and in response to public and agency comments for the Facility. The proposed modified turbine specifications do not change any site certificate conditions nor the ability to comply with any site certificate conditions. Forcing a complex review type (Type A), similar to the ASC process, for approved micrositing with no increase in impacts undermines the site certificate and the ASC process. Therefore, Wheatridge is resubmitting an ADR in conjunction with this RFA 2 and requesting that the Department either conclude that a site certificate amendment is not required to address the modified turbine specifications, or, if a site certificate amendment is deemed necessary, 1 subjecting this RFA 2 to the Type B review process.

Although not previously reviewed by Council, energy storage as a related and supporting facility to an energy facility was submitted as part of an amendment request to the Montague Wind Project which is currently under review. Moreover, although fairly new to Oregon, energy storage has been a growing trend in the energy industry to support renewable energy for several years. Energy storage sites are not complex because of their relatively small footprint, typically between one and five acres; visual impact which is insignificant compared to wind turbines due to the low height of the enclosures (usually between 15 and 20 feet); and less noise output compared to wind turbines. In addition, Lithium-ion battery technology is not new; it is widely used in cell phone and laptop batteries. Recently, however, Lithium-ion battery technology has advanced so that it is more affordable, longer lasting, and able to be manufactured at the scale required for utility use. In general, the batteries that will be used at the energy storage site are larger versions of the wellstudied Lithium-ion batteries that have been used safely in consumer electronics and vehicles since the 1990's. However, unlike these consumer uses, the batteries at the energy storage site will be restricted from the public via a fenced and secured sited, have a gas pressured deluge fire suppression system, an emergency action plan if an emergency should occur, and be operated and maintained by trained and skilled operations personnel. Because the energy storage facilities will be part of the substation sites and the site certificate conditions were written for the facility, no changes to the site certificate conditions are necessary with the addition of energy storage sites as a

¹ Sarah Stauffer Curtiss, letter to Ms. Sarah Esterson, ODOE Senior Siting Analyst, May 18, 2018

related and supporting facility. The certificate holder can still comply with all site certificate conditions. Although the certificate holder believes that no new or changed conditions are necessary, with the addition of the energy storage facility, the Council may determine that clarification of certain existing conditions is helpful as referenced in RFA 2. Therefore, the certificate holder is resubmitting an ADR in conjunction with this RFA 2 requesting concurrence that adding energy storage facilities does not trigger the need for a site certificate amendment or, if an amendment is deemed necessary, concluding that the addition of battery storage should be subject to the Type B review process.

OAR 345-027-0057(8) In determining whether a request for amendment justifies review under the type B review process described in 345-027-0051(3), the Department and the Council may consider factors including but not limited to:

OAR 345-027-0057(8)(a) The complexity of the proposed change;

The primary purpose of RFA 2 is to take advantage of technological advances, including turbine and energy storage technology. Wheatridge proposes to modify the dimensions of the turbines; there will be no increase in MW and the change will have similar or fewer impacts as what was analyzed in the ASC. RFA 2 will also propose to add energy storage systems as a related or supported facility within previously surveyed areas of the Site Boundary, adjacent to project substations. The Site Boundary (also referred to as micrositing corridor) will not be changed; therefore, there are no new areas or resources (e.g., different habitat types) to consider that were not previously evaluated. In general, the proposed changes lack complexity. Ultimately, the Facility will be constructed and operated in the same manner as approved by the Council which imposed conditions, as necessary.

OAR 345-027-0057(8)(b) The anticipated level of public interest in the proposed change;

The Council has already imposed conditions in response to past public comments during the siting process. As noted above, the proposed changes lack complexity, and will not result in any changes to the project that will affect the public. Any public interest is anticipated to largely be in support of the Project similar to the positive public interest during the ASC process.

OAR 345-027-0057(8)(c) The anticipated level of interest by reviewing agencies;

There will be no change to the previously approved Site Boundary. Reviewing agencies commented on the site certificate, which informed the development of the site certificate conditions. The certificate holder is coordinating with agencies that may be interested in the changes, such as the Department of Defense, DOGAMI, Morrow and Gilliam counties planning departments, and the Orgon Department of Aviation in advance of submittal. The certificate holder understands that the ODOE review process includes outreach to respective agencies as a matter of process, but it is anticipated that their interest will be low in comparison to other energy projects. Because the proposed changes to the Wheatridge Wind Energy Facility comply with all existing conditions, the anticipated level of interest by reviewing agencies is low.

OAR 345-027-0057(8)(d) The likelihood of significant adverse impact; and

The Council approved the use of micrositing corridors for the Wheatridge Wind Energy Facility to allow flexibility in siting of the wind generation components in order to account for geotechnical constraints and turbine procurement options during final design. Therefore, the potential for significant adverse impacts from facilities within the Site Boundary has already been reviewed. RFA 2 proposes taller turbines, but potentially fewer turbines, as well as the addition of energy storage—all within the previously approved Site Boundary. Wheatridge anticipates the requested flexibility in final turbine model selection will result in the same or fewer impacts than was previously evaluated as presented in this RFA 2. Therefore, there is little likelihood of significant adverse impact.

OAR 345-027-0057(8)(e) The type and amount of mitigation, if any.

ODOE agreed that for the reasons described above, the proposed modifications are not likely to result in new mitigation for temporary and permanent habitat impacts.

2.0 Certificate Holder Information – OAR 345-027-0060(1)(a)

OAR 345-027-0060(1) To request an amendment to the site certificate required by OAR 345-027-0050(3) and (4), the certificate holder shall submit a written preliminary request for amendment to the Department of Energy that includes the following:

OAR 345-027-0060(1)(a) The name of the facility, the name and mailing address of the certificate holder, and the name, mailing address, email address and phone number of the individual responsible for submitting the request.

2.1 Name of the Facility

Wheatridge Wind Energy Facility

2.2 Name and Mailing Address of the Certificate Holder

Jesse Marshall

Wheatridge Wind Energy, LLC

FEW/JB

700 Universe Blvd.

Juno Beach, FL 33408

2.3 Current Parent Company of Certificate Holder

Matt Handel

NextEra Energy Resources, LLC

FEW/JB

700 Universe Blvd

Juno Beach, FL 33408

2.4 Name and Mailing Address of the Individuals Responsible for Submitting the Request

Mike Pappalardo

Environmental Manager

NextEra Energy Resources, LLC

3256 Wintercreek Drive

Eugene, OR 97405

Mike.Pappalardo@nexteraenergy.com

(541) 302-1345

3.0 Detailed Description of the Proposed Change - OAR 345-027-0060(1)(b)

OAR 345-027-0060(1)(b) A detailed description of the proposed change, including:

RFA 2 proposes two changes to the Project, as discussed in the following sections.

3.1 Clarify Turbine Specifications

The certificate holder seeks EFSC approval to clarify the turbine specifications approved for use at the Project. Table 1 shows the range of turbine specifications the applicant used to determine potential impacts as part of the ASC compared to RFA 2.

499.7 feet (152.3 m)

70.5 feet (21.5 m)3

Specification	Prior Analysis	RFA 2	
Maximum Blade Length	197 feet (60 m)	204.1 feet (62.2 m)	
Maximum Hub Height	278 feet (85 m)	291.3 feet (88.6 m)	
Maximum Rotor Diameter	393 feet (120 m)	416.7 feet (127 m) ¹	

476 feet (145 m)²

83 feet (25 m)

Table 1. Turbine Specification Range

Total Maximum Blade Tip Height (tower hub

height plus blade length) Minimum Ground Clearance

The Site Certificate does not restrict individual turbine generating capacity. Turbine specifications (hub height, maximum blade tip height, minimum ground clearance, rotor diameter) are dependent on the turbine model selected. The proposed turbine specification changes to the Project will allow the certificate holder to select a turbine type with specifications in the approved range, but that may require fewer turbines to generate the same maximum generating capacity, as authorized by the Site Certificate. All turbines will still be located within the approved micrositing corridors.

3.2 Add Related and Supporting Facility

Energy storage will be included within the site boundary adjacent to project substations. Wheatridge proposes a 20 MW energy storage site in Wheatridge East and 30 MW energy storage site in Wheatridge West. Energy storage allows for energy generated from a wind facility to be stored as available, and later deployed as needed, providing greater consistency of energy supply and the opportunity to respond to market demands. The energy storage will consist of lithium(Li)ion batteries in a building (series of modular containers may also be used) as described in more detail below:

- For building enclosure, footprint of approximately 80 feet in length by 100 feet in width (20) MW) and 190 feet in length and 100 in width (30 MW) by 15 feet tall.
- Approximately eighteen inverters with associated step up transformers, each having a combined footprint approximately 8 feet by 4 feet and power rating for 2.7 mega-voltampere (MVA).
- Interconnection facilities including a control house, protective device, and power transformer. The actual design of energy storage, inverters and batteries may change, but the estimated project size will not exceed 5 acres. Battery containers and inverter skids will either be placed on an engineered grade or on poured concrete foundations, depending on site conditions and Morrow and Umatilla County Building Department requirements.

^{1.} The maximum rotor diameter specifications provided by GE for this model include an additional 1.3 meters to account for the hub

^{2.} The ASC assumed a maximum blade tip height of 525 feet (160 meters) for the visual impact analysis. All other analyses assumed 476 feet for maximum blade tip height.

^{3.} Assumes an 85 meter tower with a 127 meter rotor diameter.

Battery and inverter equipment will be electrically connected via a combination of above ground cable trays, underground conduit, and covered cable trenches. Site surfacing will remain primarily gravel.

Site Certificate Conditions imposed on the Project will apply to the energy storage site and no new conditions are needed to comply with the standards.

3.3 Effect of Proposed Changes on the Project – OAR 345-027-0060(1)(b)(A)

OAR 345-027-0060(1)(b)(A) a description of how the proposed change affects the facility,

According to the Project's Final Order (April 2017), EFSC has previously approved site certificates for wind energy facilities before the final layout has been decided, and before the actual impacts (such as habitat impacts) are known. EFSC has recognized the need for wind energy developers to have flexibility to "microsite" the final location of wind turbines and related infrastructure after issuance of a site certificate. In order to accommodate the need for flexibility, the analysis conducted to support issuance of the site certificate reflected a 'worst-case' scenario for the facility components. Based on this analysis, modifications can be made to the final location and dimensions of the wind turbines and related infrastructure while remaining within the range of impacts considered within the site certificate. Micrositing considerations include the size of the turbine selected and available for the facility, optimization of capture of the wind energy resource, geotechnical factors, and avoidance of higher-value wildlife habitat, among others. With that in mind, the proposed changes will have minimal effects on the Facility, as outlined below:

- As described in Section 1, selection of a turbine type can result in more cost-effective energy generation, and can potentially significantly reduce a generation facility's physical footprint by requiring less turbines. Regardless of the turbine type selected, the certificate holder will construct all Project turbines and the proposed energy storage structures within the previously approved micrositing corridors. In addition, visual impacts were already assessed in the ASC for turbines up to 525 feet. There will be no change to the previously approved Site Boundary or to any of the micrositing corridors.
- Wind energy is not a steady source of power. It fluctuates depending on factors such as location, weather, and time of day. Whereas the Project substation transforms voltage from low to high values to connect to the Project interconnection transmission line as part of the distribution process, energy storage can smooth out the variability of energy flow, and store excess energy when demand is low in order to release it when demand is high. Therefore, the energy storage system will support the facility's energy supply to the regional grid by stabilizing the wind energy resource to allow for better control of the Project's energy distribution in response to market and customer demands.

Overall, the proposed changes to the Project are typical to industry micrositing. The Project will be constructed and operated substantially in the same manner as previously approved by EFSC. Ultimately, the proposed changes will maximize the use of current technology to minimize impacts, while supporting renewable energy production in the region.

3.4 Applicable Laws and Council Rules - OAR 345-027-0060(1)(b)(B)

 $OAR\ 345-027-0060(1)(b)(B)$ a description of how the proposed change affects those resources or interests protected by applicable laws and Council standards, and

In general, the proposed changes do not affect the resources or interests protected by applicable laws and EFSC standards in a substantially different way than approved by EFSC as demonstrated in Section 6. Since the first amendment request, there has been no change to local, state, or federal law that would prohibit the changes requested in RFA 2. Compliance with applicable laws is integrated into the site certificate conditions, including conditions related to pre-construction habitat surveys, noise analysis, setback verification, the National Pollutant Discharge Elimination System 1200-C permit, consultation with the Oregon Department of Fish and Wildlife (ODFW), the Oregon Department of Geology and Mineral Industries, and the Federal Aviation Administration (FAA) 7460-1 filings, among others.

With the proposed changes, the certificate holder can comply with the site certificate conditions for the Project. Sections 4.0 and 6.0 further demonstrate how the proposed changes are consistent with EFSC's previous findings. The Site Boundary and micrositing corridors will not be changed; therefore, there are no new areas or resources that were not previously evaluated. The Project will be constructed and operated in substantially the same manner as already approved by EFSC.

