## **Exhibit A**

## **Applicant Information**

## **Prepared for**



## Wheatridge Wind Energy, LLC

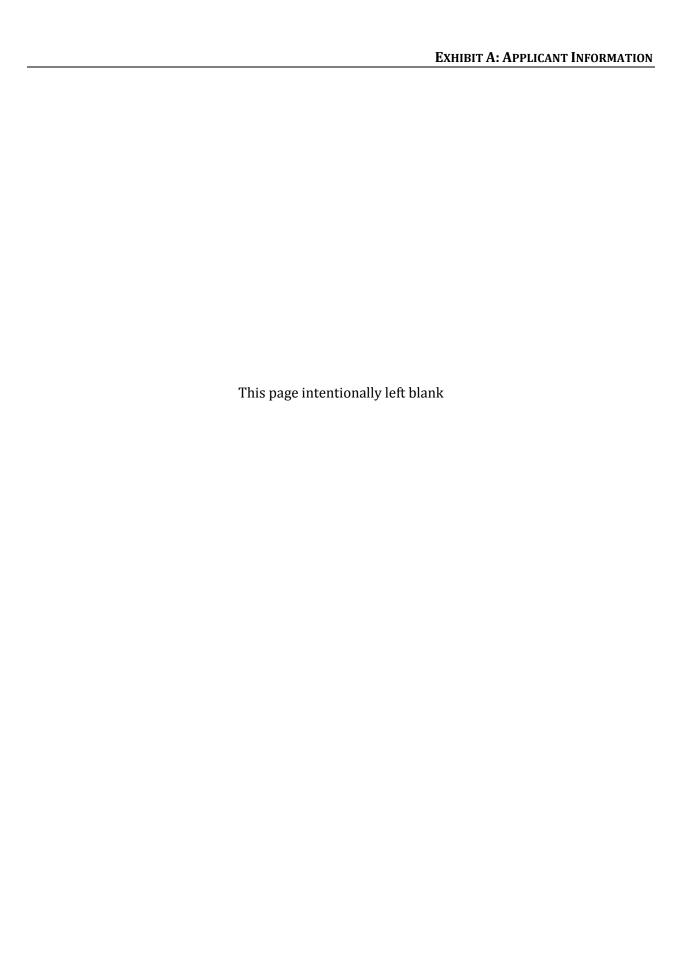
Wheatridge Wind Energy Facility

July 2015

Prepared by



Tetra Tech, Inc.



### **Table of Contents**

1.0	Introduction	. 1
2.0	Applicant Contact Information – OAR 345-021-0010(1)(a)(A)	. 1
3.0	Other Participants - OAR 345-021-0010(1)(a)(B)	. 2
4.0	Limited Liability Company Information – OAR 345-021-0010(1)(a)(H)	. 3
5.0	Other Affiliations – OAR 345-021-0010(1)(a)(C) through (F)	3
6.0	Submittal Requirements and Approval Standards	3
6.1	Submittal Requirements	3
6.2	Approval Standard	4
	List of Tables	
Table .	A-1. Submittal Requirements Matrix	. 3

#### **Attachments**

Attachment A-1. Oregon Articles of Conversion

Attachment A-2. Delaware Certificate of Formation

Attachment A-3. Delaware Certificate of Conversion

Attachment A-4. Qualification to Conduct Business in Oregon

Attachment A-5. Letter Authorizing Submittal of this Application for Site Certificate

## **Terms and Definitions**

MAP MAP Royalty, Inc.

OAR Oregon Administrative Rule

Project Wheatridge Wind Energy Facility

Swaggart Wind Power, LLC

Wheatridge Wind Energy, LLC

#### 1.0 Introduction

Exhibit A provides contact information for the Wheatridge Wind Energy Facility (Project) proponent and other entities assisting Wheatridge Wind Energy, LLC (Wheatridge) in the permitting process, as required by Oregon Administrative Rule (OAR) 345-021-0010(1)(a) paragraphs (A) through (H). This exhibit provides evidence to support a demonstration of compliance with the Organizational Expertise standard of OAR 345-022-0010, which is addressed in detail in Exhibit D of this application.

### 2.0 Applicant Contact Information – OAR 345-021-0010(1)(a)(A)

#### Name and mailing address of Applicant:

Andrew O'Connell, President Wheatridge Wind Energy, LLC P.O. Box 133 245 W. Main Street, Suite 200 Ione, Oregon 97843 andrew@diversifiedwinds.com (541) 571-3005

#### **Contact Persons other than Applicant:**

Jerry Reitmann Wheatridge Wind Energy, LLC P.O. Box 133 245 W. Main Street, Suite 200 Ione, Oregon 97843 ellaresources@wildblue.net (541) 379-2814

Robert G. Friedel, Permitting Project Manager 215 SE 30<sup>th</sup> Place Portland, OR 97214 (541) 231-9990 robertfriedelconsulting@gmail.com David J. Petersen, Resident Attorney Tonkon Torp LLP 1600 Pioneer Tower 888 SW Fifth Avenue Portland, Oregon 97204 david.petersen@tonkon.com (503) 802-2054

Carolyn Valle, Registered Agent Corporation Service Company 2711 Centerville Rd. Suite 400 Wilmington, Delaware 19808 (800) 927 - 9801 ext 62221

## 3.0 Other Participants – OAR 345-021-0010(1)(a)(B)

Swaggart Wind Power, LLC (Swaggart), is a joint venture between Leprechaun Holdings, LLC, a local development company founded by a landowner from Ione, Oregon as an Oregon limited liability company, and three investment funds managed by MAP Royalty, Inc. (MAP): MAP 2006, L.P., a Delaware limited partnership, MAP 2006(A), L.P., a Delaware limited partnership, and MAP 2009, L.P., a Delaware limited partnership. Swaggart owns 100% of the interests in Wheatridge, which was formed to secure the real estate rights, permits, and interconnection rights necessary to construct and operate a wind energy facility within the Project footprint. Swaggart is also a Delaware limited company, which may be contacted as follows:

Swaggart Wind Power, LLC P.O. Box 133 245 W. Main Street, Suite 200 Ione, Oregon 97843 andrew@diversifiedwinds.com (541) 422-7552

No other participants are anticipated at this time, with the exception of potential third party permits that would 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. Wheatridge anticipates that these permits would meet the facility standards adopted by the Energy Facility Siting Council.

# 4.0 Limited Liability Company Information – OAR 345-021-0010(1)(a)(H)

The Applicant, Wheatridge, was originally formed as Swaggart Wind Development, LLC on June 8, 2009 as an Oregon limited liability company and later renamed to Wheatridge Wind Energy, LLC on July 15, 2010. Wheatridge was subsequently converted to be a Delaware limited liability company on November 15, 2010.

The articles of organization are provided in Attachments A-1, A-2, and A-3. Proof of registration to do business in Oregon is provided in Attachment A-4. A written consent for filing of this application is provided in Attachment A-5.

## 5.0 Other Affiliations – OAR 345-021-0010(1)(a)(C) through (F)

Wheatridge is a wholly owned subsidiary of Swaggart Wind Power, LLC. The full name and address of Swaggart Wind Power is provided in Section 3.0. The registered agent for Wheatridge in Delaware is Carolyn Valle; see section 2.0 for contact information.

## 6.0 Submittal Requirements and Approval Standards

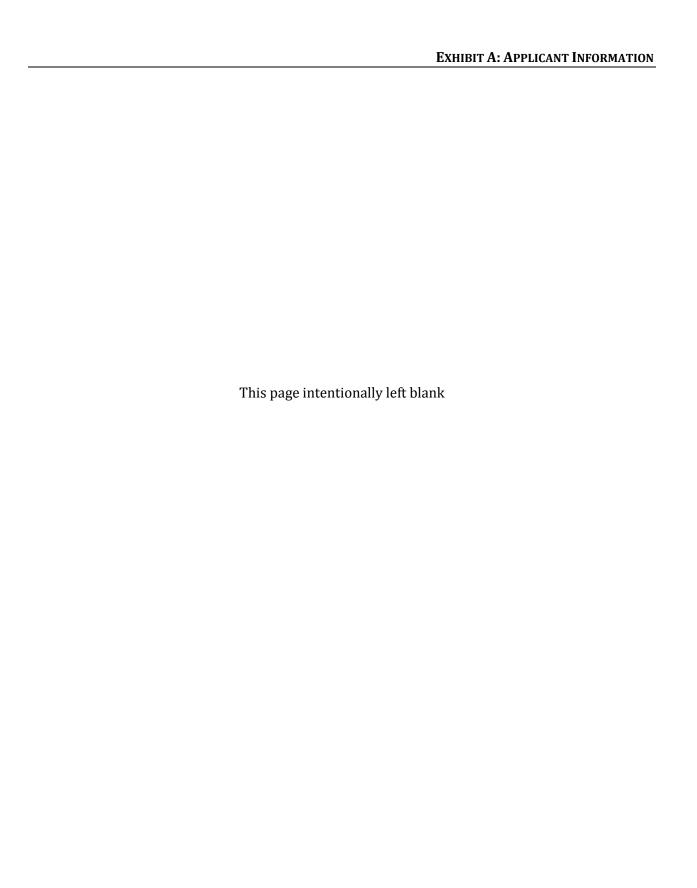
#### **6.1** Submittal Requirements

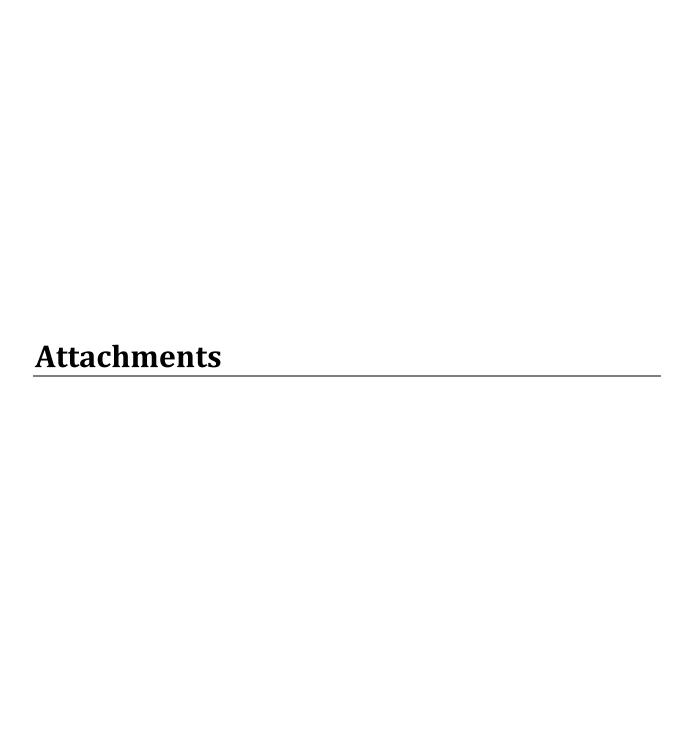
Table A-1. Submittal Requirements Matrix	
Requirement	Location
OAR 345-021-0010(1)(a)(A) The name and address of the applicant including all co- owners of the proposed facility, the name, mailing address, email address and telephone number of the contact person for the application, and if there is a contact person other than the applicant, the name, title, mailing address, email address and telephone number of that person.	Section 2.0
OAR 345-021-0010(1)(a)(B) The contact name, mailing address, email address and telephone number of all participating persons, other than individuals, including but not limited to any parent corporation of the applicant, persons upon whom the applicant will rely for third-party permits or approvals related to the facility, and persons upon whom the applicant will rely in meeting any facility standard adopted by the Council.	Section 3.0
OAR 345-021-0010(1)(a)(C) If the applicant is a corporation, it shall give:	
(i) The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the application;	N/A
(ii) The date and place of its incorporation;	N/A
(iii) A copy of its articles of incorporation and its authorization for submitting the application; and	N/A

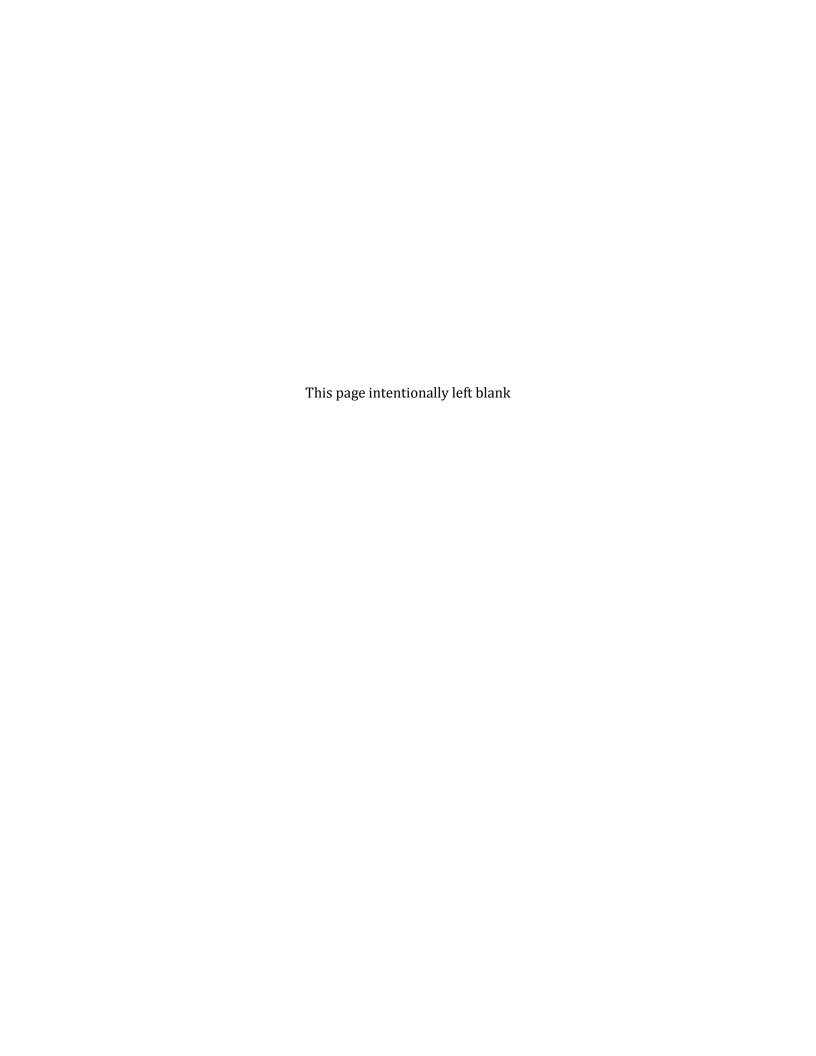
(iv) In the case of a corporation not incorporated in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.	N/A
OAR 345-021-0010(1)(a)(D) Owner Information if Subsidiary	Section 5.0
OAR 345-021-0010(1)(a)(E) Association/Joint-Venture Information	N/A
OAR 345-021-0010(1)(a)(F) Public/Government Entity Information	N/A
OAR 345-021-0010(1)(a)(G) If the applicant is an individual, the individual shall give his or her mailing address and telephone number.	N/A
OAR 345-021-0010(1)(a)(H) Limited Liability Company Information	Section 4.0, Attachments A-1, A-2, A-3, A-4 and A-5