3.5 Location of the Proposed Change - OAR 345-027-0060(1)(b)(C)

 $OAR\ 345-027-0060(1)(b)(C)$ the specific location of the proposed change, and any updated maps and/or geospatial data layers relevant to the proposed change.

A figure showing the location of energy storage sites is included as Figure 1. The two energy storage sites will be constructed adjacent to the Project substations and have a maximum permanent disturbance area within the micrositing corridors of up to 5 acres each. However, because they will be adjacent to the substations where temporary impacts are already anticipated, construction impacts from the energy storage sites will occur within the 5-acre disturbance area already analyzed and there will be no additional temporary impacts. Furthermore, because the proposed change in turbine specifications will allow Wheatridge to use fewer turbines to generate the same maximum generating capacity, permanent disturbance associated with the modified facility will be similar to or less than the disturbance presented in the ASC. Accordingly, the certificate holder anticipates that the maximum acres of permanent disturbance will be the same as outlined in the Final Order (171 acres of permanent disturbance) or less.

4.0 Division 21 Requirements - OAR 345-027-0060(1)(c)

OAR 345-027-0060(1)(c) References to any specific Division 21 information that may be required for the Department to make its findings.

4.1 OAR 345-021-0010(1)(a) – Information about the Applicant and Participating Persons

The certificate holder's information, including contact information, is included in Section 2. Wheatridge is a wholly-owned indirect subsidiary of NextEra Energy Resources, LLC (NEER). The full name and address of NEER is provided in Section 2.

No other participants are anticipated at this time, with the exception of potential third party permits that will be obtained by the construction firm selected to build the Project. Wheatridge anticipates that these third-party permits may include permits for obtaining aggregate and other construction materials, transporting materials to the site, and other building-related permits that are typically obtained immediately prior to construction activities.

4.2 OAR 345-021-0010(1)(d) - Organizational Expertise

The certificate holder is a wholly-owned, indirect subsidiary of NEER. As noted in RFA 1, NEER is headquartered in Juno Beach, Florida, and is the world's largest generator of wind and solar renewable energy. NEER is a regionally diversified company with approximately 5,000 employees dedicated to the production of approximately 19,882 MW, from 175 facilities in 29 states and Canada. With more than 9,365 wind turbines in its fleet, NEER's wind generation capacity totals more than 13,851 MW. NEER is also capable of generating more than 420 net MW of electricity from natural gas facilities, operates three nuclear power plants with a capacity of more than 2,700 MW, and operates more than 2,100 MW of solar energy. It is estimated that nearly 95 percent of the electricity produced by NEER comes from clean or renewable sources.

Along with its rate-regulated sister company, Florida Power and Light, NEER is a wholly owned subsidiary of NextEra Energy, Inc. (NYSE NEE). NEER Energy, Inc. is a Fortune 150 Company with a market capitalization of approximately 66 billion dollars. The financial strength of NEER and its parent company provides the company with the financial capital to self-finance and build up to 4 billion dollars of projects per year on its own balance sheet.

Within Oregon, NEER subsidiaries (FPL Vansycle, LLC and FPL Energy Stateline II) constructed, and now own and operate, 186 turbines, with a total peak generating capacity of 123 MW at the Stateline 1 and 2 wind energy facilities, and 43 turbines with a total peak generating capacity of 99 MW at the Stateline 3 Wind Energy Facility. FPL Vansycle, LLC and FPL Energy Stateline II were permitted through the EFSC process, and were issued a site certificate with amendments under the name Stateline Wind Project.

Through this relationship, the certificate holder's management team and the NEER family of companies have deep regional expertise, derived over years of successfully permitting and

operating hundreds of MWs of wind energy projects in the Oregon. NEER employees have deep local ties to the communities we operate in, and a solid history of understanding local economic development, permitting, environmental concerns and compliance with the various conditions stipulated within an EFSC site certificate.

This said, based on its team's vast experience and the parent company's portfolio as the largest provider of renewable energy in the world, the certificate holder will select qualified contractors, engineers, and manufacturers with experience in the wind industry. These contractors, engineers, and manufacturers will comply with the site certificate conditions adopted by EFSC.

At this point in time, the certificate holder has not selected a turbine manufacturer for the Project's wind turbines, or a specific contractor to construct the Project. The certificate holder will comply with the Organizational Expertise conditions of the site certificate, which require notification to ODOE of the identify and qualifications of the major design, engineering and construction contractor(s) for the facility.

4.3 OAR 345-021-0010(1)(e) - Required Permits

Exhibit E of the ASC identified the federal, state, and local government permits related to the siting of the Project, which were incorporated into site certificate conditions as necessary. The proposed changes do not require any new permits or any new site certificate conditions for permits that were not previously considered by EFSC.

4.4 OAR 345-021-0010(1)(f) - Materials Analysis

Construction materials for the taller turbines will be the same as those used for construction of the wind turbines that EFSC has already approved. The certificate holder anticipates that the quantities of materials will be similar or smaller. If larger turbines are selected, fewer turbines will be required to achieve the facility maximum generating output, but there may be more materials needed to construct each individual turbine because they will be larger. In general, the proposed turbine modifications will not increase the amount of solid waste and wastewater generated by the Project, and will not modify the procedures and practices used for handling these materials. The certificate holders will continue to comply with site certificate conditions related to materials and waste management.

The energy storage sites (a 30MW site and a 20MW site) will use materials previously identified in the ASC and typical to construction (i.e., steel, concrete, gravel). Quantities of these materials will be small in comparison to the quantities previously estimated for the entire facility. The energy storage sites also will use new materials consisting of the lithium-ion batteries. The following materials are anticipated depending on what type of enclosure is used for the batteries (either a building or containers):

- **Steel Containers** The amount of steel will vary depending on the type and configuration of the energy storage system.
- **Concrete** Foundations are assumed to require approximately 500 cubic yards of concrete.

- **Water** Constructing the energy storage facility will require approximately 12,500 gallons of water. The water source will remain the same as previously described.
- **Gravel** A maximum of 10 acres of the energy storage area will be graveled to a depth of 6 inches, using 5,200 tons of gravel. The gravel source will remain the same as previously described.
- **Batteries** Lithium-ion system will require regular change out of batteries as they degrade over time at a rate depending on usage. For example, a battery that is cycled or used more often will degrade faster than one that is used less often. It is assumed that conservatively the battery will need to be replaced every 10-15 years, or 2-3 times over the life of the Facility (30 years).

For the replacement of batteries during operation, the certificate holder will follow the handling guidelines of 49 Code of Federal Regulations 173.185 – Department of Transportation Pipeline and Hazardous Material Administration related to the shipment of lithium-ion batteries. The regulations, among other thing, include requirements for the:

- Prevention of a dangerous evolution of heat;
- Prevention of short circuits;
- Prevention of damage to the terminals; and
- Prevention of contact with other batteries or conductive materials.

Licensed third party battery suppliers will be responsible for transporting batteries to and from the Project in accordance with applicable regulations, as required through their licensure. Spent batteries will be disposed at a facility permitted to handle them in compliance with applicable Resource Conservation and Recovery Act and Toxic Substances Control Act regulations administered by the U.S. Environmental Protection Agency or the Oregon Department of Environmental Quality. Adherence to the requirements and regulations (including personnel training, safe interim storage, and segregation from other potential waste streams) minimizes the potential for safety hazards related to the transport, use, or disposal of batteries.

5.0 Site Certificate Revisions - OAR 345-027-0060(1)(d)

OAR 345-027-0060(1)(d) The specific language of the site certificate, including conditions, that the certificate holder proposes to change, add or delete through the amendment.

A red-lined site certificate is included as Attachment 1. Although no changes to conditions are required, with the addition of the energy storage facility, the Council may determine that clarification of certain existing conditions is helpful as referenced in RFA 2. The applicant proposes two changes to the site certificate, as outlined below.

1. Turbines – In Section 3.1 of the site certificate, the turbine specifications analyzed will be clarified, including Table 2, Turbine Specifications used for Impact Evaluations.

2. Related and Supporting Facility – In Section 3.2 of the site certificate, energy storage will be added as a related and supporting facility.

6.0 Other Standards and Permits - OAR 345-027-0060(1)(e)

OAR 345-027-0060(1)(e) A list of the Council standards and all other laws - including statutes, rules and ordinances - applicable to the proposed change, and an analysis of whether the facility, with the proposed change, would comply with those applicable laws and Council standards. For the purpose of this rule, a law or Council standard is "applicable" if the Council would apply or consider the law or Council standard under OAR 345-027-0075(2).

EFSC standards relevant to RFA 2 include Division 22 (General Standards for Siting Facilities) and Division 24 (Specific Standards for Siting Facilities). Division 23, which applies to non-generating facilities, does not apply to wind power generating facilities. Similarly, inapplicable provisions of Division 24 (e.g., standards applicable to gas plants, gas storage, non-generating facilities) are not discussed.

The modifications proposed to the Project do not alter the certificate holder's ability to comply with EFSC's earlier findings in the First Amended Site Certificate. The primary purpose of RFA 2 is to take advantage of technological advances, including turbine and energy storage technology. The Site Boundary (also referred to as micrositing corridor) will not be changed; therefore, there are no new areas or resources (such as different habitat types) to consider that were not previously evaluated by EFSC. Ultimately, the Project will be constructed and operated in the same manner as previously approved by EFSC which imposed conditions, as necessary, that take into consideration micrositing needs and public and reviewing agencies comments. Table 2 identifies EFSC Standards and laws reviewed as part of RFA 2, their applicability, and the site certificate conditions that govern Project compliance for each standard.

Table 2. Standards and Laws Relevant to Proposed Amendment

Standard	Applicability & Compliance	Related Site Certificate Condition(s)
OAR 345-022-0010 Organizational Expertise	Applicable and complies. There is no proposed change to organizational expertise. The Wheatridge management team and the NEER family of companies have deep regional expertise, derived over years of successfully permitting and operating hundreds of MWs of wind energy projects in the Oregon. See section 4.1 for accompanying analysis.	GEN-OE-01: Responsibility of non-compliance GEN-OE-02: Report of site certificate violations GEN-OE-03: Report of change in corporate structure PRE-OE-01: Notification of contractor identities PRE-OE-02: Notification of construction manager PRE-OE-03: Compliance of construction workers PRE-OE-04: Notification of non-surveying activities PRE-OE-05: Proof of aggregate source and county permits PRE-OE-06: Proof of third party approvals and permits GEN-GS-01: Commencement of construction GEN-GS-02: Completion of construction

Table 2. Standards and Laws Relevant to Proposed Amendment

Standard	Applicability & Compliance	Related Site Certificate Condition(s)
		GEN-GS-03: Compliance during all phases
		GEN-GS-04: Permission to construct
		GEN-GS-05: Notification of environmental impacts
		GEN-GS-06: Inclusion of all representations
		GEN-GS-07: Vegetation restoration
		GEN-GS-08: Construct to prioritize human safety
		GEN-GS-09: Notification of foundation changes
		GEN-GS-10: Notification of other geological observations
		GEN-GS-11: Notification of new owners
		OPR-GS-01: Submission of legal description
		GEN-SS-01: Compliance with building codes
	Applicable and complies. See	PRE-SS-01: Geological investigation reporting
OAR 345-022-0020	Section 6.1.1, which includes	PRE-SS-02: Investigation of active faults
Structural Standard	updated facility information regarding climate change.	PRE-SS-03: Investigation of slope instability
	regarding climate change.	PRE-SS-04: Investigation of loess soil
		PRE-SP-01: SPCC construction plans
	Applicable and complies. See	PRE-SP-02: Restoration of agricultural soils
	Section 6.1.2. There will be	PRE-SP-03: Septic system permitting
OAR 345-022-0022	two energy storage sites, but	OPR-SP-01: Prevention of erosion, soil disturbance
Soil Protection	less turbines. Total maximum	CON-SP-01: Erosion and Sediment Control Plan (ESCP)
	permanent disturbance to be the similar to or less than	CON-SP-02: Best management practices to be included in
	analyzed in ASC.	ESCP
		PRO-SP-01: Submission of operational SPCC
		GEN-LU-01: Compliance with county setbacks
		GEN-LU-02: County road permits and standards
	Applicable and complies. See Section 6.1.3. Energy storage is a related and supporting facility as part of the wind energy facility which is a conditional use in the Exclusive Farm Use zone.	GEN-LU-03: Meteorological tower requirements
		GEN-LU-04: Usage of minimum land area
		GEN-LU-05: Blending with natural surroundings
		GEN-LU-06: Micro siting to minimum road/highway
		setbacks
OAD 245 022 0020		GEN-LU-07: Blending of O&M building
OAR 345-022-0030 Land Use		GEN-LU-08: Best management of access roads
24114 000		GEN-LU-09: Notification of project infrastructure locations
		GEN-LU-10: Delivery of annual report
		PRE-LU-01: Obtain local permitting
		PRE-LU-02: Obtain CUP
		PRE-LU-03: Preparation of Weed Control Plan
		PRE-LU-04: Recording of a Covenant Not to Sue for Morrow
		County
		PRE-LU-05: Consultation with landowners