## 6.2 Approval Standard

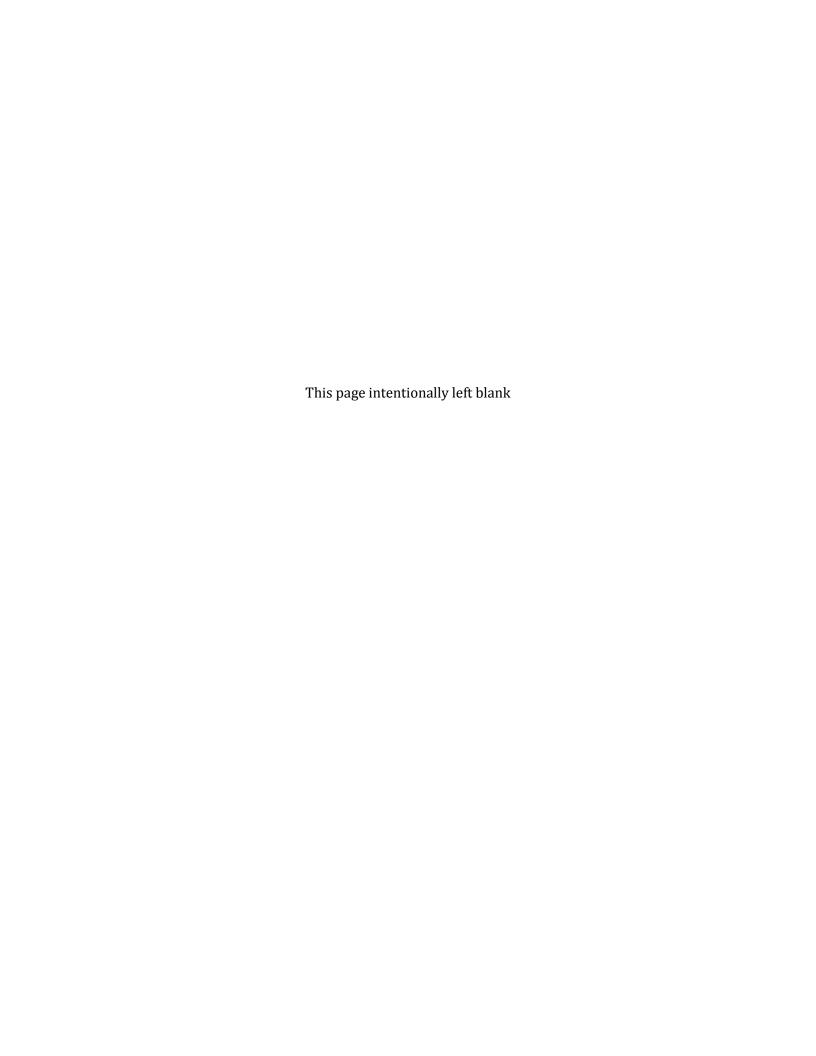
OAR 345 Division 22 does not provide an approval standard specific to Exhibit A.











### **CERTIFICATE**

# State of Oregon

# OFFICE OF THE SECRETARY OF STATE Corporation Division

I, KATE BROWN, Secretary of State of Oregon, and Custodian of the Seal of said State, do hereby certify:

That the attached copy of the
Articles of
Conversion
filed on
November 15, 2010

for

WHEATRIDGE WIND ENERGY, LLC
(an Oregon Limited Liability Company)
converting to and changing it's name to
WHEATRIDGE WIND ENERGY, LLC
(a Delaware Limited Liability Company)
is a true copy of the original document
that has been filed with this office.



In Testimony Whereof, I have hereunto set my hand and affixed hereto the Seal of the State of Oregon.

KATE BROWN, Secretary of State

Debra L. Virag

November 22, 2010



#### Articles of Conversion - Business Entities

Secretary of State Corporation Division - 255 Capitol St. NE, Builte 151 Selem, OR 97310-1327 http://www.FilinglinOregon.com - Phone: (503) 986-2200

## **FILED**

NOV 1 5 2010 REGISTRY NUMBER: 608313-94 **OREGON** n accordance with Oragon Revised Statute 192.410-192.490, the information on this application We must release this information to all parties upon request and it will be posted on our website. SECRETARY OF STATE Please Type or Print Legibly in Black ink 1) NAME OF BUSINESS ENTITY PRIOR TO CONVERSION: Wheatridge Wind Energy, LLC 1008313-94 TYPE OF BUSINESS ENTITY PRIOR TO CONVERSION: Oregon limited liability company NAME OF BUSINESS ENTITY AFTER CONVERSION: Wheatridge Wind Energy, LLC TYPE OF BUSINESS ENTITY AFTER CONVERSION: Delaware limited liability company A COPY OF THE PLAN OF CONVERSION IS ATTACHED. PROVIDE ADDITIONAL INFORMATION REQUIRED FOR NEW ENTITY TYPE The conversion of Wheatridge Wind Energy, LLC, an Oregon limited liability company, into Wheatridge Wind Energy, LLC, a Delaware Limited Liability Company, is permitted pursuant to Section 18-214 of the Delaware Limited Liability Company Act and Section 63.470 of the Oregon Revised Statutes

7) EXECUTION: (Must be signed by an officer or director for a corporation, a member or manager for a limited liability company, a general partner for a limited partnership, or a partner for a limited Rability partnership.)

By my signature, I declare as an authorized authority, that this filing has been examined by me and is, to the best of my knowledge and belief, true, correct, and complete. Making take statements in this document is against the law and may be penalized by fines, imprisonment or both.

Signature:

Printed Name:

Aaron Zubaty

Title:

MANAGER SWAGGART UIND POURE, LLC,

The Manager of Uncolvidge Usus Emery, He

CONTACT NAME: (To resolve questions with this filing.)

Elaine Garcelon

PHONE NUMBER: (Include area code )

415-268-7119

FEES

Domestic Required Processing Fee \$

\$275

Confirmation Copy (Optional) 25

Processing Fees are nonrefundable. Pl

"Corporation Division."

219 - Articles of Conversion Business Entities (0:

WHEATRIDGE WIND ENERGY, LLC



60831394-12260692

Attachment A-

#### WHEATRIDGE WIND ENERGY, LLC

#### AGREEMENT AND PLAN OF CONVERSION

This Agreement and Plan of Conversion (this "Agreement") is entered into as of October 18, 2010, by Wheatridge Wind Energy, LLC, an Oregon limited liability company (the "Company") and Swaggart Wind Power, LLC, a Delaware limited liability company and the sole member of the Company ("Swaggart").

WHEREAS, Swaggart and its members (the "Members") have approved the conversion of the Company into a Delaware limited liability company to be named Wheatridge Wind Energy, LLC ("Wheatridge Delaware") upon the terms and conditions herein provided (the "Conversion");

WHEREAS, the Company and Swaggart desire to enter into this Agreement to set forth certain provisions relating to the consummation of the Conversion, which shall be effected pursuant to Section 63.470 of the Oregon Revised Statutes of the Oregon Limited Liability Company Act, ORS Chapter 63 and Section 18-214 of the Delaware Limited Liability Company Act (the "Delaware Act").

NOW, THEREFORE, the undersigned hereby agree as follows:

#### 1. TERMS AND CONDITIONS

- 1.1 CONVERSION. The Conversion shall be effective on such date as the Certificate of Conversion substantially in the form of Exhibit A attached hereto, and the Certificate of Formation substantially in the form of Exhibit B attached hereto, shall be filed with the Delaware Secretary of State (the "Effective Date"). The President of the Company, individually and in his capacity as an officer of the Company is hereby designated as an "authorized person" within the meaning of the Delaware Act to execute and file such certificates.
- 1.2 SUCCESSION. On the Effective Date, the Company shall continue its existence under the laws of the State of Delaware as a limited liability company and the LLC shall be for all purposes the same entity that existed before the Conversion.
- 1.3 ASSETS AND LIABILITIES. Upon the Conversion, all of the rights, privileges and powers of the Company, and all property, real, personal and mixed, and all debts due to the Company, as well as all other things and causes of action belonging to the Company, shall remain vested in Wheatridge Delaware and shall be the property of Wheatridge Delaware, and the title to any real property vested by deed or otherwise in the Company shall not revert or be in any way impaired by reason of the Conversion. All rights of creditors and all liens upon any property of the Company shall be preserved unimpaired, and all debts, liabilities and duties of the Company shall remain attached to Wheatridge Delaware, and may be enforced against Wheatridge Delaware to the same extent as if such debts, liabilities and duties had been incurred or contracted by Wheatridge Delaware in its capacity as a limited liability company. The rights, privileges, powers and interests in property of the Company, as well as the debts, liabilities and duties of the Company, shall not be deemed, as a consequence of the Conversion, to have been transferred to Wheatridge Delaware for any purpose under applicable law.
- 1.4 CONVERSION OF OREGON LLC TO DELAWARE LLC. On the Effective Date, by virtue of the Conversion and without any further action on the part of Swaggart, Swaggart shall receive 100% of the membership interests in Wheatridge Delaware as provided in the LLC Agreement (defined below).

#### 2. CHARTER DOCUMENTS AND MANAGER

2.1 LLC AGREEMENT. Upon the effectiveness of the Conversion, Wheatridge Delaware and each Member thereof shall be governed and bound by the terms of the Limited Liability Company

Agreement and Plan of Conversion sf-2890712

l

Agreement in the form attached hereto as Exhibit C (the "LLC Agreement"), irrespective of whether such Members have executed the LLC Agreement.

2.2 MANAGER. The Manager of Wheatridge Delaware shall be Swaggart, which Manager shall serve in accordance with the terms of the LLC Agreement

#### 3. MISCELLANEOUS

- 3.1 FURTHER ASSURANCES. From time to time, when required by Wheatridge Delaware or by its successors and assigns, there shall be executed and delivered on behalf of Wheatridge Delaware and/or the Company such deeds and other instruments, and there shall be taken or caused to be taken by the LLC and/or the Company such further and other action, as shall be appropriate or necessary in order to vest or perfect in or to conform of record or otherwise, in Wheatridge Delaware the title to and possession of all property, interests, assets, rights, privileges, immunities, powers, franchises and authority held by the Company immediately prior to the Conversion, and otherwise to carry out the purpose of this Agreement, and the Manager and the officers of Wheatridge Delaware are fully authorized to in the name and on behalf of Wheatridge Delaware or otherwise to take any and all such action and to execute and deliver any and all such deeds and other instruments.
- 3.2. AMENDMENT. At any time before or after the Effective Date, this Agreement may be amended upon the unanimous vote of the Members of Swaggart in any manner as may be necessary, desirable, or expedient in order to clarify the intention of the parties hereto or to effect or facilitate the purpose and intent of this Agreement.
- 3.3 ABANDONMENT OR DEFERRAL. At any time before the Effective Date, upon the unanimous vote of the Members of Swaggart, this Agreement may be terminated and the Conversion may be abandoned or the consummation of the Conversion may be deferred for a reasonable period of time if, in the determination of the Members of Swaggart, such action would be in the best interest of the Company and Swaggart.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement and Plan of Conversion is hereby executed by the undersigned as of the date first set forth above.

COMPANY:

WHEATRIDGE WIND ENERGY, LLC an Oregon limited liability company

By:

Andrew O'Connell President

S-1

Wheatridge Agreement and Plan of Conversion sf-2890712

Attachment A-1

#### SOLE MEMBER:

SWAGGART WIND POWER, LLC, a Delaware limited liability company

Name: Aaron Zubaty
Its: Manager

By:

Name: Sam Enfield

Its:

Manager

Ву

Name: Jerry Rietmann

Its.

Manager

Ву

Name: Andrew O'Connell

Its. Manager

S-2

#### **SOLE MEMBER:**

SWAGGART WIND POWER, LLC, a Delaware limited liability company

By: Name: Aaron Zubaty Its: Manager

By: Name: Sam Enfield Manager Its:

Manager

By:
Name: Andrew O'Connell Its:

Manager

Wheatridge Agreement and Plan of Conversion sf-2890712

#### **SOLE MEMBER:**

SWAGGART WIND POWER, LLC, a Delaware limited liability company

By:
Name: Aaron Zubaty

Its: Manager

By: Name: Sam Entield

Its:

By:
Name: Jerry Rietmann

Manager

Manager

\_\_\_\_\_\_

By: Name: Andrew O'Connell

Its: Manager

S-2

Wheatridge Agreement and Plan of Conversion sf-2890712



## Application for Authority to Transact - Foreign Limited Liability Company

Secretary of State - Corporation Division - 255 Capital St. NE, Suite 151 - Salem, OR 97310-1327 http://www.FilinginOregon.com - Phone: (503) 986-2200

naccordance with Oregon Revised Statute 192.410-192.490, the Info Ve must release this information to all perties upon request and it will Please Type or Print Legibly in Black Ink. Attach Additional	be posted on ou	r wobelto.	· · ·		For office use onl	<u>v</u> .	
1) Name: Wheatridge Wind Energy, LLC							
NOTE. (Must contain the words "Limited Liability Company" or	the abbreviations	s "LLC" or "L.L.C.") Must be identical to	the name on the	Certificate of	Existence, See #3	ì.	
<ol> <li>STATE OR COUNTRY OF ORGANIZATION:</li> <li>Delaware</li> </ol>		7) REGISTERED AGÉNY'S PUBL (Must be an Oregon Street Addi business office.)				<u>,                                    </u>	
Date of Organization: 1172010		285 Liberty Street NE					
3) CERTIFICATE OF EXISTENCE: /	:	Salem, OR 97301	,				
A certificate of existence, current within 80 days of delivery		8) Address of Principal, Off	FICE OF THE B	USINESS:		Λ,	
authenicated by the official having custody of the organizati	ion, is attached.	245 W Main Street, Suite	e 200	` `		<u> </u>	
4) DURATION: (Please check one.)		Ione, OR 97843	· · · · · · · · · · · · · · · · · · ·			\	
Latest date upon which the entity is to dissolve le		9) ADDRESS WHERE THE DIVIS	ION MAY MAI	L NOTICES:		<u>-</u>	
Or	•	P.O Box 133	* 1				
Duration shall be perpetual.	t	Ione, OR 97843					
5), This foreign limited liability company satisfies 1 Requirements of ORS 63.714(3).	THE	10) IF THIS LIMITED LIABILITY CO	OMPANY IS NO	T MEMBER	MANAGED, CHE	SCK	
		*****					
R) NAME OF ORPOON PROPERTY ACTOR		☐ This limited liability comp	any is manage	ed by a singl	e manager.	•	
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the			eany is manage	knowledge	e manager(s). and belief, true,	· !	
EXECUTION: (At least one member or manager must sign.)	Socument is aga Printed	This limited liability comp	the best of my by fines, impr	knowledge a isomment or	e manager(s). and belief, true,	art Win	đ
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my algnature, I declare as an authorized authority. the correct, and complete. Making false staments in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s). and belief, true, both,		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false staments in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false statements in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false staments in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false staments in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false staments in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false statements in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false statements in this of	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority, the correct, and complete. Making false statements in this of Signature.	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  Description: (At least one member or manager must sign.) By my signature, I declare as an authorized authority, the correct, and complete. Making false statements in this of Signature.  Signature:  CONTACT NAME: (To resolve questions with this filing.)	Socument is aga Printed	This limited liability compared by me and is, to alinst the law and may be penalized Name:	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		
Corporation Service Company  1) EXECUTION: (At least one member or manager must eign.) By my signature, I declare as an authorized authority. the correct, and complete. Making false staments in this of	Socument is aga Printed	This limited liability computes been examined by me and is, to sinst the law and may be penalized Name:  Zubaty	the best of my by fines, impr	knowledge isonment or	e manager(s).  and belief, true, both.		

608313-94

**FILED** 

NOV 1 5 2010

OREGON SECRETARY OF STATE

# Delaware

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF
DELAWARE, DO HEREBY CERTIFY "WHEATRIDGE WIND ENERGY, LLC" IS
DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN
GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF
THIS OFFICE SHOW, AS OF THE FIFTEENTH DAY OF NOVEMBER, A.D.
2010.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL TAXES HAVE NOT BEEN ASSESSED TO DATE.

4898003 8300

101085078

You may verify this certificate online

A STATE OF THE STA

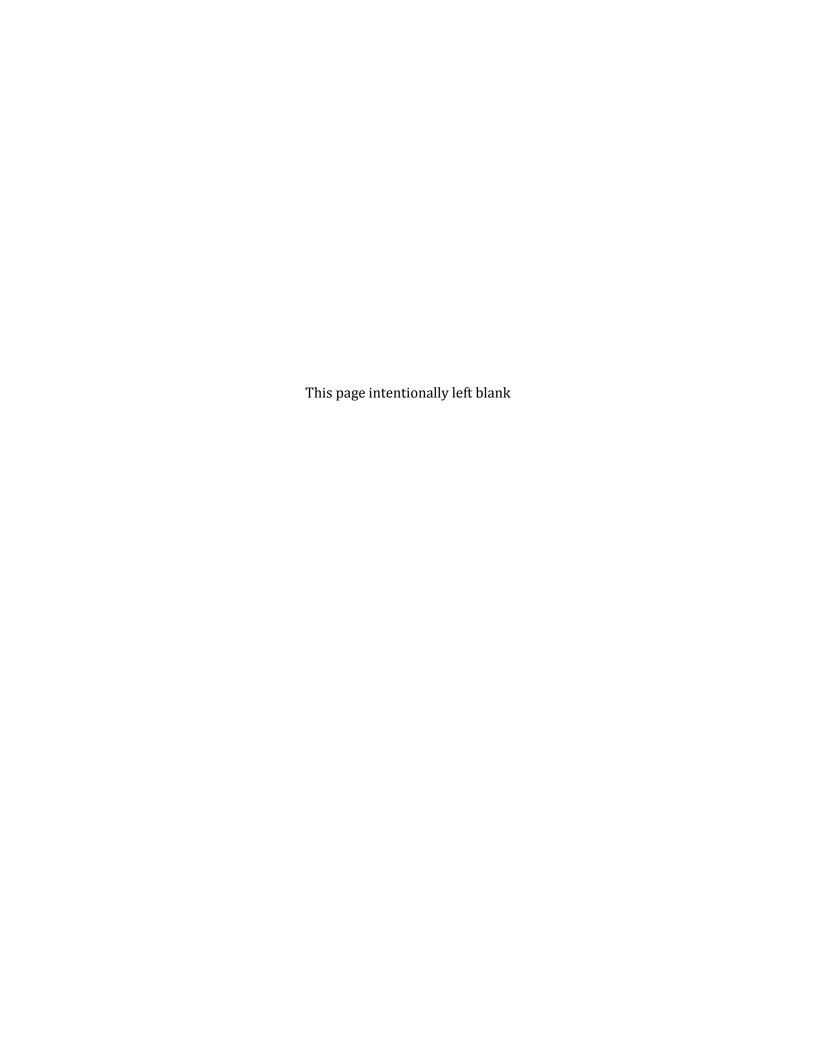
jeffrey W. Bullock, Secretary of State NTICATION: 8351992

DATE: 11-15-10

Attachment A-

VOID WITHOUTSWATERMARK OR IF ALTERED OR ERASED







PAGE 2

## The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF

DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND

CORRECT COPY OF CERTIFICATE OF FORMATION OF "WHEATRIDGE WIND

ENERGY, LLC" FILED IN THIS OFFICE ON THE TWELFTH DAY OF

NOVEMBER, A.D. 2010, AT 8:56 O'CLOCK P.M.

4898003 8100V

101085078

Jeffrey W. Bullock, Secretary of State **AUTHENT CATION:** 8352044

DATE: 11-15-10

State of Delaware Secretary of State Division of Corporations Delivered 09:18 PM 11/12/2010 FILED 08:56 PM 11/12/2010 SRV 101085078 - 4898003 FILE

#### CERTIFICATE OF FORMATION OF WHEATRIDGE WIND ENERGY, LLC

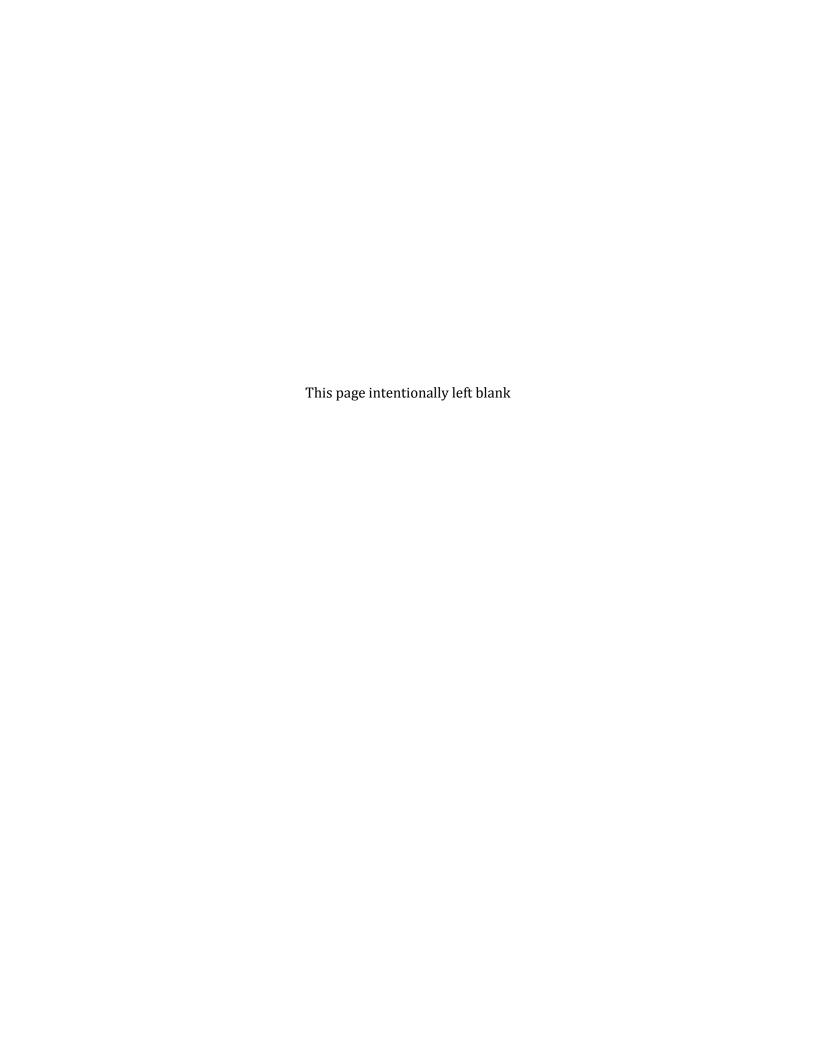
This Certificate of Formation of Wheatridge Wind Energy, LLC, is being duly executed and filed by the undersigned, an authorized person, to form a limited liability company under the Delaware Limited Liability Company Act (6 *Del.C.* § 18-101, *et seq.*) (the "Act").

- 1. The name of the limited liability company is "Wheatridge Wind Energy, LLC".
- 2. The address of its registered office in the State of Delaware is 2711 Centerville Road, Suite 400, Wilmington, 19808, County of New Castle. The name of its registered agent at such address is Corporation Service Company.

IN WITNESS WHEREOF, this Certificate of Formation has been duly executed as of November 12, 2010, and is being filed in accordance with Section 18-206 of the Act.

/s/ Sam Enfield
Sam Enfield
Authorized Person







PAGE 1

## The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF

DELAWARE DO HEREBY CERTIFY THAT THE ATTACHED IS A TRUE AND

CORRECT COPY OF THE CERTIFICATE OF CONVERSION OF AN OREGON

LIMITED LIABILITY COMPANY UNDER THE NAME OF "WHEATRIDGE WIND

ENERGY, LLC" TO A DELAWARE LIMITED LIABILITY COMPANY, FILED IN

THIS OFFICE ON THE TWELFTH DAY OF NOVEMBER, A.D. 2010, AT 8:56

O'CLOCK P.M.

4898003 8100V

101085078

Jeffrey W. Bullock, Secretary of State **AUTHENTYCATION:** 8352044

DATE: 11-15-10

State of Delaware Secretary of State Division of Corporations Delivered 09:18 PM 11/12/2010 FILED 08:56 PM 11/12/2010 SRV 101085078 - 4898003 FILE

# STATE OF DELAWARE CERTIFICATE OF CONVERSION FROM A NON-DELAWARE LIMITED LIABILITY COMPANY TO A DELAWARE LIMITED LIABILITY COMPANY PURSUANT TO SECTION 18-214 OF THE LIMITED LIABILITY COMPANY ACT

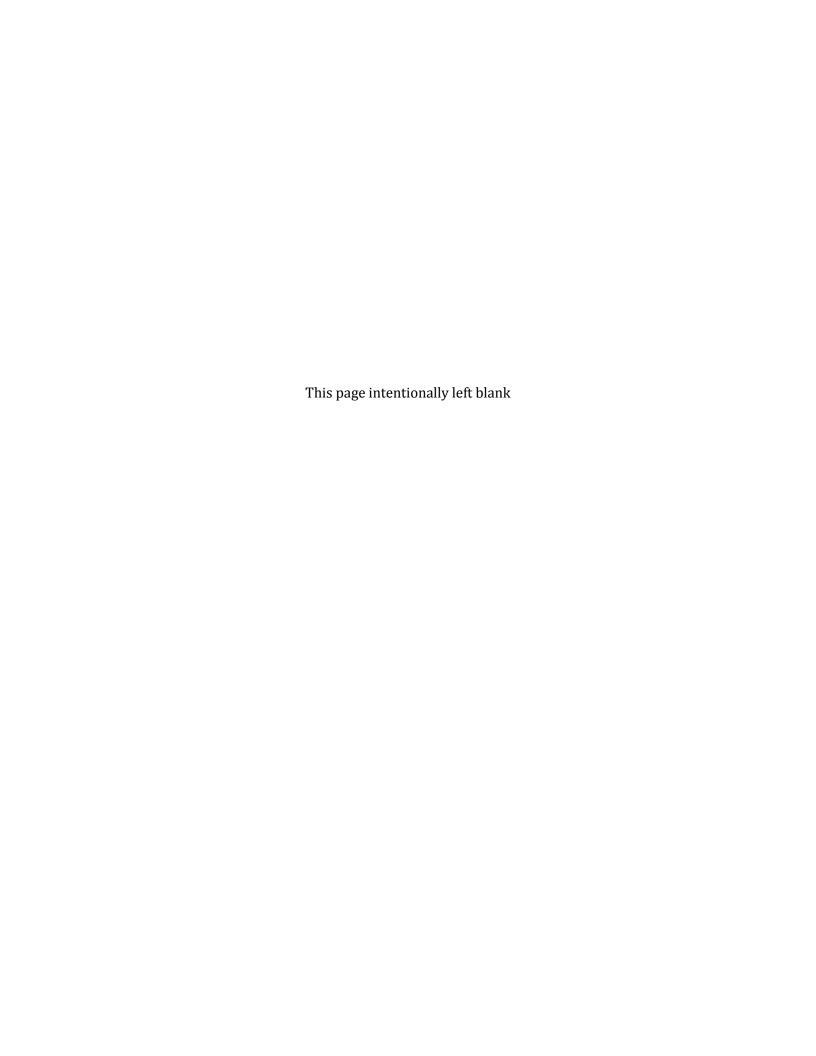
- 1.) The jurisdiction where the Non-Delaware Limited Liability Company was first formed is Oregon.
- 2.) The jurisdiction immediately prior to filing this Certificate is Oregon.
- 3.) The date the Non-Delaware Limited Liability Company was first formed is June 8, 2009.
- 4.) The name of the Non-Delaware Limited Liability Company immediately prior to filing this Certificate is Wheatridge Wind Energy, LLC.
- 5.) The name of the Limited Liability Company as set forth in the Certificate of Formation is Wheatridge Wind Energy, LLC.

IN WITNESS WHEREOF, the undersigned being duly authorized to sign on behalf of the converting Limited Liability Company has executed this Certificate on the 12th day of November, 2010.