Table 2. Standards and Laws Relevant to Proposed Amendment

Standard	Applicability & Compliance	Related Site Certificate Condition(s)
		PRE-LU-06: Identification of construction traffic concerns
		PRE-LU-07: Obtaining county zoning permits
		PRE-LU-08: Installation of gates and signs to private access
		roads PRE-LU-09: Recording of a Covenant Not to Sue for Umatilla County
		OPR-LU-01: Submission of as-built surveys for construction phases
		OPR-LU-02: Restoration of disturbed areas
		OPR-LU-03: Completion of final retirement plan
		OPR-LU-04: Preparation of Operating and Facility Maintenance Plan
		OPR-LU-05: Submission of as-built changes
		OPR-LU-06: Retirement restoration activities
		CON-LU-01: Minimization of footprint
		CON-LU-02: Installation of bird deterring devices
		CON-LU-03: Installation of underground cable system
OAR 345-022-0040 Protected Areas	Applicable and complies. See Section 6.1.4. The ASC reviewed visual impacts for the project on Protected Areas for turbines up to 525 feet tall. The proposed changes do not modify EFSC's previous finding for protected areas.	N/A
OAR 345-022-0050 Retirement and Financial Assurance	Applicable and complies. See Section 6.1.5. With the proposed changes, the Certificate Holder is still able to restore the site to a useful, nonhazardous condition following permanent cessation of construction or operation of the Project.	GEN-RF-01: Prevention of non-restorable site PRE-RF-01: Letter of credit to restore site to non-hazardous condition PRE-RF-02: Letter of credit naming State as payee RET-RF-01: Compliance with retirement plan RET-RF-02: Retirement of facility upon cessation of activities
OAR 345-022-0060 Fish and Wildlife Habitat	Applicable and complies. See Section 6.1.6. Proposed changes will be within existing site boundary in areas surveyed for fish and wildlife habitat as documented in Exhibit P of the ASC. The Habitat Mitigation Plan will be	GEN-FW-01: Speed limit requirement GEN-FW-02: Compliance with Avian Power Line Interaction Committee designs PRE-FW-01: Confirmation of habitat categories, nests via habitat survey PRE-FW-02: Implementation of Wildlife Monitoring and Mitigation Plan PRE-FW-03: Flagging of environmentally sensitive areas

Table 2. Standards and Laws Relevant to Proposed Amendment

Standard	Applicability & Compliance	Related Site Certificate Condition(s)
	finalized after final design per Condition PRG-FW-04.	PRE-FW-04: Approval of Habitat Mitigation Plan PRE-FW-05: Approval of Revegetation Plan CON-FW-01: Cease of construction during mule deer winter range CON-FW-02: Buffer zones for nest sites CON-FW-03: Environmental training by professional CON-FW-04: Appointment of on-site environmental
OAR 345-022-0070 Threatened and Endangered Species	Applicable and complies. See Section 6.1.7. The Project will be constructed within the approved site boundary where impacts to T&E species have already been reviewed.	inspector PRE-TE-01: Determination of WAGS boundaries PRE-TE-02: Implementation of Wildlife Monitoring and Mitigation Plan for WAGS PRE-TE-03: Avoidance of Laurent's milkvetch impacts
OAR 345-022-0080 Scenic Resources	Applicable and complies. See Section 6.1.8. The ASC reviewed visual impacts for the project on Scenic Resources for turbines up to 525 feet. The proposed changes do not modify EFSC's previous finding for Scenic areas.	GEN-SR-01: Reduction of lighting facility visual impacts GEN-SR-02: Minimization of visual impacts
OAR 345-022-0090 Historic, Cultural and Archaeological Resources	Applicable and complies. See Section 6.1.9. Surveys were conducted for the site boundary and identified resources will be protected per conditions.	PRE-HC-01: Submission of final design PRE-HC-02: Marking of buffer areas PRE_HC-03: Training by qualified archeologist CON-HC-01: Flagging of 200ft avoidance buffer CON-HC-02: Work cease due to historical find
OAR 345-022-0100 Recreation	Applicable and complies. See Section 6.1.10. The ASC reviewed visual impacts for the project on Recreation Areas for turbines up to 525 feet. The proposed changes do not modify EFSC's previous finding for recreation areas.	N/A
OAR 345-022-0110 Public Services	Applicable and complies. See Section 6.1.11. Existing conditions apply to the Project which will include the energy storage sites.	GEN-PS-01: Coordination with solid waste handler GEN-PS-02: Installation of security measures GEN-PS-03: Fire prevention and response training PRE-PS-01: Preparation of Traffic Management Plan PRE-PS-02: Road Use Agreements with counties

Table 2. Standards and Laws Relevant to Proposed Amendment

Standard	Applicability & Compliance	Related Site Certificate Condition(s)	
		PRE-PS-03: Access road and private road modification approvals	
		PRE-PS-04: Submission of Notice of Proposed Construction	
		of Alteration	
		PRE-PS-05: Preparation of Emergency Management Plan	
		PRE-PS-06: Development of health and safety plan	
		PRE-PS-07: Assurance of first aid/CPR/AED personnel	
		CON-PS-01: Waste management plan protocols	
		CON-PS-02: Establish on-site security	
		CON-PS-03: Assurance of fall, high angle, confined space trained personnel	
		CON-PS-04: Usage of concrete pads, nonflammable ground cover	
		CON-PS-05: Maintenance of non-vegetated area	
		PRO-PS-01: Fall protection/tower rescue training	
		PRO-PS-02: Submission of site plan to fire protection officials	
		PRO-PS-03: Assurance of current first aid/CPR/AED	
		personnel	
		OPR-PS-01: Discharge of wastewater	
		OPR-PS-02: On-site well water usage	
		OPR-PS-03: Implementation of waste management plan	
		OPR-PS-04: Current contact information for personnel	
	Applicable and complies. See Section 6.1.12. The proposed	PRE-WM-01: Minimum waste management plan requirements	
OAR 345-022-0120 Waste Minimization	changes are not anticipated to substantially increase the	PRE-WM-02: Confirmation of no surface/ground/drinking water impacts	
	amount of solid waste and	CON-WM-01: Requirements of off-site soil disposal	
	wastewater generated by the Project.	CON-PS-01: Construction Waste Management Plan	
		GEN-WF-01: Following handling instructions	
	Applicable and complies. See	GEN-WF-02: Notification of accidents/failures	
OAR 345-024-0010	Section 6.2.1. NEER family of	CON-WF-01: Installation of step-up transformers	
Public Health and	companies has expertise,	CON-WF-02: Maintenance of self-monitoring devices	
Safety Standards for	derived over years of successfully operating	OPR-WF-01: Assurance of operation security fencing and	
Wind Energy Facilities	hundreds of MWs of wind	gates	
	energy projects.	PRE-PS-04: FAA and ODA aeronautical studies and	
		determinations.	
OAR 345-024-0015	Applicable and complies. See		
Siting Standards for	Section 6.2.2. The Project is	N/A	
Wind Energy	being designed to reduce		
Facilities			

Table 2. Standards and Laws Relevant to Proposed Amendment

Standard	Applicability & Compliance	Related Site Certificate Condition(s)
	cumulative adverse environmental effects.	
OAR 345-024-0090 Transmission Lines	Not Applicable. There will be no changes to the transmission line as part of RFA 2.	GEN-GS-12: Specification of corridor
OAR 340-035-0035 Noise	Applicable. See section 6.3.1. Noise analysis is being completed as part of micrositing to minimize noise impacts. Noise exceedances are anticipated to be less based on current noise modeling done as part of micrositing.	PRE-NC-01: Final facility design noise analysis and noise waiver if applicable. CON-NC-01: Measure to reduce noise impacts during construction OPR-NC-01: NRO mode turbines operating noise level documentation. OPR-NC-02: Certificate Holder to maintain a noise complaint response system. OPR-NC-03: Certificate holder will provide a monitoring plan for noise levels in response to a noise complaint.
Removal-Fill Law	Applicable. See section 6.3.2. A removal-fill permit is not needed for the Project because the Project will not temporarily or permanently impact waters of the state.	N/A
Water Rights	Applicable. See section 6.3.3. There will be the same water volumes and sources as in the ASC.	N/A

6.1 Applicable Division 22 Standards

6.1.1 OAR 345-022-0020 Structural Standard

EFSC previously found that the Project complies with the Structural Standard. The Structural Standard generally requires EFSC to evaluate whether the applicant has adequately characterized the potential seismic, geological and soil hazards within the Site Boundary, and that the certificate holder can design, engineer and construct the Project to avoid dangers to human safety from these hazards. The certificate holder provided information regarding the seismic characteristics within the Site Boundary, as well as an assessment of seismic and geologic hazards and other requirements of the Structural Standard in Exhibit H of the ASC. In addition, as required under OAR 345-021-0010(1)(h)(B), the certificate holder has committed to conducting a site-specific preconstruction geotechnical investigation to review and assess potential seismic, geologic, and soil

hazards associated with construction of the Project. The certificate holder has also committed to modifying the Project layout and construction requirements as needed, based on the results of the site-specific geotechnical investigation.

The modified turbine specifications and energy storage sites will be in the approved micrositing corridors (the Site Boundary); therefore, areas that were assessed in Exhibit H of the ASC still remain valid. Turbines are designed to meet International Electrotechnical Commission standards, and will be purchased from a major turbine manufacturer. The most up-to-date building and structural codes, reflecting the most up to date methodologies and definitions of the ground motions used for seismic design, will be used during the final design and construction of the Project. The increased turbine height will not impact the Project's ability to meet the required setback standards for the consideration of human safety including consideration of ice throw. In addition, as part of the ASC, 2.5 MW turbines were already assessed. Land disturbing activities associated with Project construction (e.g., crane walking, laydown yards, access roads) will be mitigated through reseeding and restoration, as per the conditions stipulated in the site certificate. Additionally, best management practices will be implemented through the National Pollutant Discharge Elimination System 1200-C permit.

From a structural perspective, the Project is also being designed to withstand non-seismic geologic hazards. As such, the Project should be able to withstand the potential for changes in climatic conditions (e.g., increased rainfall or temperature changes that could cause geological changes). Structurally, the basalt bedrock present over most of the Project Area is generally competent and free of existing landslides. No significant landslides were observed during geotechnical investigations conducted to-date, as documented in Exhibit H of the ASC. It is highly unlikely that the Project's underlying structural geology will change during the foreseeable future, and therefore, it is also unlikely that increased rainfall or temperature changes will cause significant geological changes that could impact the Project. Consequently, the risks to the environment and human safety by non-seismic geologic hazards that could be caused by potential changes in climatic conditions are generally considered to be small. In addition, Wheatridge (an indirect subsidiary of NEER who has experience in operating wind facilities in Oregon) will have an Emergency Action Plan for the Project, which will be updated annually in case an emergency event does occur.

The proposed changes do not affect the certificate holder's ability to design, engineer, and construct the Project to avoid dangers to human safety and the environment that are presented by seismic hazards affecting the Project Area. EFSC adopted site certificate conditions to address the potential for seismic and non-seismic geologic hazards at the Project, as listed in Table 2. The proposed changes do not change the Project's compliance with OAR 345-022-0020 or any conditions in the site certificate. Therefore, EFSC may rely on its previous findings that this amendment request also complies with OAR 345-022-0020.

6.1.2 OAR 345-022-0022 Soil Protection

EFSC previously found that the Project complies with the Soil Protection Standard. The Soil Protection Standard requires EFSC to find that, after taking mitigation into account, the design, construction, and operation of a facility will not likely result in a significant adverse impact to soils. The certificate holder's assessment of potential soil impacts and compliance with the Soil Protection Standard were included in Exhibit I of the ASC. RFA 2 makes no changes that alter the basis for EFSC's earlier findings.

The number of turbines used to construct the Project is anticipated to decrease from the maximum number of turbines approved in the site certificate through approval of this request. Exhibit C of the ASC identified that the maximum impact development scenario will result in approximately 1,194 acres of temporary disturbance and approximately 171 acres of permanent disturbance for 1.7 MW turbines. The energy storage sites will add, at maximum, a total of 10 acres of permanent disturbance. However, use of fewer, larger turbines may result in a reduction in the permanent disturbance area associated with the turbines. Therefore, the permanent disturbance area for the Project is anticipated to remain similar to or less than the impacts identified in Exhibit C of the ASC. Additionally, the certificate holder does not expect for there to be additional temporary impacts caused by RFA 2, because the energy storage sites are anticipated to be adjacent to the substation, and their temporary impacts will be contained within the temporary disturbance area for the substation.