/s/ Sam Enfield
Sam Enfield
Authorized Person

## **Attachment A-4:**

**Qualification to Conduct Business in Oregon** 

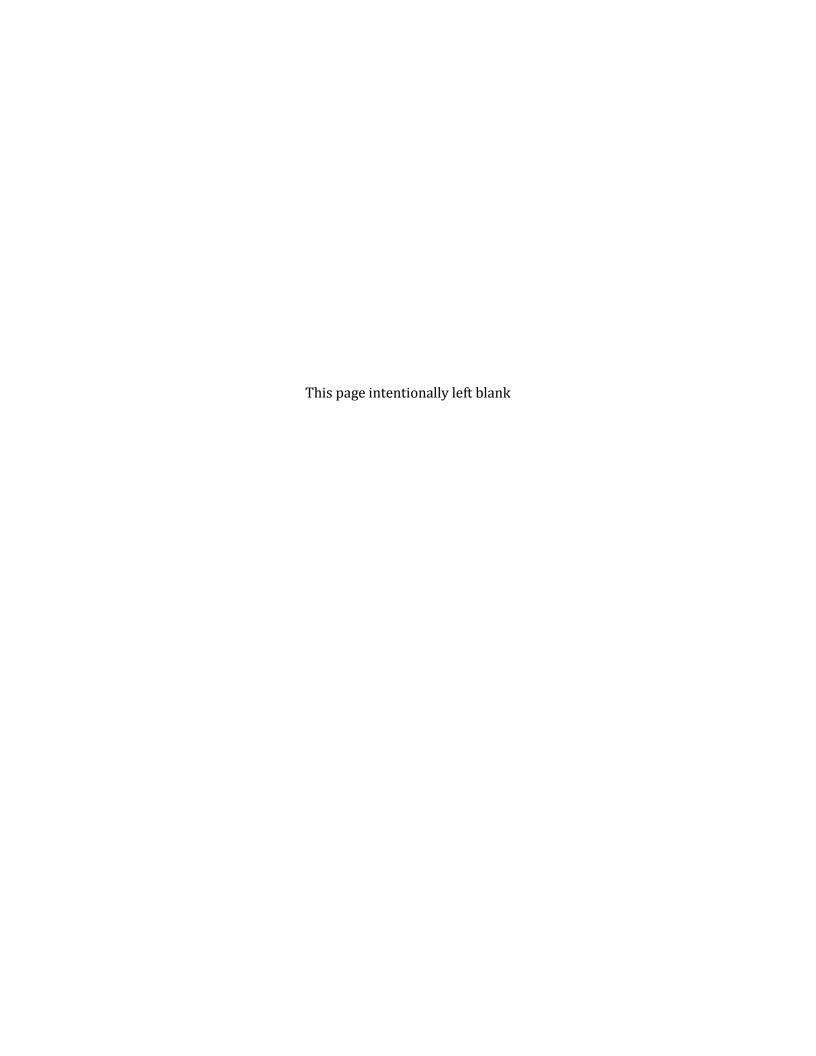




## Application for Authority to Transact - Foreign Limited Liability Company

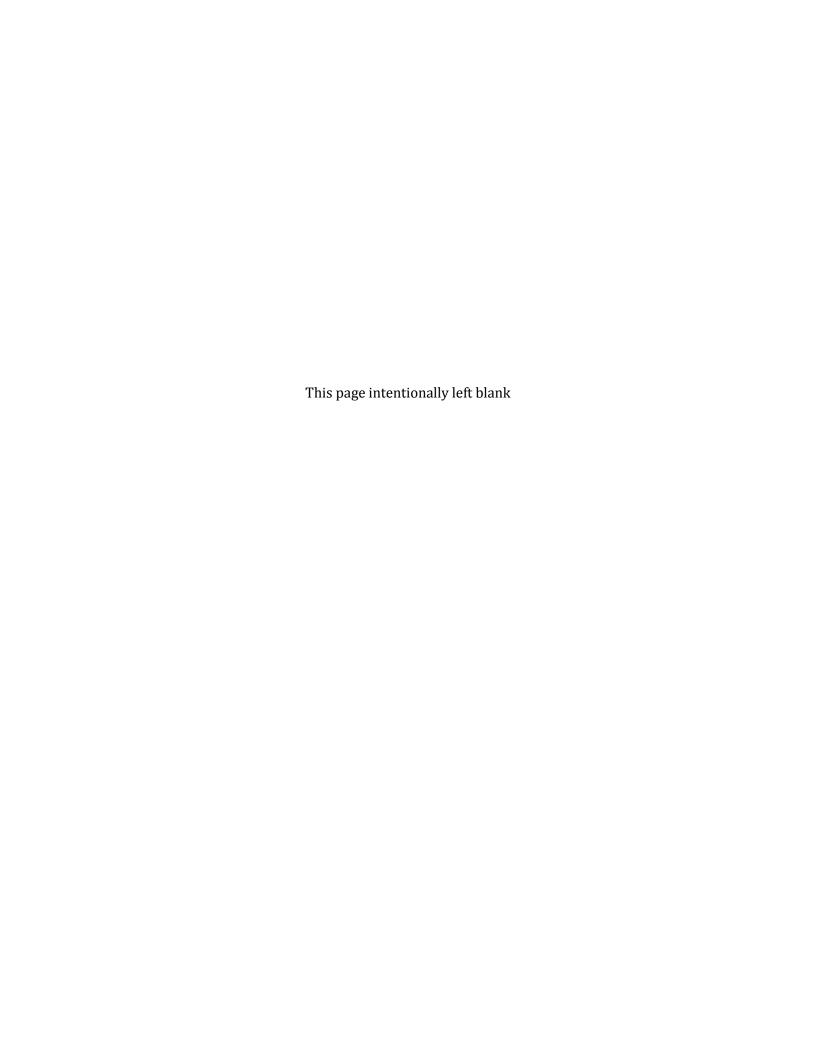
Secretary of State - Corporation Division - 255 Capital St. NE, Suite 151 - Salem, OR 97310-1327 http://www.FilinginOregon.com - Phone: (503) 986-2200

accordance with Oregon Revised Statute 192.410-192.490, the information to all perties upon request and it wi	il be posted on ou	r wabeite.		For office use only	
lesse Type or Print Legibly in Black Ink. Attach Additional	Sheet If Neces	sary.			<del></del>
NAME: Wheatridge Wind Energy, LLC     NOTE. (Must contain the words "Limited Usblity Company" or	r the shireduler	a 910° or 9.1 0° 9. March to Marchael to the name	on the Carlifornia of	Edutores Con CO	
	7				
2) STATE OR COUNTRY OF ORGANIZATION: Dolaware	^	<ol> <li>REGISTERED AGÉNY'S PUBLICLY AV (Must be an Oregon Street Address, which business office.)</li> </ol>			
Date of Organization: 11 + 42010		285 Liberty Street NE			
3) CERTIFICATE OF EXISTENCE:		Salem, OR 97301			
A certificate of existence, current within 80 days of delivery authenticated by the official having custody of the organizar		<ol> <li>Address of Principal Office of 245 W Main Street, Suite 200</li> </ol>	THE BUSINESS:	χ.	
4) DURATION: (Please check one.)		Ione, OR 97843			<u>,</u>
Latest date upon which the entity is to dissolve is		9) ADDRESS WHERE THE DIVISION MAY	Y MAIL NOTICES:		<del></del>
Or	•	P.O Box 133			
Duration shall be perpetual.	t	Ione, OR 97843		**********	<del></del>
5), This foreign limited liability company satisfies requirements of ORS 63.714(3).	THE	10) IF THIS LIMITED LIABILITY COMPANY ONE BOX BELOW-	IS NOT MEMBER I	KANAGED, CHECK	
, ,,		· · · · · · · · · · · · · · · · · · ·			
6) NAME OF OREGON REGISTERED AGENT		This limited liability company is m	nanaged by a single	s manager.	•
Corporation Service Company  1) Execution: (At least one member or manager must sign.) By my signature, I declare as an authorized authority.		This limited liability company is m	nanaged by multiple	s manager(s).	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.)	document is ag	This limited liability company is make the second of the least aliast the law and may be penalized by finest	of my knowledge as, imprisonment or t	s manager(s).	t Wind
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. t correct, and complete. Malking false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	s managèr(s).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. t correct, and complete. Malking false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. t correct, and complete. Making false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. t correct, and complete. Malking false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. to correct, and complete. Making false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. to correct, and complete. Malking false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. to correct, and complete. Making false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. to correct, and complete. Making false statements in this	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. to correct, and complete. Making false statements in this Signature.	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by finest Name:	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
Corporation Service Company  1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority. to correct, and complete. Making false statements in this signature.  Signature.  CONTACT NAME: (To resolve questions with this filing.)	document is ag	This limited liability company is means as been examined by me and is, to the best ainst the law and may be penalized by fines Name:  Zubaty	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	
1) EXECUTION: (At least one member or manager must sign.) By my signature, I declare as an authorized authority, toorrect, and complete. Malding false statements in this	document is ag	This limited liability company is must been examined by me and is, to the best ainst the law and may be penalized by fines Name:  Zubaty	of my knowledge as, imprisonment or to Title:	e managèr(e).  und bellef, true, both.	



**Attachment A-5:** 

Letter Authorizing Submittal of this Application for Site Certificate



#### ACTION BY WRITTEN CONSENT OF THE SOLE MEMBER OF WHEATRIDGE WIND ENERGY, LLC

October 30, 2012

The undersigned, being the sole member (the "Member") of Wheatridge Wind Energy, LLC, a Delaware limited liability company (the "Company"), hereby approves, adopts and consents to the adoption of the following resolutions by a written consent without a meeting pursuant to § 18-404(d) of the Delaware Limited Liability Company Act (the "Act") and Section 5(a) of the Limited Liability Company Operating Agreement of the Company (the "LLC Agreement"). Capitalized terms used but not otherwise defined herein have the meaning given to them in the LLC Agreement.

#### NOTICE OF INTENT AND APPLICATION

WHEREAS, the Member has considered the proposed submission of the Notice of Intent and Application for Site Certificate to the State of Oregon Energy Facilities Siting Council (the "Notice of Intent") and has determined that such submission is in the best interests of the Company and the Managing Member; and

WHEREAS, Andrew O'Connell is the President of the Company.

NOW THEREFORE, BE IT RESOLVED, that the execution, delivery and performance of the Notice of Intent be, and hereby is, approved; and

RESOLVED FURTHER, that Andrew O'Connell, in his capacity as President of the Company, be, and hereby is, authorized and directed to execute, deliver and cause the Company to perform under the Notice of Intent.

#### **GENERAL AUTHORITY**

RESOLVED FURTHER, that any and all actions heretofore taken by the Member or Andrew O'Connell within the terms of any of the foregoing resolutions are hereby ratified, approved and confirmed, and declared to be the valid and binding acts and deeds of the Company; and

RESOLVED FURTHER, that Andrew O'Connell, in his capacity as President of the Company, is hereby authorized, directed and empowered to do all such other acts and things and to execute and deliver all such certificates or other documents and to take such other action as he deems necessary or desirable to carry out the purposes and intent of the above resolutions.

1

IN WITNESS WHEREOF, the undersigned have executed this Action by Written Consent as of the date first written above.

#### SOLE MEMBER:

SWAGGART WIND POWER, LLC, a Delaware limited liability company

By:

Name: Aaron Zubaty

Its:

Manager

By:

Name: Samuel E. Enfield

Its:

Manager

By: (Name: Jerry

Manager

By: <sup><</sup>

Name: Andrew O'Connell

Its:

Manager

# **Exhibit B**

# **Project Description**

# **Prepared for**



# Wheatridge Wind Energy, LLC

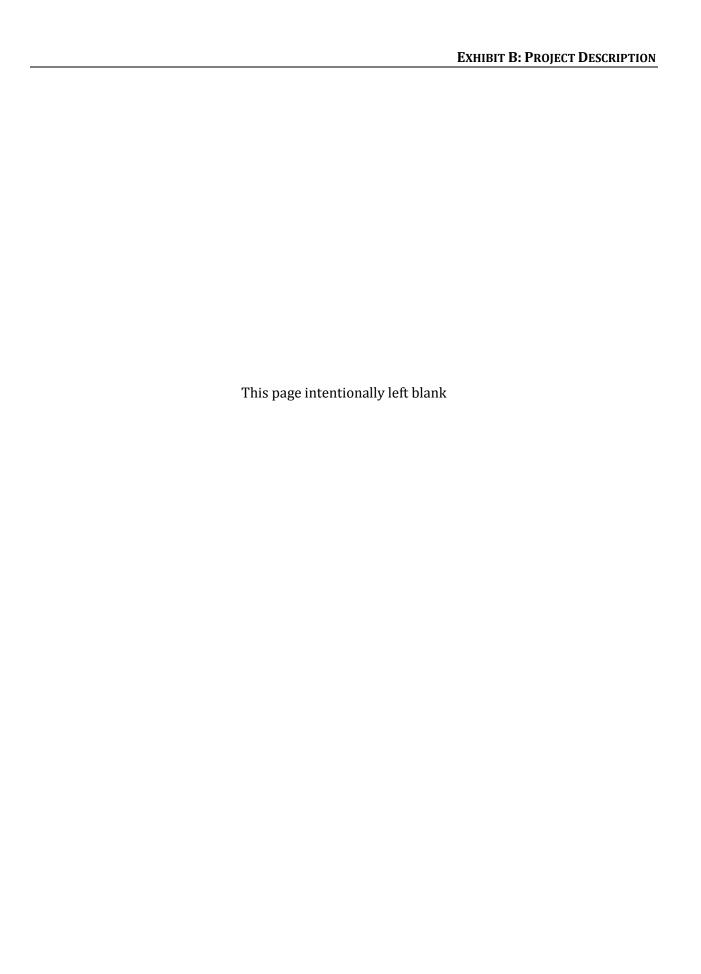
Wheatridge Wind Energy Facility

July 2015

Prepared by



Tetra Tech, Inc.



# **Table of Contents**

1.0	Introduction	1
2.0	Overview of Proposed Facility	1
2.1	Definition of the Site Boundary	1
2.2	Turbine Options	2
2.3	Grid Interconnection	3
3.0	Project Components, Structures, and Systems	3
3.1	Wind Turbines	3
3.2	Electrical Collection System	6
3.3	Intraconnection Line(s)	8
3.4	Meteorological Towers	13
3.5	Communication and SCADA System	13
3.6	Operations and Maintenance Buildings	14
3.7	Access Roads	14
3.	.7.1 Access to the Site – Offsite Public Roads	14
3.	.7.2 Access Within the Site – Onsite Private Roads	15
3.8	Construction Yards	16
4.0	Other Systems and Information	17
4.1	Fuel and Chemical Storage	17
4.2	Fire Prevention and Control	18
5.0	Rights-of-way	19
6.0	Construction Schedule	19
7.0	Submittal Requirements and Approval Standards	21
7.1	Submittal Requirements	21
7.2	Approval Standard	23
8.0	References	23

### **List of Tables**

Table B-1. Wind Turbine	e Option Characteristics	4
Table B-2. Submittal Req	quirements Matrix	21

## **List of Figures**

- Figure B-1. Typical Wind Turbine
- Figure B-2. GE 1.7-103 Spread-Footing Foundation
- Figure B-3. GE 2.5-120 Spread-Footing Foundation
- Figure B-4. GE 1.7-103 Turbine Site
- Figure B-5. GE 2.5-120 Turbine Site
- Figure B-6. Typical Pad-Mounted GSU Transformer Foundation
- Figure B-7. Typical Buried Cable Duck Back
- Figure B-8. Typical Meteorological Tower Foundation

#### **Terms and Definitions**

Collector Line An underground or overhead electrical 34.5 kV line transmitting

power from the turbines to a Substation

Construction Yard The temporary area for construction activities and Project

component storage prior to installation

GE 1.7-103 Layout Project turbine layout comprised of 292 GE 1.7MW turbines with

80m hub heights and 103m rotor diameters

GE 2.5-120 Layout Project turbine layout comprised of 200 GE 2.5MW turbines with

85m hub heights and 120m rotor diameters

Gen-tie Line(s) One or two 230 kV transmission line(s) conveying power from the

Project to an interconnection point with the grid, which will be

permitted and built by UEC or UEC/CB

Intraconnection Corridor The intraconnection transmission line corridor connecting

Wheatridge East with Wheatridge West

Intraconnection Line(s) One or two overhead electrical 230 kV lines connecting the Project

Substations in Wheatridge East and Wheatridge West.

Met Tower Permanent meteorological tower

O&M Buildings Permanent operations and maintenance buildings, including parking

Project Wheatridge Wind Energy Facility

Site Access Road Private road to be constructed or improved for the purpose of

accessing turbines and associated Project facilities

Site Boundary The boundary within which all Project facilities will be constructed,

also known as the micrositing corridor

Substation A facility in which electric power from the turbines is aggregated,

stepped up in voltage, and connected to the Intraconnection Line(s)

or the Gen-tie Line(s)

Turbine A collective term for the foundation, tower, nacelle, blades and rotor

that comprise a wind turbine generator in the Project

Turbine Pad A cleared, graveled area around the base of each turbine

encompassing primarily the turbine's foundation

Wheatridge Wind Energy, LLC

Wheatridge East The eastern group of turbines

Wheatridge West The western group of turbines

## **Acronyms and Abbreviations**

APLIC Avian Power Line Interaction Committee

ASC Application for Site Certificate

BMP Best Management Practice

BPA Bonneville Power Administration

CB Columbia Basin Electric Cooperative

EFSC Energy Facility Siting Council

EFU Exclusive Farm Use

FAA Federal Aviation Administration

GSU Generator step-up transformer

kV Kilovolt

mph Miles per hour

MW Megawatt

NESC National Electrical Safety Code

OAR Oregon Administrative Rules

ODOE Oregon Department of Energy

ORS Oregon Revised Statutes

rpm Revolutions per minute

RPS Renewables Portfolio Standard

RSA Rotor swept area

SCADA Supervisory control and data acquisition

UEC Umatilla Electric Cooperative

#### 1.0 Introduction

Exhibit B provides a description of the proposed Wheatridge Wind Energy Facility (Project), as required to meet the submittal requirements of Oregon Administrative Rule (OAR) 345-021-0010(1)(b) paragraphs (A) through (F). OAR 345 Division 22 does not provide an approval standard specific to Exhibit B.

# 2.0 Overview of Proposed Facility

Wheatridge Wind Energy, LLC (Wheatridge), proposes to construct the Wheatridge Wind Energy Facility (Project), a wind generation facility with a maximum nominal generating capacity of 500 megawatts (MW) in Morrow and Umatilla counties, Oregon (see Figures C-1 and C-2). The Project is comprised of up to 292 turbines divided into two groups: a western group of turbines (Wheatridge West) and an eastern group of turbines (Wheatridge East). Wheatridge West and Wheatridge East are electrically connected by an 'Intraconnection Corridor' containing up to two parallel overhead 230-kilovolt (kV) transmission lines (Intraconnection Lines), each no longer than 35 miles in length. Other Project components include access roads (Site Access Roads), an electrical collection and control system, the Project's substations (Substations), operations and maintenance buildings (O&M Buildings), and temporary construction yards (Construction Yards). These facilities are all described in greater detail in Section 3.0.