For the energy storage, the certificate holder will follow the handling guidelines of 49 Code of Federal Regulations 173.185 – Department of Transportation Pipeline and Hazardous Material Administration related to the shipment of lithium-ion batteries. The regulations include the following requirements, among others:

- Prevention of a dangerous evolution of heat;
- Prevention of short circuits;
- Prevention of damage to the terminals; and
- Prevention of contact with other batteries or conductive materials.

Third party energy suppliers will be responsible for transporting batteries to and from the Project in accordance with applicable regulations, as required through their licensure. In general, adherence to the requirements and regulations will minimize the potential for impacts to soil related to transport, use, or disposal of batteries.

The certificate holder will implement erosion control measures presented in Exhibit I of the ASC. In addition, the certificate holder will comply with the existing conditions for soil protection, as identified in Table 2. The proposed changes do not change the Project's compliance with OAR 345-022-0020 or any conditions in the site certificate. Therefore, EFSC may rely on its prior findings, and conclude that RFA 2 also complies with OAR 345-022-0022.

6.1.3 OAR 345-022-0030 Land Use

EFSC previously concluded that the Project complied with the Land Use Standard. Under OAR 345-021-0010(1)(k), an applicant must elect to address EFSC's Land Use standard by obtaining local land use approvals under Oregon Revised Statutes (ORS) 469.504(1)(a), or by obtaining an EFSC determination under ORS 469.504(1)(b). As stated in the ASC, the certificate holder elected to have EFSC make the land use determination under ORS 469.504(1)(b) and OAR 345-022-0030(2)(b) for the Project.

The proposed changes in turbine specifications do not affect EFSC's previous findings of compliance with the Land Use Standard because the amendment is anticipated to result in fewer turbines overall, the turbines will be constructed within the previously approved micrositing corridors, and the Project must still comply with Land Use Conditions previously imposed on the Project, as listed in Table 2.

The energy storage system is a related or supporting facility under OAR 345-001-0010(51) because it "...would not be built but for the construction and operation of the Facility." Similarly, under OAR 660-033-0130(37), it is an "other necessary appurtenance' to the wind power generation facility. Morrow County Zoning Code (MCZO) 3.010(K)(2) has the same definition of a what a wind power generation facility includes as OAR 660-033-0130(37) does. Energy storage supports the Project by providing an energy distribution function, like a substation provides an energy wattage conversion for distribution function. Therefore, the energy storage system is a necessary appurtenance to the Project.

In the Final Order of the ASC, EFSC found that the Project is a commercial utility facility for the purpose of generating power for public use by sale, pursuant to the MCZO, that is subject to the conditional use requirements of MCZO Article 6. EFSC further found that the Project is a wind power generation facility pursuant to OAR 660-033-0120, and that the conditional use standards at OAR 660-033-0130(37) apply instead of the acreage limitations in MCZO 3.010(15)(D), which would have required a Goal 3 exception for the Project. Similarly, in Umatilla County, all components of the Project and its related or supporting facilities (including energy storage) qualify as a "wind power generation facility," which is a type of "commercial utility facility for the purpose of generating power for public use by sale" allowed as a conditional use under Umatilla County Development Code (UCDO) 152.060(F).

The Exclusive Farm Use Dimensional Standards relate to parcel size, the creation of new parcels, and the siting of dwellings within big game habitat, none of which apply to the Project. As noted in the Final Order of the ASC, Morrow County requested setback requirements for the Project. Specifically, Morrow County requested that all turbines be placed a distance of at least 110 percent of turbine height from the Site Boundary to protect property owners located outside of the Site Boundary. Morrow County further requested that within the Site Boundary, wind turbines be placed at least 100 feet from property boundaries. The certificate holder represented that it will adhere to a 100-foot setback from the tower base to internal participant property boundaries to the greatest extent practicable, but that strict compliance may not be feasible due to owner restrictions

or physical and environmental factors. With the proposed changes for RFA 2, the certificate holder can still meet all conditions requested by Morrow County that are included in the site certificate.

In Umatilla County, UDCO 152.616(HHH)(6) provides the standards of approval for a wind power generation facility. The standards were addressed in Exhibit K of the ASC. Land Use Conditions were recommended in Exhibit K and incorporated into the site certificate. The standards include minimum setbacks of 110 percent of the overall tower-to-blade tip height from the boundary right-of-way of county roads and state and interstate highways within Umatilla County. With the proposed changes from RFA 2, the certificate holder can still meet all conditions that implement the UDCO.

In Exhibit K of the ASC, the certificate holder identified and described surrounding lands devoted to farm use. The certificate holder explained in Attachment K-1 and the associated figures that the majority of the land within the analysis area is devoted to dryland winter wheat farming or irrigated agriculture. The certificate holder also explained that some cattle grazing occurs in limited areas in and around the analysis area.

The certificate holder provided a detailed description of the accepted farming practices that occur on the surrounding lands that are devoted to farm use in Attachment K-1. Specifically, Attachment K-1 describes the planting cycles for winter wheat, the field preparation techniques, common farming equipment, aerial spraying by aircraft, irrigation techniques in the small areas of irrigated agriculture, and access issues. The certificate holder demonstrated that the Project will not force a significant change in accepted farm practices, nor will it significantly increase the cost of farm practices. To support that position, the applicant provided the following:

- Facility components and temporary construction laydown and staging areas will be sited to
 minimize disturbance to farming operations. Land permanently lost to farm use due to
 siting of permanent Project improvements is a *de minimis* percentage of the total farm use
 land in Morrow County; therefore the inability to use the land for farm purposes is not
 significant.
- Project Site Access Roads and other facilities will be constructed and maintained by Wheatridge, such that the cost burden for maintenance does not fall upon the farm or ranch owners.
- Private access roads improved or developed for the Project will benefit agricultural users of the land through improved access to farm fields and resulting lower fuel costs.
- As part of the lease agreements, each landowner must approve the site plan for facilities located on his lands; this mechanism assures that Project facilities would not be considered disruptive to the practices of each landowner.
- Wheatridge will implement a weed control plan consistent with the Morrow and Umatilla County Weed Control Ordinance, which will reduce the risk of weed infestation in cultivated land and the associated cost to the farmer for weed control.

- Wheatridge will record a covenant not to sue against its Project leasehold interests with regard to generally accepted farming practices on adjacent farmland.
- Wheatridge will consult with area landowners during construction and operation of the facility to determine further measures to reduce or avoid any adverse impacts to farm practices on surrounding lands and to avoid any increase in farming costs.
- To avoid or reduce adverse impacts to soil quality, Wheatridge will implement dust control and erosion-control measures during construction and operation of the facility (see Exhibit I). To the extent practicable, Wheatridge proposes to reduce impact to soils by using areas that are already disturbed and limiting the area of new disturbance.

The certificate holder provided a detailed evaluation of the four areas of concern identified by pilots that conduct aerial spraying around wind turbines in ASC Exhibit K Attachment K-1 and explained why Wheatridge has confirmed that no landowners in the Project Area utilize aerial spraying of pesticides or fertilizers; the Project would not affect the application of pesticides or fertilizers using ground-based methods. As noted in the Final Order and in ASC Exhibit K, the certificate holder explained that the presence of wind turbines can increase both the difficulty and the risk of aerial spraying in the vicinity of a wind farm. However, the certificate holder explained that wind turbines represent a minimal change in the flightpath, because spray pilots commonly fly at very low altitudes, navigating around terrain, trees, utility poles, transmission lines, farm structures, and other obstacles. Therefore, because spray pilots drop down as low as 8 feet above the ground to spray, anything 8 feet and taller will require the spray pilot to maneuver around it. A letter from Gar Aviation expressing that the presence of wind facilities has not impacted their ability to provide aerial application services, or resulted in a change in its pricing, was included in ASC Exhibit K, Attachment K-3.

Although the energy storage sites will be a new permanent impact, they will be sited adjacent to the substations, not in the middle of agricultural fields and will not cause agricultural field fragmentation or impacts on farm equipment maneuverability. Disruption to farming practices and operations will be minimized by following the measures described above, those included as conditions in the site certificate (Table 2), and through continuing coordination of Project construction and operation with each landowner. Ultimately, the Project supports continued agricultural operations while simultaneously using the land for renewable energy generation. For these reasons, EFSC may rely on its earlier findings that the Project will not force a significant change in accepted farming practices and that RFA 2 still complies with the Land Use Standard.

6.1.4 OAR 345-022-0040 Protected Areas

The Protected Areas Standard requires EFSC to find that, taking into account mitigation, that the design, construction and operation of a facility are not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040. There are 16 defined protected areas within the analysis area.

The Lindsay Prairie Preserve, a site managed to protect native grassland and wildlife habitat, is the closest protected area within the analysis area to Project construction activities. The protected area is fenced, the access road is gated, and it is not known for public use. The closest portion of the Project to the Lindsay Prairie Preserve is less than 1 mile west of the Site Boundary. All other protected areas are located 2 miles or more from the Site Boundary.

As noted in Exhibit L of the ASC, during construction, the applicant estimates that the Lindsay Prairie Preserve could experience peak noise levels of approximately 55 A-weighted decibels (dBA). The peak noise levels will be short-term and temporary and will not exceed a period of four weeks. Construction noises as for the proposed changes are anticipated to be the same as reviewed in the ASC. Also, as explained in Exhibit L, during operation of the Project, the worst-case modeled noise level at the Lindsay Prairie Preserve will be approximately 36 to 54 dBA. The certificate holder has been conducting noise modeling for potential turbines and reviewing potential noise impacts from energy storage. The worst-case modeled noise level is the same as previously asserted in the ASC. Although audible the noise levels of 36 to 54 dBA, would not be expected to interfere with the primary purpose (native grassland and wildlife habitat preservation) of the Lindsay Prairie Preserve. Based upon the information provided, EFSC can find that, due to noise attenuation, all other protected areas, which are located at distances of more than 2 miles from the Site Boundary, would not be expected to experience noise impacts greater than existing background noise levels. Therefore, protected areas will not experience significant, adverse noise impacts from Project operation.

For the proposed changes, potential traffic impacts during facility construction and operation of the Project will be similar to what was assessed as part of the ASC. EFSC previously found that potential traffic impacts during facility construction will be intermittent and temporary, and traffic levels will return to normal following construction. EFSC also found that based on the minimal number of operational trips, the increase in traffic from operations will not be likely to have any impact on protected areas, including access points to protected areas.

There are no substantial changes to water use and wastewater disposal as part of the proposed changes. Therefore, EFSC can find that water use and disposal during construction and operation of the Project will not likely result in a significant adverse impact to water quality or quantity within any protected area.

For Exhibit L of the ASC, the certificate holder conducted a zone of visual influence (ZVI) analysis, or visibility analysis, of the Project using Environmental Systems Research Institute ArcGIS software and digital bare earth modeling to identify areas from which proposed facility structures 1 (i.e. turbines) might be visible. The ZVI was completed for turbines up to 525 feet. RFA2 proposes a modified maximum turbine blade tip height of 500.5 499.7 feet, which is within the range of turbine heights analyzed for visual impacts in the ASC. In addition, the energy storage structures will be only 20 feet high, co-located with the substations, and finished with neutral colors to blend with the surrounding landscape. Therefore, the ZVI completed for the ASC and reviewed by ODOE, covers the proposed new turbine specifications.

The results of the ZVI analysis from Exhibit L of the ASC indicated that one or more facility components will be visible or partially visible from all 16 protected areas within the analysis area. However, as explained in Exhibit L of the ASC, the visual impacts are considered to be negligible for most protected areas, primarily due to their distance of 9 to 20 miles from the Site Boundary, as well as from the intervening topography. In addition, many of the protected areas currently have views of other wind farms, transmission lines, and urban and industrial development; therefore, the Project will not introduce a new or unusual feature to the view. Potential views of the Project from some of the protected areas will be partially to fully screened by vegetation.

EFSC previously found that while Project components will result in a change to the existing viewshed of the protected areas, due to the low impact to users, no specified management of scenic or visual qualities (or designated views or viewsheds), and presence of similar structures within the existing viewshed, the visual impacts of construction and operation of the Project will not likely result in a significant adverse impact to any protected area. The proposed modifications do not alter the basis for the Council's prior findings that the Project is in compliance with the Protected Areas Standard.

6.1.5 OAR 345-022-0050 Retirement and Financial Assurance

EFSC previously found that the certificate holder is able to restore the site to a useful, nonhazardous condition following permanent cessation of construction or operation of the Project, and that they have demonstrated a reasonable likelihood of obtaining a bond or letter of credit as part of RFA 1. As a supplement to RFA 1, the certificate holder submitted a letter dated June 8, 2017, from Wells Fargo Bank, N.A. (the Bank), which stated that the Bank "has an ongoing relationship with NEER and there is a reasonable likelihood that we [Wells Fargo] will provide a letter of credit for this project should it be required." The Bank letter also indicates their "understanding that the potential liability of the letter of credit could total an amount of up to eighteen million one hundred thousand dollars (18,100,000)."

The Project is still in the design phase, and EFSC previously imposed two conditions to ensure the certificate holder could meet its financial assurance obligations and ensure the adequacy of the bond or letter once design has been finalized and prior to construction. To comply with Condition PRE-RF-02, before beginning construction the certificate holder will provide an updated financial retirement analysis as part of pre-construction compliance. To comply with Condition PRE-RF-01, the certificate holder will also submit a bond or letter of credit sufficient to ensure restoration of the site to a useful, nonhazardous condition. Although two energy storage sites will be added to the Project, retirement of the energy storage sites is estimated to cost approximately \$4,000 per MW or \$200,000. This represents a little more than 1% of the \$18,100,000 previously identified to retire the Project. Therefore, it is expected that when retirement cost is estimated based on final design data, the total retirement cost will be similar to or less than the amount previously identified.

Because there are existing conditions requiring recalculation of the retirement cost and confirmation of adequate bonding after final design, and the amount is anticipated to be similar to or less than the previously identified amount, there is no reason to submit an updated letter

regarding the retirement amount or an updated letter from the Bank. Accordingly, RFA 2 makes no changes that alter the basis for EFSC's earlier findings; therefore, EFSC may find that OAR 345-022-0050 is met.

6.1.6 OAR 345-022-0060 Fish and Wildlife Habitat

As noted in the Final Order on the site certificate, EFSC's Fish and Wildlife Habitat Standard requires EFSC to find that the design, construction, and operation of a facility is consistent with ODFW's habitat mitigation goals and standards, as set forth in OAR 635-415-0025. This rule creates requirements for mitigating impacts to fish and wildlife habitat, based on the functional quantity and quality of the habitat impacted, as well as the nature, extent, and duration of the impact. The proposed changes in RFA 2 are all within the Site Boundary where habitat has been previously characterized.

The exact location of the turbines is still unknown; therefore, the applicant has requested approval of micrositing corridors for turbine placement, which is allowed under EFSC's rules. RFA 2 also includes the addition of two energy storage sites located within the micrositing corridors outside of Class 1 habits, most likely in Class 6 habitat. In order to mitigate for impacts to wildlife habitat, the certificate holder will implement a Habitat Mitigation Plan after final design and final habitat impacts can be calculated. The pre-construction survey results will inform the Habitat Mitigation Plan and confirm that appropriate mitigation is provided (Table 2). The finalization of the Habitat Mitigation Plan prior to construction will include confirmation of habitat categories in consultation with ODFW (and subject to approval by ODOE), and a final mathematical calculation of impact acreages to determine the habitat mitigation acreage based upon an approved calculation methodology (see Table 2 for associated conditions).

Turbines with longer blades and taller hub heights than previous models theoretically could pose increased collision risk to birds and bats, but as discussed below, these relationships have not been consistently demonstrated. Turbines with longer blades have a corresponding larger rotor-swept area, and the requested change to lengthen the proposed maximum blade length from 197 feet (60 meters) to 204 feet (62.2 meters) will increase the overall rotor swept area, or collision risk area, for each turbine by 7.2 percent (Table 3). Similarly, the requested change for a taller maximum blade tip height may cause the rotor-swept area to overlap with flight heights of migrating birds that were previously above shorter turbine models, leading to increased collision risk. Barclay et al. (2007) compared avian fatality data at wind farms using a range of turbine nameplate capacities from 0.04 to 1.8 MW, hub heights ranging from 79 feet (24 meters) to 308 feet (94 meters), and rotor diameters ranging from 49 feet (15 meters) to 262 feet (80 meters). Barclay et al. (2007) concluded that avian fatality rates were not affected by variation in any of these turbine dimensions, stating "it might be expected that as rotor-swept area increased, more animals would be killed per turbine, but our analyses indicate that this is not the case." Although it is reasonable to assume that the conclusions of Barclay et al. (2007) regarding hub height would apply to the Facility given that the maximum tower heights fall with the size ranges that they evaluated, more caution must be taken regarding the conclusion about rotor diameter size because the maximum

proposed rotor diameters (416.7 feet [127 m]) are substantially larger than those analyzed (maximum of 80 m). More recent meta-analyses have produced contrasting results, with a review by Loss et al. 2013 revealing increased avian mortality with hub height, whereas Erickson et al. 2014 found no linear correlation between hub height and estimated avian fatality rates. Therefore, there remains uncertainty as to whether or not the proposed turbine model changes may result in increased avian collision risk. Nonetheless, assuming that longer blades and taller hub heights correspond with greater energy production, it is expected that avian fatality rates will decrease with increased energy production capacity, a pattern demonstrated by Smallwood (2013).

Another result of increasing blade length is often decreased blade clearance (i.e., the distance from the ground to the bottom of the rotor-swept area). Decreased blade clearance theoretically could lead to greater collision risk of low-flying avian species that would have passed below the blade clearance of previous turbine models. Although pre-construction data on avian use is available at the Facility (see Exhibit P of the ASC), the proportion of avian flights within a given rotor-swept area is a poor predictor of post-construction mortality (Ferrer et al. 2012). Given the relatively small (3-7 percent) increases to the proposed maximum blade length and tower height and relatively small decrease (15 percent; Table 3) in ground clearance, it is expected that any differences in avian impacts as a results of turbine model changes may be undetectable. Any potential increases to impacts on a per-turbine bases are likely to correspond to decreases in impacts when measured on a per-MW basis as has been demonstrated at several repower studies (e.g., Hjernquist 2014 as cited in Rydell at al. 2017, Brown et al. 2013). Furthermore, EFSC has already approved a similar reduction in minimum blade tip clearance at the nearby Montague Wind Project (Amendment 3). Wheatridge will complete post-construction fatality monitoring, in coordination with ODFW, using search plots scaled to the turbine size, and will implement additional mitigation if fatality rates exceed the thresholds of concern for a species group (see Attachment D of the Final Order of the First Amended Site Certificate, Wildlife Monitoring and Mitigation Plan.

The same changes to turbines specifications that theoretically could increase collision risk to birds could also theoretically could increase collision risk to bats. The analysis by Barclay et al. 2007 found that bat fatalities increased exponentially with increased hub height. In contrast, a recent meta-analysis by Zimmerling et al. 2016 found no relationship between bat mortality rates and height of wind turbines, with the caveat that there was relatively little variation in the maximum blade tip height of wind turbines within the available data (range of 384 feet [117 meters] to 446 feet [136 meters]). Flight altitudes of migratory bats are poorly known, especially for the migratory, tree-roosting bats that appear more prone to collisions with wind turbines (Reynolds, 2006). Migratory bats have been documented at heights ranging from 46 to 2,448 meters above ground level (Allen 1939, Altringham 1996, Peurach 2003), which is within and above the rotor-swept area originally evaluated and approved for the Project turbines as well as the proposed turbine specifications. Additionally, hoary bats and silver-haired bats are the two bat species that have been found most frequently as fatalities at operational wind projects near the Facility (Johnson and Erickson 2011), particularly during their migratory periods. Therefore, it is reasonable to assume that their flight heights overlap with the rotor-swept areas of existing facilities, and that fatalities of

these species will also occur at the Facility. Whether or not bats fly between 71 feet [22 meters] and 83 feet [25 meters] above ground level in the vicinity of the Facility is not known; therefore, there remains uncertainty as to whether or not the reduced blade clearance of the turbine specification clarifications will change the predicted impacts to bats from that originally analyzed. Nonetheless, given the relatively small changes to the specifications of the proposed turbines it is expected that any differences in bat impacts as a result of the proposed turbine model changes may be undetectable, particularly given the relatively low bat fatality rates at wind facilities in the region of the Facility (Great Basin/Southwest Open Range-Desert; Hein et al. 2013). The Wildlife Monitoring and Mitigation Plan includes provisions for monitoring bat fatalities, and if established thresholds are exceeded, then considerations for additional mitigation are triggered. Any additional measures will be developed in consultation with ODFW.

Table 3. Existing and Proposed Turbine Specification and Percent Change

Specification	Previous Maximum Analyzed	New Maximum Analyzed¹	Percent Change in Maximum
Number of Turbines	292	292	TBD
Blade Length	197 feet (60 m)	204.1 feet (62.2 m)	+3.6
Hub Height	278 feet (85 m)	291.3 feet (88.6 m)	+6.2
Rotor Diameter (Rotor Swept Height)	393 feet (120 m)	416.7 feet (127 m)	+6.0
Rotor-swept Area	121,922 square feet (11,327 square m)	130,741 square feet (12,146 square m)	+7.2
Maximum Blade Tip Height	476 feet (145 m) ²	499.7 feet (152.3 m)	+5.1
Blade Clearance	83 feet (25 m)	70.5 feet (21.5) ³	-15.0

^{1.} The proposed maximums do not represent one model, but the worst-case dimension scenario for turbine models being analyzed.

Therefore, the proposed changes do not affect the certificate holder's ability to comply with any of the other previously imposed site conditions for fish and wildlife habitat, as identified in Table 2, and EFSC can find the Fish and Wildlife Habitat Standard is met.

6.1.7 OAR 345-022-0070 Threatened and Endangered Species

The exact location of the turbines is unknown; therefore, the applicant has requested approval of micrositing corridors for turbine placement, which is allowed under EFSC's rules. There will also be the addition of two energy storage sites to be located in the micrositing corridors, most likely Class 6 habitat, but not in Class 1 habitat. The certificate holders' assessment of the Project's compliance with the Threatened and Endangered Species Standard was included as Exhibit Q of the ASC and included surveys for threatened and endangered species in the site boundary. As described in Exhibit Q, the certificate holder proposed a number of mitigation measures to reduce the potential

^{2.} The maximum blade tip height analyzed for visual impacts in the ASC was 525 feet.

^{3.} This is the minimum ground clearance based on turbine models being analyzed.

impact to the Washington ground squirrel and its habitat. These measures include siting the Project on developed habitat when possible, particularly dryland wheat fields, conducting pre-construction surveys to confirm and avoid Category 1 habitat during micrositing and construction (Condition PRE-FW-01), and implementing a Wildlife Monitoring and Mitigation Plan (Condition PRE-FW-02). Additionally, the certificate holder committed to avoiding known populations of Laurent's milkvetch. Because the proposed changes will be in the site boundary and subject to compliance with the applicable site certificate conditions as identified in Table 2, EFSC can find that the Project, with the proposed changes from RFA 2, complies with EFSC's Threatened and Endangered Species Standard.

6.1.8 OAR 345-022-0080 Scenic Resources

OAR 345-022-0080 requires EFSC to determine that the design, construction, and operation of the proposed Project will not have a "significant adverse impact" to any significant or important scenic resources and values in the analysis area. The applicant provided evidence regarding potential impacts to scenic resources in Exhibit R of the ASC.

Based on the certificate holder's review of applicable land use plans, there are no significant or important scenic resources within the analysis area. However, the certificate holder completed a visual impact assessment within the analysis area to evaluate potential visual impacts related to the change in existing visual character that would result from operation of the Project. In Exhibit R of the ASC, the certificate holder described four key observation points (KOPs) selected for the evaluation of visual impacts, and completed visual simulations of proposed Project components for the KOPs. The certificate holder also conducted a ZVI analysis for turbines up to 525 feet tall using Environmental Systems Research Institute ArcGIS software to identify jurisdictions where the Project will be visible. The results of the visual impact analysis identified that Project components will have low to moderate visibility at the selected KOP locations. This same finding can be applied to the proposed turbine heights of up to 499.7 feet. However, as previously determined, because there is no management direction for preservation of views or scenic quality at any of the KOP locations, taking into account the previously imposed site certificate conditions, EFSC can find that the Project complies with EFSC's Scenic Resources Standard.

6.1.9 OAR 345-022-0090 Historical, Cultural and Archaeological Resources

The certificate holder provided information regarding historic, cultural, and archaeological resources for the analysis area (all areas within the Site Boundary) in Exhibit S of the ASC. The certificate holder contracted with the Cultural Resources Protection Program of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR-CRPP) to conduct archaeological field and desktop surveys for the entire 13,097 acres within the Site Boundary. Archaeological field investigations were conducted in accordance with SHPO's Guidelines for Conducting Field Archaeology in Oregon (SHPO 2007). The desktop survey revealed four previously recorded archeological sites within 1 mile of the Site Boundary, but none actually within the Site Boundary. However, the pedestrian field surveys recorded 21 archeological sites and isolated finds within the

Site Boundary. Of these archaeological sites and isolated finds, eight were historic, seven were precontact, and six were other isolated finds. CTUIR-CRPP recommended that seven of the 21 historic sites and isolated finds could be potentially eligible for inclusion on the National Register of Historic Places (NRHP). Based on the findings, and in accordance with OAR 345-022-0090(2), EFSC imposed five conditions (see Table 2) in the site certificate to address the protection of historic, cultural, and archaeological resources at the Project during micrositing. The Project, including the energy storage sites, have been designed to avoid impacts to all known archeological, historic, and cultural resources deemed eligible or potentially eligible for NRHP listing. In a comment letter for the ASC, SHPO confirmed receipt of the Project's archeological investigation report, concurred with the eligibility recommendations provided in the report, and confirmed that the Project, with implementation of appropriate avoidance measures, will not likely have an effect on any significant archeological objects or sites. The modifications proposed in RFA 2 do not alter the basis for EFSC's prior finding that the standard for historic, cultural, and archaeological resources has been met.