Wheatridge West is located entirely within Morrow County, approximately 5 miles northeast of Lexington, and approximately 7 miles northwest of Heppner. Wheatridge West is bisected by Oregon Highway 207 (OR-207). Wheatridge East is located approximately 16 miles northeast of Heppner and encompasses land in both Morrow and Umatilla counties. The Intraconnection Corridor is located entirely within Morrow County and adjoins to the southeastern portion of Wheatridge West and the southern portion of Wheatridge East.

#### 2.1 Definition of the Site Boundary

The Site Boundary establishes the micrositing corridors within which all Project facilities will be located. Permitting micrositing corridors allows Wheatridge the flexibility to adjust the specific location of Project facilities at the time of construction (a process referred to as micrositing), while establishing outer boundaries of potential construction which can then be used for purposes of impact assessment. The Site Boundary establishes the locations of turbine strings, and would encompass all of the permanent and temporary Project facilities. The Site Boundary is a minimum of approximately 660 feet in width around turbines, and wider in some locations. The Site Boundary width around Site Access Roads and electrical collection lines (Collector Lines) is narrower, between 200 feet and 500 feet in width. The Intraconnection Corridor is approximately 1,000 feet in width, and would contain all Intraconnection Lines and associated Site Access Roads. Wider areas of the Site Boundary would encompass the Substations, meteorological towers (Met

Towers), the O&M Buildings, and Construction Yards. The Site Boundary excludes areas where appropriate to avoid impacts to sensitive cultural, biological, or environmental resources such as wetlands.

#### 2.2 Turbine Options

In order to allow flexibility in the choice of wind turbines at the time of construction, Wheatridge has analyzed impacts for two layouts using two different turbine models, while limiting the total generating capacity to 500MW. This approach would allow 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 is required because turbine manufacturers offer new turbine models with improved technology and retire older models approximately every 1 to 2 years.

Turbine layout Option 1 utilizes 292 1.7MW GE turbines with 80-meter (262-foot) hub heights and 103-meter (337-foot) rotor diameters and is referred to as the GE 1.7-103 layout in the Application for Site Certificate (ASC). Turbine layout Option 2 utilizes 200 2.5MW GE turbines with 85-meter (278-foot) hub heights and 120-meter (393-foot) rotor diameters and Option 2 is referred to as GE 2.5-120 layout in the ASC. 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. Wheatridge seeks micrositing flexibility within the Site Boundary in regard to the final layouts for both the studied GE 1.7-103 layout and GE 2.5-120 layout and any turbine model whose impacts are less than or equal to these two studied layouts and their associated facilities.

These two turbine layout options define the maximum number, size, visual impact, and noise limits of wind turbines for the Project. The ultimate number of wind turbines and the specific model and manufacturer used would be determined near the time of construction; however, the impacts associated with any turbine model chosen for construction would not exceed the impacts as bounded by this ASC. The number of turbines would not be greater than 292 (based on the GE 1.7-103 layout), the specific model selected for construction would not have a total rotor swept area (RSA) larger than the GE 2.5-120 layout, and the received sound levels at noise sensitive receptors from the ultimately selected turbine model and layout would not exceed the noise emissions of either the studied GE 1.7-103 or GE 2.5-120 layouts.

The preliminary Project layouts presented in the ASC are layouts which have involved significant engineering design work guiding the placement of turbines and supporting facilities while minimizing their impacts. These layouts were used to define the Site Boundary, which consists of corridors around all the turbines as currently designed and as likely designed during the final micrositing of the turbines and Project facilities. These preliminary Project layouts define the maximum impacts and are representative of the final layout but are not necessarily the specific location for each turbine, the final turbine model, or the final location of all the supporting Project facilities. For this reason, the analysis of the impacts of the turbines assumes both turbine types and

the Project layout with the largest potential impact to each element of the environment. The turbine type used may not be the same for each analysis. For example, the turbine with the largest RSA may not be the turbine with the loudest noise or the largest visual impact. The final layout will be determined prior to construction and will reflect additional survey data, final engineering design, and Wheatridge's ongoing process of avoiding and minimizing impacts.

#### 2.3 Grid Interconnection

Wheatridge anticipates that the Project will connect to the Bonneville Power Administration (BPA) transmission system via overhead 230kV transmission lines (Gen-tie Line[s]) to be owned by either Umatilla Electric Cooperative (UEC) or UEC in partnership with the Columbia Basin Electric Cooperative (CB), but operated by BPA. The Gen-tie Line(s) will be permitted by UEC and/or CB separately from the Wheatridge Project; therefore, this application does not address impacts associated with the Gen-tie Line(s) and their associated substation(s).

The specific location of the future Gen-tie Line(s) is not yet known; however, several potential routes have been identified and are shown as conceptual alignments on figures in the ASC (see Figures C-4a/b/c/d). With the proposed Intraconnection Line(s) and multiple Substations, the Project is designed to accommodate a variety of Gen-tie Line route options. Several likely points of interconnection to the BPA transmission system exist, including the planned Stanfield substation near Stanfield, Oregon (Umatilla County) and the planned Longhorn substation at the Port of Morrow, Oregon (Morrow County). These two points of interconnection are the most likely and are shown throughout this ASC as illustrative of the Project's grid interconnection options, but other options may exist. The timeline and control of the interconnection options are largely established by BPA and other transmission customers in the area, which means the Project's construction timeline requires flexibility to be able to start construction when the interconnection facilities are ready.

# 3.0 Project Components, Structures, and Systems

#### 3.1 Wind Turbines

The Project is designed around two representative wind turbine models: a GE 1.7MW 103-meter rotor diameter turbine and a GE 2.5MW 120-meter rotor diameter turbine. Table B-1 shows the key characteristics for each turbine layout option for Wheatridge East and Wheatridge West. The use of two layout options defines a representative range of turbine technical specifications and maximum impact parameters for the Project. The Project's total nominal generating capacity will be 500MW. The two turbine models represent the likely range of wind turbine generator ratings of 1.7MW to 2.5MW resulting in a maximum number of 292 turbines with the 1.7MW model. Rotor diameters are anticipated to be in the range of 103 meters (337 feet) to 120 meters (393 feet). Tower heights are similarly anticipated to range from 80 meters (262 feet) to 85 meters (278 feet). Total height (tower height plus blade length) for the turbines is likely in the range of 132 meters (433 feet) to 145 meters (476 feet). Turbines would be arrayed in rows, or strings, spaced approximately 700 to

1,000 feet apart within each string, with approximately 1 mile separating each row of turbines. This spacing is required by turbine manufacturers to minimize the turbines' turbulence. Figures C-5 and C-10 show representative turbine locations for the GE 1.7-103 and the GE 2.5-120 layouts.

Table B-1. Wind Turbine Option Characteristics							
Project Area	Turbine Model	Generating Capacity	Tower Height	Rotor Diameter	Total Height	Total Number	Total Generating Capacity
		G	E 1.7-103 L	ayout			
Wheatridge East	GE 1.7-103	1.715MW	80m (262ft)	103m (338ft)	131.5m (431ft)	66 /1	113.2MW
Wheatridge West	GE 1.7-103	1.715MW	80m (262ft)	103m (338ft)	131.5m (431ft)	226	387.6MW
Total Project						292	500MW
GE 2.5-120 Layout							
Wheatridge East	GE 2.5-120	2.5MW	85m (279ft)	120m (394ft)	145m (476ft)	50 /2	125MW
Wheatridge West	GE 2.5-120	2.5MW	85m (279ft)	120m (394ft)	145m (476ft)	150	375MW
Total Project			•			200	500MW

<sup>1. 31</sup> turbines in Morrow County, and 35 in Umatilla County

A wind turbine generator consists of a three-bladed rotor, attached to a nacelle mounted atop a tubular tower (see Figure B-1); these components are described in greater detail below.

#### **Nacelle**

The nacelle sits atop the turbine tower and houses the gearbox, generator, brakes, and control systems for the turbine. Access to the nacelle is via a ladder inside the turbine tower, which is accessed by a locked doorway at the base of the tower. The nacelle is mounted to the turbine tower on a geared plate that functions to rotate the turbine horizontally on the tower, allowing the nacelle to turn and orient the rotor to face into the wind and maximize capture of the available wind resource.

The roof of the nacelle is designed to be removable or opened from within to accommodate major maintenance activities such as the replacement of a gearbox. The floor of the nacelle acts as a pan to contain any potential spills of gearbox or hydraulic fluid.

#### **Blades and Rotors**

The turbine blades are attached to the rotor hub, which is mounted to the front of the nacelle. A rotor blade is made of laminated fiberglass and carbon fiber and typically is constructed as a single piece. The rotor diameter of turbine models under consideration for the Project for maximum impact calculations and that are representative of ultimately selected turbine model range from 103 meters (337 feet) for the GE 1.7-103 layout to 120 meters (393 feet) for the GE 2.5-120 layout.

<sup>2. 20</sup> turbines in Morrow County, and 30 in Umatilla County

Each blade would therefore be approximately 51 meters (167 feet) or 60 meters (197 feet) in length.

When operating, the rotor turns at a rate between 10 and 20 revolutions per minute (RPM). The turbine begins generating electricity at wind speeds of approximately 6 miles per hour (mph). At wind speeds greater than about 55mph, the turbine shuts down; the blades are feathered so they do not catch the wind, brakes are applied to slow and stop the rotor, and once stopped the rotor may be locked to prevent damage to the turbine.

#### **Turbine Tower**

The turbine tower is a cylindrical, usually steel, structure tapered from the base to the top, on top of which is mounted the nacelle. Tower heights vary by turbine model and manufacturer; those under consideration for the Project for maximum impact calculations and that are representative of ultimately selected turbine model would be either 80 meters (262 feet) for the GE 1.7-103 layout or 85 meters (278 feet) for the GE 2.5-120 layout. The interior of a tower is accessible by a locked door at ground level, and the tower features an internal ladder system providing protected access to the nacelle. A typical turbine tower would be approximately 15 feet (4.5 meters) across at the base, tapering to less than 10 feet across at the nacelle. Each tower would arrive at the Project in three or four sections, to be assembled on-site.

#### **Turbine Foundation**

Each turbine would be secured to a reinforced concrete foundation. Typical wind turbine foundations are reinforced concrete, spread-footing or plate foundations; other foundation types such as pile or caisson-type foundations may be considered based on site-specific soil conditions. The actual foundation design for each tower will be determined prior to construction based on site-specific geotechnical studies; however, for the purposes of the ASC, Wheatridge assumes that typical spread-footing foundations would be used (Figures B-2 and B-3). A typical spread-footing foundation consists of a reinforced concrete pad, up to 80 feet in diameter, extending to approximately 12 feet below grade. The center of the foundation would be approximately 6 feet thick, tapering to approximately 3 feet thick at the outer edges. A pedestal, upon which the turbine tower is mounted, projects from the center of the footing to above ground level.

#### Permanent Turbine Pad Impact Area

An engineered earth and gravel pad is maintained for the life of the Project atop the outer edges of the foundation footing. The earth and gravel effectively add weight to the foundation and further stabilizes the turbine; the gravel pad also serves as a parking area for maintenance vehicles. The permanent impact area within the maintained gravel pad is approximated by a 20-meter (65-foot) diameter circle, or 0.08 acres per turbine.

#### **Temporary Turbine Construction Area**

Construction of each turbine will require the temporary disturbance of an area around the foundation in order to accommodate foundation excavation and soil storage and to provide a stable area for the staging and assembly of turbine and tower components and the operation of

construction cranes and other heavy equipment (Figures B-4 and B-5). This temporary disturbance area is approximated by a 30-meter (98-foot) diameter circle around the turbine, or about 0.18 acres in size. Following erection of the turbines, the Construction Yards would be reclaimed through regrading to pre-construction contours, restoration of topsoil as needed, soil decompaction if necessary, and seeding and/or planting to restore habitat as appropriate. Wheatridge will coordinate with landowners for final restoration requirements in agricultural areas.

#### **Turbine Marking and Lighting**

The turbines will be marked and lighted according to Federal Aviation Administration (FAA) guidelines, but no other lighting would be used on the turbines. FAA guidelines call for painting the turbines and towers white or light gray, while making them highly visible to pilots from the air. Flashing red aviation lighting will be mounted atop selected turbines; FAA guidelines usually dictate for lighting at the end of each turbine string or around the perimeter of a project, and within a project such that the gap between lights is no greater than 0.5 miles. Under current FAA guidelines, all of the lights would be programmed to flash in unison, allowing the entire Project to be perceived as a single unit by pilots flying at night. The specific location of aviation lighting and the operation of the lighting system will be determined in consultation with FAA prior to beginning construction on the Project.

#### 3.2 Electrical Collection System

The electrical collection system will carry power generated by the turbines to one of the Substations. Power would be initially generated at 575 to 690 volts (V) by the turbines, and then stepped up to 34.5kV through generator step-up (GSU) transformers installed at the base of each turbine. The Collector Lines would then carry the power to one of the Substations, at which the voltage would be stepped up from 34.5kV to 230kV for overhead transmission, either through the Intraconnection Line(s) or onto the Gen-tie Line(s).

Typically, the GSU transformer is a rectangular box with a footprint approximately 7.5 feet x 8.5 feet, located a few feet from the base of the turbine tower; it is therefore called a pad-mounted GSU transformer<sup>1</sup> (Figure B-6). A pad-mounted GSU transformer is typically mounted on an 8-inch thick concrete pad foundation, set within the engineered earth and gravel fill above the turbine foundation.

Electrical connections will be made underground or in enclosed junction boxes between the turbine and the pad-mounted GSU transformer, then from the transformer to the Collector Lines. The 34.5kV Collector Lines would typically run in trenches no less than 3 feet deep in tilled ground, generally located alongside the Site Access Roads, with junction splice boxes positioned intermittently along the lines for maintenance access (Figure B-7). Where land use and soil conditions make a buried depth of 3 feet infeasible, Collector Lines may be buried at a depth of less than 3 feet, while still adhering to National Electrical Safety Code (NESC) standards. Each Collector

<sup>&</sup>lt;sup>1</sup> Note that in some Turbine models the GSU transformer is located in the nacelle or in the base of the tower.

Line circuit would consist of three wires, or phases; each wire would be an insulated, stranded metal conductor in a size range of 1/0 - 4/0 American wire gauge, nearly 3 inches in diameter.

It is possible that the Collector Lines may need to be run overhead in situations where a buried cable would be infeasible or would create unnecessary impacts, such as at stream or canyon crossings. In such instances overhead Collector Lines will be supported by a wooden or steel pole structure. Each support pole would be buried approximately 6 feet in the ground and would extend to a height of approximately 60 feet above ground, spaced 100 to 200 feet apart. Collector Lines are only anticipated to potentially need overhead placement in Wheatridge West. Based on existing topographic data, there would be no greater than 10.83 miles of overhead Collector Lines in the Project; however, the specific locations where Collector Lines may need to run overhead will not be known until site geotechnical work has been done.

The total length of Collector Lines needed would depend on the turbine model and number of turbines constructed. With the use of the GE 1.7-103 layout, approximately 88 miles of Collector Lines would be needed, while approximately 80 miles would be needed for the GE 2.5-120 layout. Tables C-3 and C-4 presents the Collector Line mileage for Wheatridge East and Wheatridge West by turbine layout option.