6.1.10 OAR 345-022-0100 Recreation

The Recreation Standard requires EFSC to find that the design, construction, and operation of a facility will not likely result in significant, adverse impacts to important recreational opportunities. Therefore, EFSC's Recreation Standard applies to only those recreation areas that EFSC deems important. The certificate holder provided evidence about potential impacts to recreation opportunities that they determined to be important in Exhibit T of the ASC. The certificate holder identified recreation opportunities within the analysis area, and concluded, based on its evaluation of the criteria outlined in OAR 345-022-0100, that six recreation opportunities should be considered important. The Project, which is located entirely on private property, will not be located on or within any of the identified important recreational opportunities. Therefore, EFSC previously found that the Project will not result in direct loss of any of the recreational opportunities identified as important. The changes proposed in RFA 2 do not alter the basis of this finding.

The recreational opportunities closest to the Project Site Boundary are not designated noise-sensitive receptors. Therefore, there are no applicable noise requirements contained in the Oregon Department of Environmental Quality noise regulations addressed at OAR Chapter 340, Division 25. The closest recreational opportunity identified as important is the Oregon Trail Well Spring Interpretive Site, located approximately 1.2 miles from the Site Boundary. Noise generated during construction of the Project will be short-term and intermittent. Operational noise levels at the closest recreation opportunities will be similar to or less than the levels described in Exhibit L of the ASC.

The proposed changes will not alter traffic impacts from what was reviewed as part of the ASC. The certificate holder concluded that the volume of construction traffic on roads also used to access the Oregon Trail Well Spring Interpretive Site and Echo Meadows/Oregon Trail Area of Critical Environmental Concern will be unlikely to materially affect the operation of this intersection because of low volume. The certificate holder will work with ODOT and the counties to provide any necessary traffic controls (see Table 2 for associated conditions). In addition, as presented in

Exhibit U, construction of the Project will not cause an appreciable reduction in Level of Service on any roads in the area. During operation of the Project, 10 to 20 staff will be employed thus generating a small number of vehicle trips on a roadway system with low traffic volumes. There is no expected change in the number of employees as part of the proposed changes. Therefore, expected traffic impacts to important recreation opportunities in the analysis area during operation of the Project will be minimal.

The certificate holder determined that some portions of the Project will be visible from four of the six important recreation opportunities: Oregon National Historic Trail, Well Spring Interpretive Site, Echo Meadows/Oregon Trail Area of Critical Environmental Concern, and Blue Mountain Scenic Byway. For the visual analysis completed for the ASC, the potential visibility of turbines was based on an assumed 110 percent maximum blade tip height ranging from 474 to 525 feet, depending on the turbine model option selected. Because the visual analysis was based on height ranging up to 525 feet and the proposed turbines are only 499.7 feet, the potential visual impacts from the Project at the four recreational opportunities have already been evaluated by EFSC. In addition, the energy storage site will be only 20 feet high and located in the center of the Project, which is more than 1.2 miles from the recreational areas. Therefore, there won't be any visual impacts from the energy storage sites on important recreational sites.

EFSC can find that the design, construction, and operation of the Project with the proposed changes is not likely to result in a significant, adverse impact to any important recreational opportunities in the analysis area, and therefore the Project complies with EFSC's Recreation Standard.

6.1.11 OAR 345-022-0110 Public Services

EFSC's Public Services Standard requires the identification of likely, significant, adverse impacts caused by the Project on the ability of public and private service providers to supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. The certificate holder addressed the impacts to public services in Exhibit U of the ASC, and EFSC imposed 22 conditions (see Table 2). The modification to turbine size does not affect any aspect of the analysis conducted to support issuance of the site certificate. The addition of an energy storage system adds an additional aspect to the analysis for fire protection but existing site certificate conditions are sufficient to be meet the Public Services standard as described below. In addition, the batteries at the energy storage site will be restricted from the public via a fenced and secured sited, have a gas pressured deluge fire suppression system, an emergency action plan if an emergency should occur, and be operated and maintained by trained and skilled operations personnel.

The lithium-ion battery system will be kept in a temperature-controlled facility with individual battery modules isolated to prevent the spread of fire if it were to occur. The energy storage system will incorporate a gas pressured deluge fire suppression system, as designed by the battery manufacturer. In addition, the following measures will be implemented for lithium-ion battery systems to minimize fire and safety risks:

- The battery systems will be stored in completely contained, leak-proof modules.
- 0&M staff will conduct frequent (monthly) inspections of the battery systems according to the manufacturer's recommendations.
- Battery storage and fire protection systems will comply with applicable standards specified by Morrow and Umatilla County building departments through the permitting process which will include the 2014 Oregon Structural Specialty Code et. seq., as documented through the facility's building permit application(s).
- An emergency management plan will also be developed with response procedures in the event of an emergency, such as a fire (see Condition PRE-PS-05 and PRO-PS-02).

Transportation of lithium-ion batteries is subject to 49 Code of Federal Regulations 173.185 – Department of Transportation Pipeline and Hazardous Material Administration. The regulations include requirements for prevention of a dangerous evolution of heat, prevention of short circuits, prevention of damage to the terminals, and require that no battery come in contact with other batteries or conductive materials.

Impacts on public services from construction of the energy storage systems will not directly affect public services during construction and operation of the Project. The energy storage systems will be constructed within the Site Boundary. In addition, construction, operation and maintenance, and retirement of energy storage does not alter the need for public services, as identified in Exhibit U of the ASC. Therefore, it is not likely to result in significant, adverse impacts within the analysis area for public service providers.

The proposed changes do not affect EFSC's previous findings on public services and the certificate holder can comply with all 22 site certificate conditions previously adopted by the Council for the Project.

6.1.12 OAR 345-022-0120 Waste Minimization

The applicant provided information about waste minimization in Exhibits G and V of the ASC. Exhibit V includes the applicant's plans for solid waste and wastewater management during construction and operation of the Project. Exhibit G includes additional information about management of potentially hazardous materials. Construction of the modified turbine types and quantities will generally be the same as previously reviewed by EFSC. Construction of the energy storage system will generate similar types of waste as the turbines and substation components: concrete waste from construction of concrete pads for container and inverter support, erosion control materials, and packaging materials. Therefore, no new types of solid waste will be generated from the construction of additional Facility components proposed under RFA 2. However, during operations, the energy storage system may generate incidental waste from repair or replacement of electrical equipment and periodic replacement of the batteries. Lithium-ion batteries are expected to last between 10 and 15 years. The certificate holder anticipates a 10-year replacement cycle to be conservative.

Self-contained battery components will be removed and disposed of or recycled by a qualified vendor as needed to keep the facility operational. The proposed changes do not affect EFSC findings on waste minimization because the Conditions (see Table 2) imposed are written broadly enough to address the proposed inclusion of an energy storage facility. Specifically, Condition PRE-WM-01 requires segregating all hazardous and universal, non-recyclable wastes for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes. Therefore, the proposed changes do not affect EFSC's previous findings on waste minimization.

6.2 Applicable Division 24 Standards

6.2.1 OAR 345-024-0010 Public Health and Safety Standards for Wind Energy Facilities

EFSC previously found that the Project complies with the Public Health and Safety Standards for Wind Energy Facilities. The proposed changes will be within the existing site boundary. The facility will be located entirely on private property, which will restrict public access to turbine and other facility component locations. As stated in the ASC, the selected turbines will be designed with several levels of built-in safety and comply with the codes set forth by the Occupational Safety and Health Administration and American National Standards Institute. The wind turbines will also be equipped with Supervisory Control and Data Acquisition (SCADA) systems that will allow for remote control and monitoring of individual turbines and the wind facility as a whole from both the central host computer or from a remote computer to shut down turbines if abnormal levels of vibration are detected. In addition, there are also conditions for setbacks to locate the turbine towers within the minimum safety setbacks of 110 percent of the maximum blade as need. As noted above, the addition of an energy storage system adds an additional aspect to the analysis for fire protection but existing site certificate conditions are sufficient to be meet the Public Services standard and Public Health and Safety Standards.

Therefore, the changes described in RFA 2 will not alter the basis for EFSC's earlier findings, nor change the certificate holder's ability to comply with any requirements and conditions issued by EFSC regarding public health and safety (See Table 2). Therefore, EFSC may find that OAR 345-024-0010 is satisfied.

6.2.2 OAR 345-024-0015 Siting Standards for Wind Energy Facilities

As described above, although the proposed turbines will have an increased height, the changes to visual impact on protected areas or public viewing areas will not be significant. Proposed changes will not significantly affect wetlands or other waters of the state because the Project construction will avoid impacts to wetlands through boring or rerouting facilities around these features. The proposed changes will result in a net reduction of impact to fish and wildlife habitat because there will be a net reduction in disturbance area for the Project, and other construction methodologies

and commitments will be met as approved. RFA 2 makes no changes that would alter the basis for EFSC's earlier findings that OAR 345-024-0015 is met.

6.3 Other Standards and Laws

6.3.1 *Noise Control Regulations (OAR 340-035-0035)*

The certificate holder addressed compliance with the DEQ noise regulations in Exhibit X of the ASC. The requirements of OAR 340-035-0035(1)(b)(B)(iii) apply to noise levels generated by a "wind energy facility." Therefore, the Project is reviewed under OAR 340-035-0035(1)(b)(B)(iii). Under the regulation, the noise generated by a new wind energy facility located on a previously unused site must comply with two tests: the "ambient noise degradation test" and the "maximum allowable noise test."

OAR 340-035-0035(5)(g) specifically exempts noise caused by construction activities. As reviewed by EFSC in the ASC, construction of the Project will produce localized, short-duration noise levels similar to those produced by any large construction project with heavy construction equipment. The certificate holder proposed mitigation measures in the ASC to minimize temporary noise levels generated during construction of the Project. Therefore, EFSC considered the proposed mitigation as binding commitments and adopted the Condition CON-NC-01 for facility construction (see also Table 2).

EFSC previously imposed Site Certificate Condition PRE-NC-01, which requires that the final design locations, sound power levels, noise analysis, and noise easements be provided to the Oregon Department of Energy (ODOE) to demonstrate that the Facility complies with DEQ's noise control standards in OAR 340-035-0035. Consequently, EFSC may rely on its prior findings and Condition PRE-NC-01 to ensure that the project, as modified, complies with the DEQ noise regulation.

Compared to sound levels generated from wind turbines, the sound generated from energy storage is less. One energy storage system will be rated at 20 MW and the other will be rated at 30 MW. Wheatridge is planning on constructing and operating energy storage systems adjacent to project substations, employing voltage source inverters to provide energy storage for grid load leveling, enhanced power transfer and system stability. Potential sound sources associated with the energy storage systems may include but not be limited to energy storage container ground-level cooling equipment, power conditioning systems (including fan units), distribution and auxiliary transformers.

The sound power level of the battery compartment cooling equipment may be on the order of 95 dBA at 1 foot from the equipment, while a bank of four power conditioning system fan units with motor may translate to a sound pressure level of approximately 86 dBA at 1 foot. The sound rating of distribution and auxiliary transformers will vary based on their nameplate rating, National Electrical Manufacturer Association (NEMA) rating, and other factors. The overall sound emissions produced by the energy storage systems will depend on the number of units proposed for each site, final equipment selection, and other design features such as enclosures, firewalls, etc. However,

given that the closest non-participating noise sensitive receptors (i.e., residences) are more than 2 miles (3.2 kilometers) from the energy storage system sites, it is anticipated that received sound levels at those noise sensitive receptors will be low level and below the ODOE 36 dBA noise criterion.

Prior to Project construction, Wheatridge will provide the ODOE with an acoustic analysis of the proposed energy storage systems demonstrating compliance with the ODOE 36 dBA noise criterion and Condition PRE-NC-01; however, due to the significant setback distances between the sites and noise sensitive receptors, adverse noise impacts are not expected. Therefore, based on the foregoing findings, and subject to compliance with the site certificate conditions, EFSC may find that the Project will comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

6.3.2 Removal-Fill Law

The Oregon Removal-Fill Law (ORS 196.795 through ORS 196.990) and Oregon Department of State Lands regulations (OAR 141-085- 0500 through OAR 141-085-0785) require a removal-fill permit if 50 cubic yards or more of material is removed, filled, or altered within any "waters of the state."