There would be no permanent impacts associated with the Collector Lines buried underground. Where not placed within a Site Access Road, the area above the buried line would be restored and revegetated following construction. For the purposes of the ASC, Wheatridge assumes a temporary impact corridor approximately 8 meters (26 feet) for the buried Collector Lines. Where Collector Lines may need to run overhead the permanent impact would be only the support poles for the overhead Collector Lines. Each pole's permanent impact would be a 1.5 meter diameter circle centered on the support pole; comprising no greater than 0.17 acres assuming all 10.83 miles of potential overhead support is needed for the Collector Lines.

#### **Collector Substation(s)**

The Project would likely include up to three Substations, in which power from the Collector Lines would be aggregated and stepped up to transmission voltage: with one or two Substations being located in Wheatridge West and one additional Substation being located in Wheatridge East. The proposed Substation locations for both Wheatridge East and Wheatridge West are shown on Figures C-4a/b/c/d and C-10.

This proposal describes three alternative locations for the Substations in Wheatridge West (Substations 1, 2a and 2b). While only two Substations are likely to be constructed in Wheatridge West, for the purposes of impact calculations all three potential Substation locations are considered within Wheatridge West. The final number and location of Substations in Wheatridge West will depend on the final location of the UEC or UEC/CB Gen-tie Line(s), as well as the route option used for the Intraconnection Line(s) (see Section 3.3).

Each Substation would occupy between 2 and 5 acres and would be enclosed by a locked 8-foot tall wire mesh fence to prohibit unauthorized access. Substation equipment would include transformers, transmission line termination structures, a bus bar, circuit breakers and fuses,

control systems, meters, and other equipment. The area within the fence line would be graded approximately flat, with a bed of crushed rock applied for a durable surface.

Substation 1 would likely be located near the Wheatridge West O&M Building on the southern side of Baseline Road. Substation 2a would likely be located south of Strawberry Lane, approximately 0.5 miles west of Bombing Range Road. Substation 2b would likely be located 0.5 miles east of Cutsforth Road, east of its intersection with Dolven Road. Substation 3 would likely be located near the Wheatridge East O&M Building, along an existing private road to be improved, west of Vey Road and approximately 1.25 miles north of the Umatilla County line.

#### 3.3 Intraconnection Line(s)

Wheatridge East and Wheatridge West would be electrically connected by the Intraconnection Line(s), either single or a double circuit 230kV transmission line(s) running between the Substations in each area (Figures C-4a/b/c/d). If the Intraconnection Line is a single circuit, then one set of transmission line structures, either H-frame or monopole, will be constructed to carry the circuit. If the Intraconnection Line(s) is two circuits, then either one set of transmission line monopole structures carrying both circuits or two sets of parallel transmission line monopole structures each carrying one circuit will be constructed. The Intraconnection Line(s) would be designed to maintain a minimum conductor-to-ground clearance of 30 feet and the structures would be typically 60 feet tall and spaced approximately 400-800 feet apart depending on the terrain. The Intraconnection Line(s) will be designed following Avian Power Line Interaction Committee (APLIC) (2006) recommendations to prevent electrocution of birds. APLIC recommended measures are intended to protect raptors, cranes, and other large birds from accidental electrocution and are sufficient to protect even the largest birds that may try to roost on the Project Intraconnection Line(s). The engineering options for the Intraconnection Line structures are discussed in detail in Exhibit AA, including example drawings. The construction schedule of the Project may require that one circuit is constructed before the second circuit; discussed in greater detail in section 6.0.

The final Intraconnection Line routes will depend on the point of interconnection to the BPA grid, likely either the planned Longhorn or Stanfield substations, and on the number of Project Substations; likely there will be two or three. A shown on Figures C-4a/b/c/d, there are four Intraconnection Line route options, none of which is dependent upon the layout options. Any of these routes would work with either the GE 1.7-103 or GE 2.5-120 layouts. The Intraconnection Line route options are as follows:

- Option 1: Two Project Substations to Longhorn
  - This option would run from Substation 3 in Wheatridge East to Substation 1 in Wheatridge West and then on to the proposed UEC/CB Strawberry substation, just to the west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line going to the proposed BPA Longhorn substation. The Intraconnection Line routes would be 31.5 miles (50.5 kilometers) in length.

- Option 2: Three Project Substations to Longhorn
  - o This option would run from Substation 3 in Wheatridge East to Substation 2b in Wheatridge West, then on to Substation 2a in Wheatridge West, and then on to the proposed UEC/CB Strawberry substation, just to the west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line going to the proposed BPA Longhorn substation. The Intraconnection Line routes would be 31.3 miles (50.3kilometers) in length.
- Option 3: Two Project Substations to Stanfield
  - This option would run from Substation 1 in Wheatridge West to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line going to the proposed BPA Stanfield substation. The Intraconnection Line routes would be 24.5miles (39.4 kilometers) in length.
- Option 4: Three Project Substations to Stanfield
  - o This option would run from Substation 2a in Wheatridge West to Substation 2b in Wheatridge West, and then on to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line going to the proposed BPA Stanfield substation. The Interconnection Line routes would be 27.8 miles (44.7 kilometers) in length.

For the purposes of impact assessment in the ASC, the longest route, Option 1, with two parallel overhead Intraconnection Lines, has the maximum impact of the options considered and is used for calculating the maximum impact of the Interconnection Lines. The use of any of the other Intraconnection Line route options would result in lesser impacts. The shortest route, Option 3, also assumes two parallel overhead Intraconnection Lines and is used to represent the minimum impacts of the Intraconnection Lines.

OAR 345-021-0010(1)(b)(D) requires a corridor selection assessment if the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300. ORS 469.300 defines a transmission line as an energy facility if it is (a) more than 10 miles in length, (b) with a capacity of 230,000 volts or more, and (c) would be constructed in more than one city or county. The proposed Intraconnection Line(s) would be more than 10 miles in length, would operate at 230kV, and would be located in both Morrow and Umatilla counties. The Intraconnection Line(s) alone would therefore be considered an energy facility according to ORS 469.300, and a corridor selection assessment is required.

Wheatridge examined a number of potentially viable routes for the Intraconnection Line(s); however, none appeared to be particularly advantageous or disadvantageous in terms of satisfying the requirements of the corridor selection assessment. Many routes could have been designed that would meet the corridor selection criteria. Ultimately, the route became defined based on the participation of landowners in the area.

Per the requirements of OAR 345-021-0010(1)(b)(D), "In the assessment, the applicant shall discuss the reasons for selecting the corridor(s), based upon evaluation of the following factors:

(i) Least disturbance to streams, rivers and wetlands during construction.

The Project and the Intraconnection Corridor are designed to avoid as many impacts to streams, rivers, and wetlands as possible during construction and operation. Where necessary, streams would be spanned by the proposed Intraconnection Line(s), with the nearest support poles accessed from opposite sides of the stream; no impacts to the streambed or riparian vegetation would occur. In areas of steep terrain, a helicopter may be used to bring Intraconnection Line components and construction personnel to access these areas.

Wheatridge feels that the potential use of a helicopter in construction of the Intraconnection Line(s) is exempt from state noise regulations under OAR 340-035-0035(5) which exempts sounds that originate at construction sites (g) and sounds created in the construction or maintenance of capital equipment (h) from Oregon state noise regulations. Wheatridge anticipates construction requiring the use of a helicopter to last no more than 2 weeks, during which periodic deliveries of Intraconnection Line(s) equipment and personnel will be airlifted between the area under construction within the Intraconnection Corridor and the temporary Construction Yards in Wheatridge East.

Additionally, in the areas within which a helicopter may be required for construction of the Interconnection Line(s), the area of the Interconnection Corridor south of Big Butter Creek Lane for approximately 6 miles to Little Butter Creek Road, there are no protected areas or recreation sites within 10 miles. See Exhibit X, Section 2.2.1 for more detail on exemptions to Oregon state noise regulations.

All impacts to wetlands have been avoided through the siting of Project facilities. Given the general scarcity of these resources in the area, other routes for the Intraconnection Corridor exist with similar impacts, but no alternative was identified with materially less impacts to these resources than the chosen route.

(ii) Least percentage of the total length of the pipeline or transmission line that would be located within areas of Habitat Category 1, as described by the Oregon Department of Fish and Wildlife.

The Intraconnection Line(s) would have no impacts to areas of Category 1 Habitat, which in this region is largely limited to Washington ground squirrel colonies and surrounding suitable habitat. It is likely that other routes could be defined that would also avoid all impacts to Category 1 Habitat.

(iii) Greatest percentage of the total length of the pipeline or transmission line that would be located within or adjacent to public roads and existing pipeline or transmission line rights-of-way.

The Intraconnection Line(s) would not be located within or adjacent to public roads or existing utility rights-of-way, except where it would cross roadways. There are no existing pipeline or transmission line rights-of-way in the area that could be utilized as a connection between Wheatridge East and Wheatridge West. The proposed Intraconnection Line route does not follow

existing roads, partially to avoid an unnecessary visual impact for users of those road segments. Rather, the proposed Intraconnection Line route runs in remote areas, in locations where it would be visible to only a few area residents or participating landowners.

(iv) Least percentage of the total length of the pipeline or transmission line that would be located within lands that require zone changes, variances or exceptions.

The proposed Intraconnection Line(s) are located entirely on land zoned for exclusive farm use (EFU), and does not require a zone change, variance, or exceptions to County regulations to be permitted. Exhibit K provides a discussion regarding zoning and compliance with local zoning regulations. All potentially viable alternative Intraconnection Line routes would similarly need to cross EFU-zoned land.

(v) Least percentage of the total length of the pipeline or transmission line that would be located in a protected area as described in OAR 345-022-0040.

The proposed Intraconnection Line(s) would not be located within or otherwise affect any protected area. All other potentially viable Intraconnection Line routes would similarly have been far from any protected area.

(vi) Least disturbance to areas where historical, cultural or archaeological resources are likely to exist.

Surveys of historical, cultural and archaeological resources throughout the Site Boundary have been completed, and the Project has been modified to avoid impacts to all known cultural resource sites. With the very limited impact footprint of the Intraconnection Line(s) and the sparse nature of cultural resources in the region, it is unlikely that previously unknown cultural resources would be found or impacted during construction. Exhibit S describes the findings of cultural resource surveys and avoidance efforts. All other potentially viable Intraconnection Line routes would cross a similar landscape and would likely have a similar level of sparsely distributed cultural resources, for which impacts could likewise be avoided.

(vii) Greatest percentage of the total length of the pipeline or transmission line that would be located to avoid seismic, geological and soils hazards.

As described in Exhibit H and Exhibit I, the Intraconnection Line routes have been sited to avoid known seismic, geologic, and soil hazards. They would not be located within any landslide or rock fall hazard areas, nor in any liquefaction or subsidence areas. The nature of the Intraconnection Line design is such that it would not be particularly vulnerable to damage from earthquakes, which have historically occurred in the region. To the extent that the route of the Intraconnection Lines may be affected by faults, earthquakes, or other geologic hazards, the use of robust engineering design would alleviate safety concerns related to geologic hazards. Exhibit I describes a number of soil hazards, which include disturbance and potential loss of soils susceptible to water or wind erosion, hydric soils, and soils with qualities that may make post-construction revegetation difficult. To the extent that Site Access Roads or construction activities cross soils particularly susceptible to erosion, the loss of soil would be limited through the use of Best Management Practices (BMPs) for erosion control, and spraying of water in open construction areas to avoid wind erosion. The

Revegetation and Weed Management Plan (see Exhibit P attachment) provides guidance for establishing vegetation in challenging sites.

The landscape that any other potentially viable Intraconnection Line route might cross is similarly largely free of geologic hazards, such that known hazard areas could similarly be avoided. To the extent that some geologic hazards cannot be avoided (e.g. the potential for future earthquakes), robust engineering design would be similarly employed to prevent safety concerns. Impacts to sensitive soils would likely be similar in scale, and would be mitigated through identical actions.

(viii) Least percentage of the total length of the pipeline or transmission line that would be located within lands zoned for exclusive farm use.

The entire Intraconnection Line route options are located in lands zoned EFU. In the area where the Intraconnection Lines are proposed, there are no lands that are not zoned EFU that could be used. All potentially viable alternative Intraconnection Line routes would similarly need to cross EFU-zoned land.

OAR 345-021-0010(1)(b)(E) If the proposed energy facility is a pipeline or transmission line, or has, as a related or supporting facility, a related or supporting facility, a transmission line or pipeline of any size:

(i) The length of the pipeline or transmission line.

The proposed Intraconnection Line(s) would be approximately 24.5 to 31.5 miles in length, depending on the route option selected.

(ii) The proposed right-of-way width of the pipeline or transmission line, including to what extent new right-of-way will be required or existing right-of-way will be widened.

The Intraconnection Line routes would require a 150-foot wide right-of-way, and would be approximately centered within that right-of-way. There is currently no existing utility right-of-way in the location of the proposed Intraconnection Line(s), and no utility right-of-way nearby that would provide appropriate routing for the Intraconnection Line(s). Wheatridge will obtain right-of-way easements from the private landowners along the proposed Intraconnection Line routes prior to construction; it is assumed that this will be a condition of the Site Certificate.

(iii) If the proposed transmission line or pipeline corridor follows or includes public right-of-way, a description of where the transmission line or pipeline would be located within the public right-of-way, to the extent known. If the applicant proposes to locate all or part of a transmission line or pipeline adjacent to but not within the public right-of-way, describe the reasons for locating the transmission line or pipeline outside the public right-of-way. The applicant must include a set of clear and objective criteria and a description of the type of evidence that would support locating the transmission line or pipeline outside the public right-of-way, based on those criteria.

Wheatridge does not intend to use public road right-of-ways. The proposed corridor for the Intraconnection Line(s) will not include public rights-of-way, except where the lines would cross existing public roads. There is currently no existing utility right-of-way in the location of the

proposed Intraconnection Line(s), and no utility right-of-way nearby that would provide appropriate routing for the Intraconnection Line(s).

(iv) For pipelines

[N/A]

(v) For transmission lines, the rated voltage, load carrying capacity, and type of current and a description of transmission line structures and their dimensions.

The proposed Intraconnection Line(s) would be comprised of one or two parallel overhead 230kV transmission lines supported by H-frame or monopole structures likely constructed of wood or steel. The transmission line structures would be approximately 60 to 150 feet tall and spaced approximately 400 to 800 feet apart depending on the terrain. The Intraconnection Line is designed as a single or double circuit transmission line, or as two parallel, single circuit transmission lines on two separate, parallel pole structures. The circuits consist of 3-phase alternating current transmitted on single or twin-bundled conductors usually of aluminum and steel. The peak line loading value assumed for the overhead 230kV Intraconnection Line is 500MW, or approximately 1,280 amperes per phase. The Intraconnection Line design is described in greater detail in Exhibit AA.

#### 3.4 Meteorological Towers

The Project includes up to 12 permanent Met Towers spaced throughout the Project: five Met Towers are sited in Wheatridge East and seven in Wheatridge West. The number of Met Towers proposed is identical for both the GE 1.7-103 and GE 2.5-120 layouts. The Met Towers are required to measure the wind speeds around the Project separate from the wind turbines for verification of the wind turbines' performance in accordance with IEC standards and wind farm best practice operations. The Met Towers would be a freestanding, non-guyed design, with a height of approximately 100 meters (328 feet). FAA lighting may be installed on some of the Met Towers, depending on the overall lighting scheme for the Project as a whole, to be determined prior to construction and in consultation with FAA. Each Met Tower would have a foundation footprint approximated by a 10-meter (32-foot) diameter circle. The temporary disturbance area associated with the construction of each Met Tower is approximated by a 30-meter (98-foot) diameter circle (Figure B-8).