The certificate holder provided information regarding wetlands and other waters of the state in Exhibit J of the ASC, including a wetland delineation report included as attachment J-3. A removal-fill permit is not needed for the Project because the Project, including with the proposed changes, will not temporarily or permanently impact waters of the state. The modifications proposed under RFA 2 do not alter the prior analysis.

6.3.3 Water Rights

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department administers the appropriation of water rights and regulates the use of the water resources of the state. The certificate holder stated in Exhibit O of the ASC that all water for construction activities will be procured from municipal sources near the Site Boundary, including Hermiston Public Works, Stanfield Public Works, Boardman Public Works, and the Port of Morrow. The certificate holder also provided evidence of correspondence with those four municipal water suppliers, confirming that the suppliers expect to be able to provide the requested quantity of water. The Port of Morrow also stated that it expects to be able to provide up to 6.5 million gallons per month, more than the certificate holder expects to need during the anticipated worst-case scenario. The modifications proposed under RFA 2 do not alter the amount of water or procurement sources from what was described in Exhibit O.

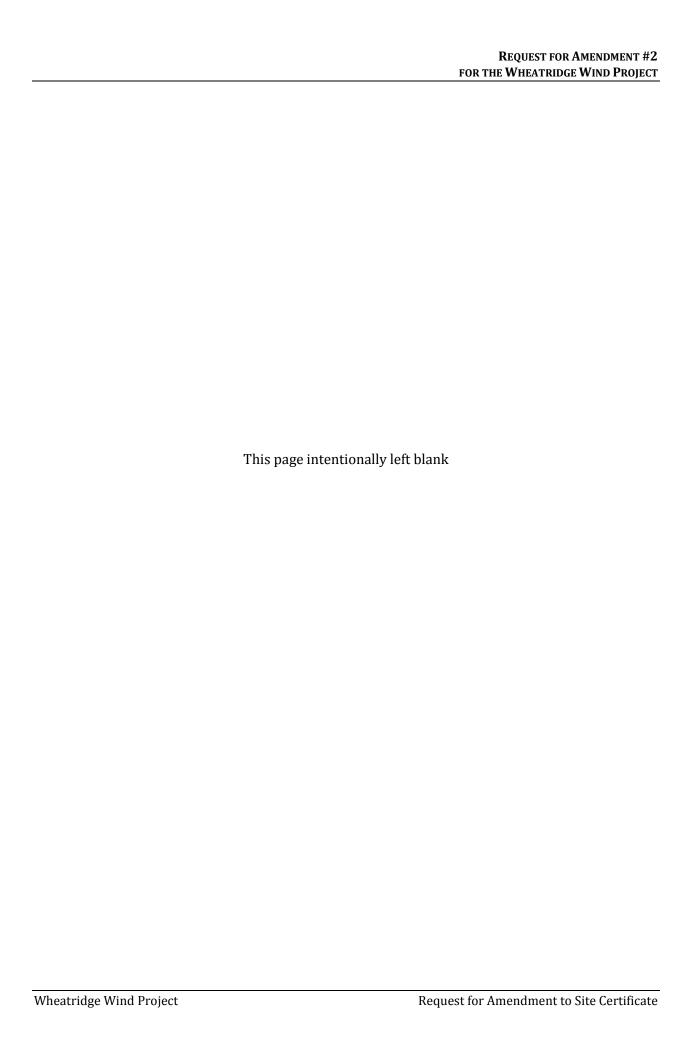
7.0 Property Owners Located within or Adjacent to the Site of the Facility (OAR 345-027-0060(1)(f))

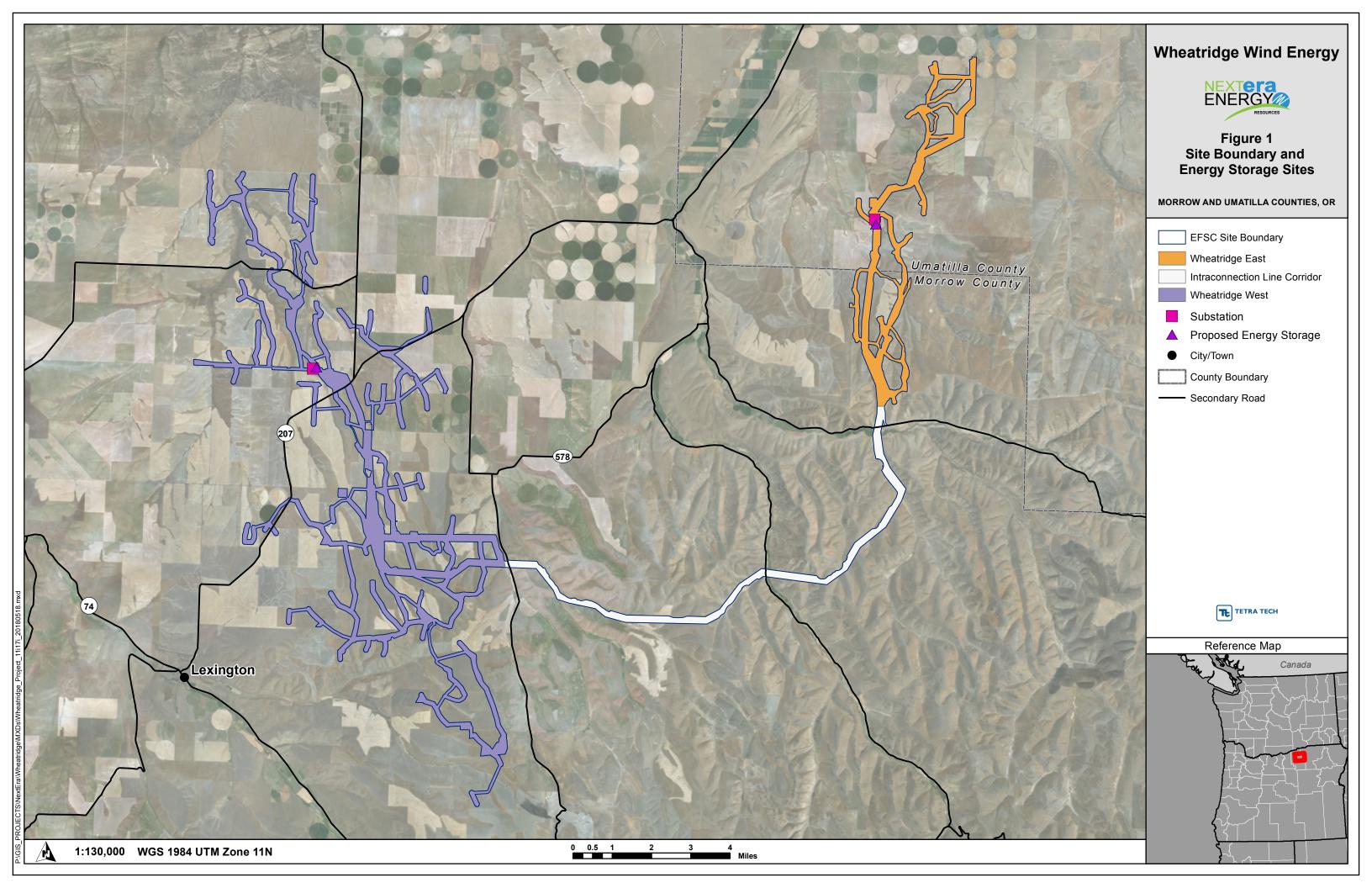
A revised property owner list will be provided at the request of ODOE after the completeness review.

8.0 Conclusion

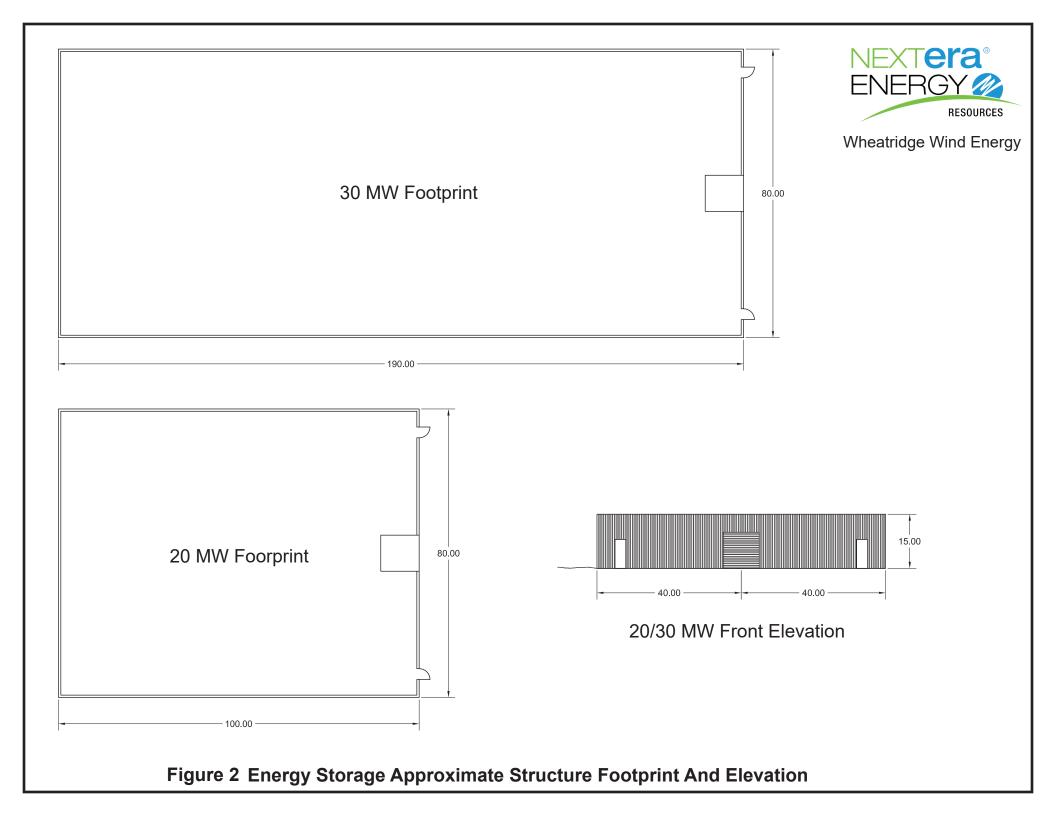
For the reasons stated above, Wheatridge respectfully requests approval of its Request.

Figures









Attachment 2:

Department's Type B Review ADR Evaluation and Determination (June 14, 2018)





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June 14, 2018

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RE: Type A Review Determination on preliminary Request for Amendment 2 of the Wheatridge Wind Energy Facility Site Certificate

Dear Mr. Marshall,

On May 18, 2018, Wheatridge Wind Energy, LLC (Wheatridge or the certificate holder) submitted a preliminary Request for Amendment 2 (pRFA2) for the Wheatridge Wind Energy Facility (facility) site certificate and a request for a subsequent evaluation of the Department of Energy's (Department) April 25, 2018 Type A amendment review process determination for pRFA2 (Initial Determination). The certificate holder requests subsequent evaluation of the Type B review amendment determination request (Type B Review ADR) based on consideration of information provided in pRFA2, which had not been previously provided and therefore not considered in the Department's Initial Determination.

The proposed facility modifications in pRFA2 include construction and operation of larger wind turbines; and, installation and operation of two battery storage systems (proposed modifications), as further described below. The Department may consider, but is not limited to, the factors identified in OAR 345-027-0057(8) when determining whether to process an amendment request under Type B review. The Department's evaluation of the OAR 345-027-0057(8) factors is presented below.

Amendment Review Process

Energy Facility Siting Council (EFSC or Council) rules describe the process for Type A and Type B review of a request for amendment at OAR 345-027-0051. The table below summarizes key differences in the review phases/steps and timelines between the two processes. Council rules describe both processes in greater detail.

Daview Phase (Step	Timeline		
Review Phase/Step	Type A	Type B	
ODOE Issues Determination of Completeness on Preliminary Request for Amendment	Within 60 days	Within 21 days	
ODOE Issues Draft Proposed Order	Within 120 days of notice of Determination of Completeness	Within 60 days of notice of Determination of Completeness	
Public Hearing	At least 20 days after issuance of Draft proposed order	Not applicable	
ODOE Issues Proposed Order	Within 30 days following the Public Hearing	Within 21 days of close of comment period on Draft Proposed Order	
Deadline for Contested Case Requests	At least 30 days after issuance of Proposed Order	Not applicable	
ODOE Review and Council Decision on Contested Case (CC) Requests	Next regularly scheduled Council meeting following deadline for CC requests	Not applicable	
Contested Case Proceeding	At Council's discretion (no specific timeline)	Not applicable	
Issuance of Final Order and Amended Site Certificate	Next regularly scheduled Council meeting following deadline for CC requests	Next regularly scheduled Council meeting following issuance of PO	

As presented in the above table, the key procedural difference between the Type A and Type B review is that the Type A review includes a public hearing on the draft proposed order and an opportunity for a contested case proceeding. The key timing differences between Type A and Type B review are in the maximum allowable time for the Department's determination of completeness of the preliminary amendment request, and the issuance of the draft proposed order and proposed order. It is important to note that Council rules authorize the Department to adjust the timelines for these specific procedural requirements in both processes. Type A review is the default amendment review process, and it is the certificate holder's burden to demonstrate whether the Type B review process is appropriate for an amendment request.