#### 3.5 Communication and SCADA System

A communication system consisting of fiber optic and copper communication lines will connect the turbines, Met Towers, and Substations to the O&M Buildings. This communication system allows each turbine and Substation to be monitored by a Supervisory Control and Data Acquisition (SCADA) system, installed in the O&M Buildings. This system monitors each turbine and the Met Tower data for variables such as meteorological conditions, critical operating parameters, and power output. The turbines are controlled via the SCADA system, which can also be controlled remotely. SCADA software is tuned specifically to the needs of each wind project by the turbine

manufacturer or a third-party SCADA vendor. The communication lines for the SCADA system run alongside the Collector Lines, typically in a trench at least 3 feet deep or overhead, if necessary.

#### 3.6 Operations and Maintenance Buildings

The Project includes sites for two O&M Buildings, the first in Wheatridge East and a second in Wheatridge West. Each O&M Building would be a single-story structure of approximately 6,000 to 9,000 square feet. Immediately adjacent to each building would be a parking lot for employees, visitors and Project equipment. Each O&M Building would occupy a total of approximately 1.1 acres likely within a fenced enclosure. Each O&M Building would include an office, break room, kitchen, lavatory with shower, utility room, covered vehicle parking, storage for maintenance supplies and equipment, and the SCADA system. Electricity and telephone service would be provided to each O&M Building from local providers using overhead and/or underground lines. Water would be provided by an on-site well at each building. Water use is not anticipated to be greater than 5,000 gallons per day, so a water right would not be required for such a well. The kitchen, toilets, and shower would drain into an on-site septic system, to be permitted for each building prior to construction through either Morrow or Umatilla Counties.

Likely locations for the Wheatridge West O&M Building would be located on the southern side of Baseline Road, 0.75 miles east of Nichols Road near the Project Substation 1. The Wheatridge East O&M Building would be located in the portion of Wheatridge East in Umatilla County, along an existing private road to be improved by Wheatridge, approximately 1.5 miles west of Vey Road, about 1.25 miles north of the Umatilla County line, near Project Substation 3 (see Figures C-5 through C-10).

#### 3.7 Access Roads

#### 3.7.1 Access to the Site – Offsite Public Roads

The primary access to the Project would be from Interstate 84 (I-84) via Bombing Range Road or Oregon Route 207 (OR-207). Within the Site Boundary and surrounding area, existing county and private roads would provide access to the Project; these include, but are not limited to: Strawberry Lane, Kilkenny Road, Kemp Lane, Sand Hollow Road, Spur Lane, Butter Creek Road, Big Butter Creek Lane, and Little Butter Creek Road. Some improvements to existing public roads are likely to be needed to accommodate Project construction, such as flattening crests or filling dips, widening sharp corners, or adding road base material; specific improvements will be identified in consultation with the appropriate county road master prior to construction. Upgrades to existing roads will be done according to applicable state and county road standards and after consultation with Morrow and Umatilla County staff. A road use agreement with each county will specify requirements, including that all existing public roads used to access the Project will be left in as good or better condition than that which existed prior to the start of construction. See Figure U-2 for potential county road improvements.

#### 3.7.2 Access Within the Site – Onsite Private Roads

Access to the turbines, Construction Yards, Substations, and O&M Buildings would be via a network of private Site Access Roads to be constructed or improved by Wheatridge as part of the Project's construction. In order to minimize impacts to agricultural operations, grazing lands, and wildlife habitat, existing private roads and farm access tracks would be utilized to the greatest extent practicable.

All newly constructed and improved Site Access Roads would be graded and graveled to meet load requirements for heavy construction equipment, as necessary. Most Site Access Roads would be initially constructed to be wider than needed for operations, to accommodate the large equipment needed for construction. Following turbine construction, the Site Access Roads would be narrowed for use during operations and maintenance. The additional disturbed width required during construction would be restored following the completion of construction by removing gravel surfacing, restoring appropriate contours with erosion and stormwater control Best Management Practices (BMPs), decompacting as needed, and revegetating the area appropriately. For purposes of impact assessment, a temporary impact corridor 12 meters (39 feet) in width and a permanent impact corridor 5 meters (16 feet) in width are used; these corridors would encompass the Site Access Roads and most cut and fill slopes and any necessary drainage or erosion control features. Where there are existing roads to be improved, the existing road area is assumed to be approximately 3 meters (10 feet) in width; this area has been subtracted out of the Project's impacts.

The total mileage of the Site Access Roads would vary slightly depending on the turbine option chosen at the time of construction. The GE 1.7-103 layout would require approximately 73 miles of Site Access Roads, of which approximately 61 miles would be new, and 12 miles would be improvements to existing roads. The GE 2.5-120 layout would require approximately 65 miles of Site Access Roads, of which nearly 53 miles would be new and 12 miles would be improved. Tables C-3 and C-4 present the length of Site Access Roads for Wheatridge East, Wheatridge West, and the Project as a whole for each turbine layout option, along with the areas of temporary and permanent disturbance associated with the Site Access Roads.

Site Access Roads would also be needed for the construction of the Intraconnection Line(s). All of the Site Access Roads for the Interconnection Line(s) would be temporary in nature, utilizing existing farm roads and edges of fields to access the Intraconnection Corridor. Because the Intraconnection Line(s) can be constructed and maintained using only large trucks rather than heavy construction cranes, and construction would take place during the dry time of year when the ground surface is hard enough to support those vehicles, it is expected that no Site Access Road improvements will be necessary. The same unimproved farm access tracks and field crossings would sufficiently serve the light trucks generally used for maintenance operations. As with other Site Access Roads, a 12 meter (39 feet) wide temporary impact corridor is used for purposes of assessing impacts of Site Access Roads used for constructing the Intraconnection Line(s); however, there is no permanent impact associated with these Site Access Roads.

The total mileage of the Site Access Roads used for constructing the Intraconnection Line(s) would vary depending on the Intraconnection Line route option chosen at the time of construction. The shortest route would require approximately 22.75 miles of Site Access Roads, while the longest would require approximately 25.5 miles. Table C-5 presents the length of Site Access Roads for the Intraconnection Line(s), for the longest and shortest routes, along with the areas of temporary and permanent disturbance associated with the Site Access Roads.

#### 3.8 Construction Yards

During construction, Wheatridge would establish up to four Construction Yards within the Site Boundary, to facilitate the delivery and assembly of material and equipment. As many as two Construction Yards would be utilized in Wheatridge West, as well as up to two more in Wheatridge East. The Construction Yards would contain field construction offices; would be used to store construction equipment when not in use; would be used for storage of construction supplies and materials; may contain temporary concrete batch plants; and may be used for assembly of some Project components. Typically turbine and tower components would be delivered directly to each turbine site rather than being received and stored at the Construction Yards.

Each Construction Yard would occupy between 15 and 20 acres, and would be graded approximately level and surfaced in gravel. Construction Yards would be signed as private, no trespassing with on-site security staff.

All Construction Yards will be restored to pre-construction conditions unless an agreement with the landowner leads to some or all of a Construction Yard being retained after construction. Restoration of a Construction Yards would typically involve removal of gravel surfacing; regrading to pre-construction contours; restoration of topsoil as needed; soil decompaction if necessary; and seeding and/or planting to restore agricultural or habitat lands as appropriate. Wheatridge will coordinate with landowners for final restoration requirements in agricultural areas.

Figures C-5 through C-10 show the locations of proposed temporary Construction Yards. Construction Yards 1 and 2 are located in Wheatridge West. Construction Yard 1 is located on the south side of OR-207 approximately 0.4 miles west of Bombing Range Road, and Construction Yard 2 is be located to the southeast of the intersection of Nichols Road and Baseline Road. Within Wheatridge East are Construction Yards 3 and 4. Construction Yard 3 would be located to the west side of Vey Road, in Morrow County. Construction Yard 4 would also be located to the west of Vey Road but in Umatilla County, approximately 4 miles south of the Lexington-Echo Highway (a.k.a. OR-320 or Oregon Trail Road).

#### **Temporary Concrete Batch Plant**

Wheatridge anticipates that the construction contractor would utilize on-site temporary concrete batch plants instead of sourcing concrete from existing suppliers. Therefore, for the purposes of the ASC, Wheatridge assumes that one or more temporary concrete batch plants would be utilized during construction of the Project. The concrete batch plants would be located within the temporary Construction Yards, and therefore do not have associated independent impact areas. The

use of temporary batch plants will be permitted by the construction contractor through the county in which it will be located. In addition, each concrete batch plant requires a state air quality permit, which would also be held by the construction contractor or a qualified third-party contractor. These third-party permits are described in more detail in Exhibit E. Wheatridge may at the time of construction choose to instead purchase concrete directly from a licensed third-party contractor and have it delivered directly to the site as required, thereby removing the need for on-site batch plants.

Wheatridge assumes that rock for road construction and concrete mixing would be obtained from existing, permitted quarries near the Project, and therefore has not included rock quarrying or gravel mining as an integral part of the Project. However, if a new quarry is found to be necessary or advantageous, it would be permitted and developed at a future time by the construction contractor.

### 4.0 Other Systems and Information

#### 4.1 Fuel and Chemical Storage

During construction of the Project, small quantities of a few hazardous materials may be utilized or stored in the Construction Yards. Such materials may include cleaners, insecticides or herbicides, paint, or solvents. None would be present in substantial reportable quantities; the amounts present (if at all) would be no greater than household quantities. When not in use these would be stored in a secure location within the Construction Yards.

Fuels would be the only hazardous material that may be stored in substantial quantities on-site during construction; Wheatridge anticipates that up to 1000 gallons of diesel fuel and 500 gallons of gasoline may be kept on-site for fueling of construction equipment. These would both be stored in temporary above-ground tanks in the construction yard(s), within an area that provides for secondary containment. Fuels would be delivered to the construction yard by a licensed specialized tanker vehicle. There would be no substantial quantities of lubricating oils, hydraulic fluid for construction equipment, or other hazardous materials maintained on-site during construction. Lubricating oil or hydraulic fluids for construction equipment would similarly be brought in on an as-needed basis for equipment maintenance by a licensed contractor using a specialized vehicle, and waste oils removed by the same maintenance contractor. Lubricating oils and hydraulic oils for the turbines and dielectric oils for the transformers would similarly arrive on an as-needed basis and transferred into the receiving components, such that none would be stored on-site.

During operations, there would be no substantial quantities of fuels, oils, or chemicals on-site, except as contained in qualified oil-filled equipment including the turbine gearboxes and Substation transformers. Lubricating oil would be brought in on an as-needed basis for periodic oil changes in the turbine gearboxes, by a maintenance contractor using a specialized vehicle, and waste oils would be removed in the same way. Small quantities of gear oil would likely be maintained on-site for occasional top-off; it is anticipated that less than 20 gallons would be stored in the O&M

Buildings at any given time. Very small quantities of pesticides or herbicides, paint, solvents or cleaners may also be kept on-site; when not in use these would be stored in the O&M Buildings. Due to the limited quantities of petroleum products or hazardous materials, no secondary containment systems are planned for the O&M buildings; however, sorbent materials will be maintained on-site to capture any small spills that may occur.

There are multiple viable alternatives for secondary containment for the fueling/fuel storage area. For example, a liner may be installed under the gravel surfacing, or the area may be surfaced with concrete; stormwater and any spilled liquids would pass through an oil-water separator and the spilled fuels would then flow into an enclosed sump that would be pumped out for disposal. Other satisfactory options include the use of drip pans while fueling, or provision of sorbent materials to capture minor spills, The specific methods and design will be determined by the construction contractor in conjunction with EPA prior to storing bulk quantities of fuel on-site.

Secondary containment is optional for the transformers and for the turbine gearboxes, as these are classified as qualified oil-filled operational equipment under the EPA's Amended Spill Prevention, Control, and Countermeasure (SPCC) Rule issued in 2006 (EPA-550-F-06-008). Per the Amended Rule, instead of providing secondary containment for qualified oil-filled operational equipment, an owner or operator may prepare an oil spill contingency plan and a written commitment of manpower, equipment, and materials to quickly control and remove discharged oil; the plan must include an inspection or monitoring program for the equipment to detect a failure and/or discharge. Alternatively, the transformers may be installed on foundations that provide secondary containment, or sorbent materials may be kept on-hand to capture minor leaks. The specific methods and design (if appropriate) will be determined prior to construction of the substations. The nacelles and turbine foundation will effectively function as secondary containment for the turbine gearboxes, such that no additional secondary containment systems are needed for the turbines.

#### 4.2 Fire Prevention and Control

The greatest risk of fire would occur during construction of the Project, when welding and metal cutting for foundation rebar frames would take place, and vehicles and construction equipment may be used in areas of tall, dry grass. In order to prevent fires from occurring, the construction contractor will implement a number of systems and procedures. These would include requirements to conduct welding or metal cutting only in areas cleared of vegetation, and to keep emergency firefighting equipment on-site when potentially hazardous operations are taking place. Construction workers will be prohibited from parking vehicles in areas of tall dry vegetation, to prevent fires caused by contact with hot mufflers or catalytic converters.

The risk of fire during the operational phase of the Project is low. While incidents of wind turbine fires have occurred, these incidents are rare and have generally been traceable to poor maintenance or electrical malfunction. The risk of turbine fires will be minimized through proper maintenance of the turbine and its critical mechanical and electrical components. In addition, internal fire suppression systems would be installed in all of the turbines to prevent a catastrophic

turbine fire. Lightning protection systems are built into the turbine blades and tower to electrically ground the entire structure and eliminate the potential for lightning-caused fires. The electrical collection system and Intraconnection Line(s) are unlikely to cause a fire.

### 5.0 Rights-of-way

The Intraconnection Line(s) would require the acquisition of an approximately 150-foot wide right-of-way from private landowners; all of the landowners along the proposed Intraconnection Line routes are Project participants or have expressed a willingness to grant such rights-of-way to Wheatridge. The necessary legal documents granting the rights-of-way will be finalized and recorded with the appropriate county prior to beginning construction of the Intraconnection Line(s).

#### 6.0 Construction Schedule

Wheatridge requests a Site Certificate from the Energy Facility Siting Council (EFSC) valid for 6 years within which to begin construction on one or more phases of the Project for the following reasons. The construction of the planned BPA Longhorn and/or Stanfield substations, into which the Project will interconnect to the grid, is dependent on the BPA, which is outside the control of Wheatridge and requires approximately a 3-year lead time to procure a 230kV to 500kV step-up transformer. Additionally, the market demand for renewable power is expected to significantly increase around 2020. According to Renewable Northwest, Oregon and Washington utilities are forecasted to have a shortfall of over 700 average MW in complying with the Renewable Portfolio Standard (RPS) requirements by 2020. The shortfall can be supplied by approximately 2000 MW of Northwest wind power. A 6-year Site Certificate allows Wheatridge to meet this strong and growing market demand and RPS requirement immediately and incrementally over 6 years.

The Project will be constructed in one or more phases each lasting up to 18 months. Wind projects of similar or larger sizes as Wheatridge built in Oregon and other parts of the country have been built in one or more phases due to constraints on wind turbine delivery schedules, the normal rate of wind farm construction, and the size of off-take agreements with purchasers of the wind power. Constructing the Project in phases also allows for each phase to satisfy incremental market demand, serve power to different customers, and possibly to different interconnections during the 6-year Site Certificate. Since the Project is likely to be built in phases, up to two Intraconnection Line circuits may be required so that power can be supplied to different customers at different times or interconnects from two different phases or groups of phases. For example, the first phase may supply power on the first circuit and then the second and third phases may supply power on a second circuit constructed later. Any phased construction schedule scenario or configuration of the Intraconnection Line(s) would not have greater impacts than the maximum impacts of the Project discussed throughout this ASC.