Description of Proposed Modifications

The proposed larger wind turbines would change the previously approved turbine dimensions including: increase turbine hub height (278 to 291.3 feet), increase maximum blade tip height (476 to 499.7 feet), increase maximum blade length (197 to 204.1 feet), lower the minimum aboveground clearance (83 to 70.5 feet), and increase rotor diameter (393 to 416.7 feet).

The proposed battery storage systems would consist of lithium-ion batteries contained in a building or series of modular containers and would include approximately 18 inverters and associated step-up transformers, as well as interconnecting facilities (control house, protective device and power transformer). The proposed battery storage systems may include ground-level cooling equipment, power conditioning systems, and distribution and auxiliary transformers. The proposed battery storage systems would be located adjacent to the previously approved substation and operation and maintenance building sites and would each result in up to 5 acres of new permanent disturbance. The proposed battery storage container dimensions for the 20 megawatt (MW) system would be approximately 80-feet in length by 100-feet in width by 15-feet in height; and the 30 MW system would be approximately 190-feet in length by 100-feet in width by 15-feet in height.

Considerations for Determining Whether to Process an Amendment Request as Type B Review

OAR 345-027-0057(8) provides a non-exhaustive list of factors the Department may consider in determining whether to process an amendment request under Type B review. When evaluating whether Type B review is warranted, the Department may consider these factors individually or in combination.

The listed factors are evaluated as follows:

(a) The complexity of the proposed change;

Wheatridge's Type B Review ADR requests that the Department consider the proposed modifications to be non-complex. The ADR asserts that the proposed changes in turbine dimensions are typical, technological changes within the turbine manufacturing industry and would not present any complexities not previously evaluated within the application for site certificate (ASC), as the ASC evaluated two layouts using two different turbine models. The Type B Review ADR asserts that the proposed battery storage systems would not be complex because the required footprint would be relatively small, and because the systems would have an insignificant visual impact and lesser noise output, compared to wind turbines.

The Department provides the relevant dictionary definition of "complex" as: not easy to understand or explain: not simple. A proposed change to the components of an energy facility and its related and supporting facilities may be complex. Even where a proposed change is not technologically complex, there may be complexity in conducting the regulatory applicability review if, for example, a Request for Amendment involves a new technology or a type of change that has not previously been subject to substantive analysis by the Department or the Energy Facility Siting Council (Council).

As explained in its Initial Determination, the Department considers the proposed battery storage systems to be complex because these type of systems have not been previously reviewed or approved by Council for any EFSC-jurisdictional facility. Therefore, the Department considers the evaluation necessary to determine applicable regulatory requirements and assess the certificate holder's proposed compliance measures to be complex.

The Department acknowledges that the Council has reviewed and approved changes in wind turbine dimension specifications for other EFSC-jurisdictional facilities and does not consider the proposed changes to the components nor the regulatory applicability review to be complex. The Department, therefore, agrees with the certificate holder's representation that the proposed larger turbines should not be considered complex.

(b) The anticipated level of public interest in the proposed change;

Wheatridge's Type B Review ADR requests that the Department consider the nature and extent of comments received on the record for the facility and states that because the record for the facility demonstrates the majority of historic comments were in support of the facility, that the historic interest would not represent a sufficient level of public interest in the proposed modifications.

The certificate holder argues that there is no evidence that there will be sufficient interest in the proposed modifications from members of the public to warrant a Type A review process. For the evaluation of this factor, the Department does not view there to be a specific number of comments necessary to demonstrate a sufficient level of interest. The Department considers that if historic public interest demonstrates concerns relevant to the proposed modifications, then there would be an anticipated level of interest the Department views as important.

The Department agrees with the certificate holder's assessment that the nature and extent of historic comments on the record of prior facility proceedings should be considered in the evaluation of this factor. However, the proposed battery storage systems have not been previously evaluated for this facility nor by the Department or Council for any EFSC-facility. Therefore, the Department takes a conservative approach in its determination that public interest will be moderate and perhaps higher.

When assessing the public interest factor for the proposed larger turbines, the Department considers whether previous Council proceedings for the facility or other EFSC-jurisdictional wind energy generating facilities included comments raising issues related to the proposed change. Based on review of the record for the facility, the Department notes two comments expressing concern related to turbine visibility at important recreation opportunities and protected areas. Even though visual impacts of a 525-foot turbine were included in the ASC, a taller turbine than is requested in pRFA2, the Department considers this level of interest to be relevant to the proposed larger turbines. In addition, there were two individual comments expressing concern related to the impacts of Wheatridge's proposed wind turbines on aerial spraying. Further, blade tip height has been the subject of prior public comment at other EFSC-jurisdictional wind energy generating facilities. Based on prior comments specific to the visual and navigation/obstacle impacts and general public interest in the height of turbines, the Department anticipates at least a moderate level of public interest in the proposed larger turbines.

(c) The anticipated level of interest by reviewing agencies;

Wheatridge's Type B Review ADR requests that the Department consider the nature and extent of comments received on the record for the facility and states that because the record demonstrates the majority of historic comments were in support of the facility, that the historic interest would not represent a sufficient level of reviewing agency interest in the proposed modifications.

Because pRFA2 was submitted in conjunction with the Type B Review ADR, the Department initiated coordination with reviewing agencies and identified a level of interest in the proposed battery storage systems from the State Fire Marshall, and Umatilla and Morrow counties (planning department and fire departments). The Department also initiated

¹ The Department clarifies that Morrow County Planning Department and Morrow County Commissioners have expressed support in pRFA2 and in processing pRFA2 under Type B review. However, the Department consulted Morrow County Planning Department regarding local requirements applicable to the proposed battery storage systems, and bases its assessment of a level of reviewing agency interest from Morrow County on the fact that there are applicable county requirements that would apply to the proposed battery storage systems, and that warrant agency consultation during the amendment review process.

coordination with reviewing agencies and identified a level of interest in the proposed larger turbines from the Oregon Department of Aviation.

(d) The likelihood of significant adverse impact;

Wheatridge's Type B Review ADR requests that the Department consider there to be no likelihood of a significant adverse impacts from the proposed modifications based on the evaluation presented in its pRFA2.

The Department initiated review of pRFA2 but has not yet completed its full evaluation of compliance with Council standards, applicable statutes, rules and ordinances. However, in its June 8, 2018 request for additional information on pRFA2, the Department identified information necessary for the compliance evaluation of the proposed battery storage systems under the Council's General Standard of Review, Organizational Expertise, and Retirement and Financial Assurance standards; and, Noise Control Regulation. The Department is not in a position at this time to confirm whether the likelihood of significant adverse impacts by the proposed battery storage systems would be minimal.

In its June 8, 2018 request for additional information on pRFA2, the Department also identified information necessary for the compliance evaluation of the proposed larger turbines under the Council's General Standard of Review and Public Health and Safety Standards for Wind Energy Facilities. On June 11, 2018, the certificate holder provided responses to the information requested specific to the proposed larger wind turbines. Based on review of these responses, the Department anticipates there to be a low likelihood of potentially significant adverse impacts from the proposed larger turbines.

(e) The type and amount of mitigation, if any.

Wheatridge's Type B Review ADR did not address whether the proposed changes would impact the type and amount of mitigation previously determined necessary for the facility. However, in its initial Type B Review ADR, received on April 9, 2018, the certificate holder stated that because the proposed modifications would be within the previously approved micrositing corridor and site boundary, and would not result in new impacts, substantial changes to existing habitat mitigation and revegetation plans were not expected. In its Initial Determination, the Department agreed with the certificate holder's reasoning and that the proposed modifications would not be likely to result in new mitigation for temporary and permanent habitat impacts.

Amendment Type Determination

The certificate holder requests that the Department provide separate amendment review path determinations for the proposed battery storage systems and proposed larger turbines. After reviewing the Type B Review ADR and consideration of the OAR 345-027-0057(8) factors, the Department determines that RFA2, including the proposed changes together or separately, be processed under Type A review.

As presented in *Table 1: Type A Review – Factor Assessment*, the Department considers Type A review appropriate for the proposed battery storage systems because it is considered complex; there is an anticipated level of public and reviewing agency interest; and, the likelihood of a significant adverse impact is uncertain.

As presented in *Table 1: Type A Review – Factor Assessment*, the Department considers Type A review appropriate for the proposed larger turbines because there is an anticipated level of interest from members of the public and reviewing agencies.

Table 1: Type A Review – Factor Assessment			
OAR 345-027-0057(8) Factors	Battery Storage Systems	Larger Wind Turbines	
(a) The complexity of the proposed change	Х		
(b) The anticipated level of public interest in the proposed change	Х	Х	
(c) The anticipated level of interest by reviewing agencies	Х	Х	
(d) The likelihood of significant adverse impact	Х		
(e) The type and amount of mitigation, if any			

The Department understands based on the May 21, 2018 email request from Mr. Pappalardo that the certificate holder preemptively requested to refer the Department's Type A review determination to Council for their concurrence, modification, or rejection. On June 14, 2018, the Department provided its Type A determination to Council and notified Council of the certificate holder's request for referral to Council. At this time, the June 29, 2018 Council agenda includes the certificate holder's Type A review determination Council referral request.

If there are any questions or comments, please feel free to contact me per the information below.

Sincerely,

Sarah Esterson, Senior Siting Analyst

E: sarah.esterson@oregon.gov

P: 503-373-7945

Largh Esterson

cc via e-mail distribution:

Todd Cornett, Oregon Department of Energy Maxwell Woods, Oregon Department of Energy Jesse Ratcliffe, Oregon Department of Justice Patrick Rowe, Oregon Department of Justice

Attachment 3:

Wheatridge Wind Energy Facility, LLC's Referral of Department's June 13, 2018 Type A Review Determination to Council (May 21, 2018)

ESTERSON Sarah * ODOE

From: Pappalardo, Mike <MIKE.PAPPALARDO@nexteraenergy.com>

Sent: Monday, May 21, 2018 5:13 PM **To:** ESTERSON Sarah * ODOE

Cc: Marshall, Jesse; Castro, Scott; Carrie Konkol (carrie.konkol@tetratech.com); Curtiss, Sarah

Stauffer (sarah.curtiss@stoel.com); Filippi, David (david.filippi@stoel.com); Solsby, Anneke (Anneke.Solsby@tetratech.com); WOODS Maxwell * ODOE; RATCLIFFE Jesse D;

CORNETT Todd * ODOE

Subject: Re: Submittal of RFA 2 for Wheatridge Wind Energy Facility, and Request for

Reconsideration for the Wheatridge Wind Energy, LLC's Amendment Determination

Request

Attachments: image001.png

Dear Ms. Esterson:

As a follow-up to our submittal of RFA 2 and Request for Reconsideration for the Wheatridge Project, we also request that the Project to be put on the June 2018, Oregon Energy Facility Siting Council agenda. We ask that the Wheatridge Project be included on the agenda for June 28, 2018 in the event staff determines that RFA 2 be placed on Type A Amendment pathway. We are making this request as a precautionary measure and will cancel it in the event staff modifies their decision and determines that the Amendment is categorized as a Type B Amendment.

Please contact me at anytime if you have any questions or concerns regarding this request.

Sincerely,

Mike Pappalardo NextEra Energy Resources Cell (541) 206-1005 Office (541) 302-1345

- > On May 18, 2018, at 3:30 PM, Pappalardo, Mike < MIKE.PAPPALARDO@nexteraenergy.com > wrote:
- > Dear Ms. Esterson:

> Attached please find a second Request for Amendment ("RFA 2") for the Wheatridge Wind Energy, LLC ("Wheatridge"), Wheatridge Wind Energy Facility ("Project"). In RFA 2, Wheatridge seeks concurrence on a modified range of turbine specifications for use at the Project. In addition, Wheatridge seeks to add energy storage as a related and supporting facility. With this submittal, we are also formally requesting that the Oregon Department of Energy ("Department") reevaluate its April 25, 2018 determination ("Department Response") that RFA 2 should be subject to the Department's Type A amendment review process.

- > Please feel free to contact me at any time if you have any questions or concerns regarding this submittal.
- > Sincerely,
- > Mike Pappalardo | Environmental Manager
- > NextEra Energy Resources | 3256 Wintercreek Drive | Eugene, OR 97405
- > office: 541.302.1345 | cell: 541.206.1005 | email:
- > mike.pappalardo@nexteraenergy.com<mailto:mike.pappalardo@nexteraenergy
- > .com>