Each Project phase will be commissioned after the completion of its construction, testing, inspection, and interconnection to the grid. This includes inspections by state and county inspectors to satisfy permitting requirements and conditions of the Site Certificate. Inspection and testing of the turbines, Collector Lines, Substations, Intraconnection Line(s), SCADA system, and all supporting Project infrastructure will also occur to ensure safe and reliable operations of the Project in accordance with equipment manufacturer guidelines, NESC, and other applicable standards.

# 7.0 Submittal Requirements and Approval Standards

# **7.1 Submittal Requirements**

Table B-2. Submittal Requirements Matrix			
Requirement	Location		
OAR 345-021-0010(1)(b)(A) A description of the proposed energy facility, including as applicable:			
(i) The nominal electric generating capacity and the average electrical generating capacity, as defined in ORS 469.300.	Section 2.0		
(ii) Major components, structures and systems, including a description of the size, type and configuration of equipment used to generate electricity and useful thermal energy.	Section 2.0 and 3.0		
(iii) A site plan and general arrangement of buildings, equipment and structures;	Figures C-5 and C-7		
(iv) Fuel and chemical storage faculties, including structures and systems for spill containment	Section 4.1		
(v) Equipment and systems for fire prevention and control.	Section 4.2		
(vi) For thermal power plants: (i) A discussion of the source, quantity and availability of all fuels proposed to be used in the facility to generate electricity or useful thermal energy. (ii) Process flow, including power cycle and steam cycle diagrams to describe the energy flows within the system; (iii) equipment and systems for disposal of waste heat; (iv) The fuel chargeable to power heat rate.	N/A		
(vii) For surface facilities related to underground gas storage, estimated daily injection and withdrawal rates, horsepower compression required to operate at design injection or withdrawal rates, operating pressure range and fuel type of compressors.	N/A		
(viii) For facilities to store liquefied natural gas, the volume, maximum pressure, liquefaction and gasification capacity in thousand cubic feet per hour.	N/A		
OAR 345-021-0010(1)(b)(B) A description of major components, structures and systems of each related or supporting facility.	Section 3.0		
OAR 345-021-0010(1)(b)(C) The approximate dimensions of major facility structures and visible features.	Section 3.0		
OAR 345-021-0010(1)(b)(D) If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, a corridor selection assessment explaining how the applicant selected the corridor(s) for analysis in the application. In the assessment, the applicant shall evaluate the corridor adjustments the Department has described in the project order, if any. The applicant may select any corridor for analysis in the application and may select more than one corridor. However, if the applicant selects a new corridor, then the applicant must explain why the applicant did not present the new corridor for comment at an information meeting under OAR 345-015-0130. In the assessment, the applicant shall discuss the reasons for selecting the corridor(s), based upon evaluation of the following factors:			
(i) Least disturbance to streams, rivers and wetland during construction.	Section 3.3		

Table B-2. Submittal Requirements Matrix				
Requirement	Location			
(ii) Least percentage of the total length of the pipeline or transmission line that would be located within areas of Habitat Category 1, as described by the Oregon Department of Fish and Wildlife.	Section 3.3			
(iii) Greatest percentage of the total length of the pipeline or transmission line that would be located within or adjacent to public roads, and existing pipeline or transmission line rights-of-way.	Section 3.3			
(iv) Least percentage of the total length of the pipeline or transmission line that would be located within lands that require zone changes, variances or exceptions.	Section 3.3			
(v) Least percentage of the total length of the pipeline or transmission line that would be located in a protected area as described in OAR 345-022-0040.	Section 3.3			
(vi) Least disturbance to areas where historical, cultural or archaeological resources are likely to exist.	Section 3.3			
(vii) Greatest percentage of the total length of the pipeline or transmission line that would be located to avoid seismic, geological and soils hazards.	Section 3.3			
(viii) Least percentage of the total length of the pipeline or transmission line that would be located within lands zoned for exclusive farm use.	Section 3.3			
OAR 345-021-0010(1)(b)(E) If the proposed energy facility is a pipeline or transmission line, or has, as a related or supporting facility, a transmission line or pipeline of any size:				
(i) The length of the pipeline or transmission line.	Section 3.3			
(ii) The proposed right-of-way width of the pipeline or transmission line, including to what extent new right-of-way will be required or existing will be widened.	Section 3.3			
(iii) If the proposed transmission line or pipeline corridor follows or includes public right-of-way, a description of where the transmission line or pipeline would be located within the public right-of-way, to the extent known. If the applicant proposes to locate all or part of a transmission line or pipeline adjacent to but not within the public right-of-way, describe the reasons for locating the transmission line or pipeline outside the public right-of-way. The applicant must include a set of clear and objective criteria and a description of the type of evidence that would support locating the transmission line or pipeline outside the public right-of-way, based on those criteria.	Section 3.3			
(iv) For pipelines, the operating pressure and delivery capacity in thousand cubic feet per day and the diameter and location, above or below ground, of each pipeline.	N/A			
(v) For transmission lines, the rated voltage, load carrying capacity, and type of current and a description of transmission line structures and their dimensions.	Section 3.3			
OAR 345-021-0010(1)(b)(F) A construction schedule including the date by which the applicant proposes to begin construction and the date by which the applicant proposes to complete construction. Construction is defined in OAR 345-001-0010. The applicant shall describe in this exhibit all work on the site that the applicant intends to begin before the Council issues a site certificate. The applicant shall include an estimate of the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor that the applicant anticipates or has performed as of the time of submitting the application.	Section 6.0			

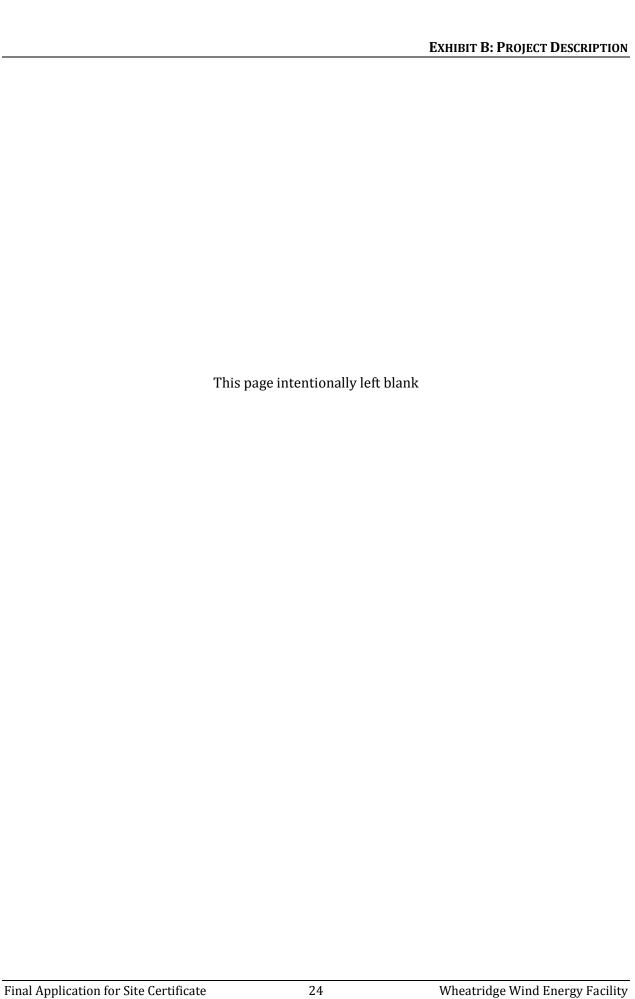
Table B-2. Submittal Requirements Matrix			
Requirement	Location		
Project Order Comments	Location		
All paragraphs apply except (A)(vi)(vii) and (viii).			
Paragraph (D) only applies if any of the proposed transmission lines associated with the Wheatridge Wind Energy Facility meet the definition of an energy facility under ORS 469.300.	Section 3.3		

#### 7.2 Approval Standard

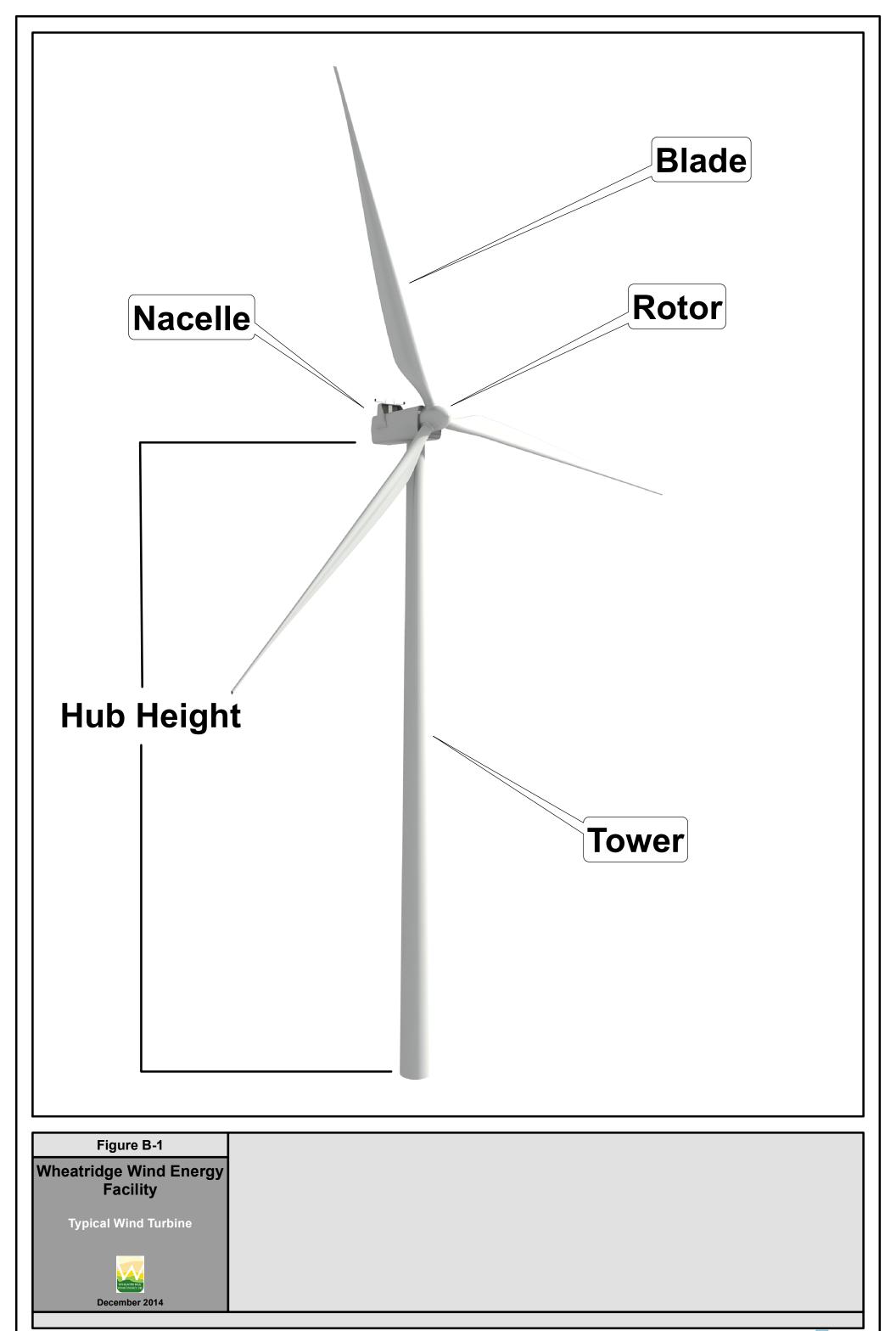
OAR 345 Division 22 does not provide an approval standard specific to Exhibit B.

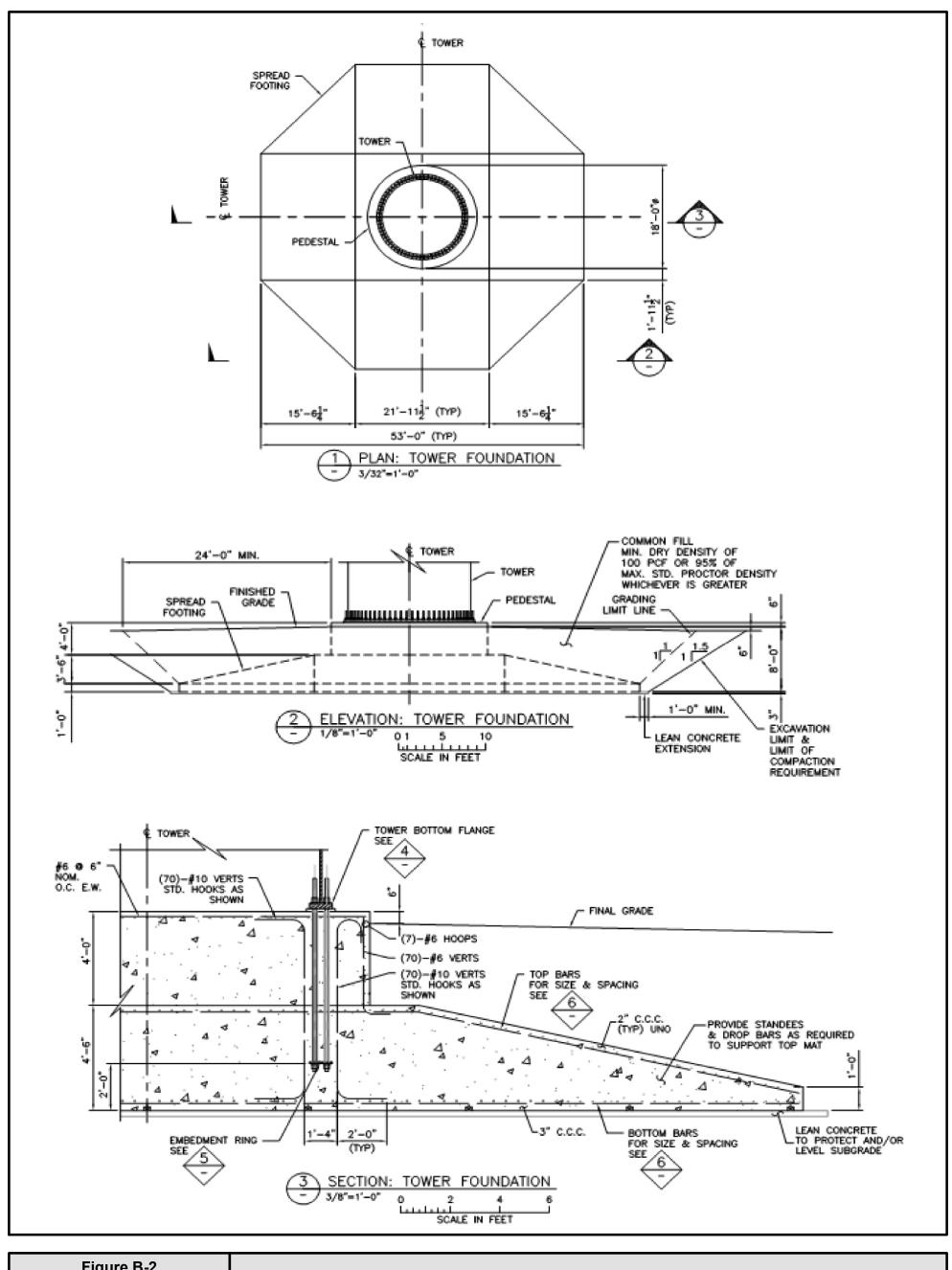
#### 8.0 References

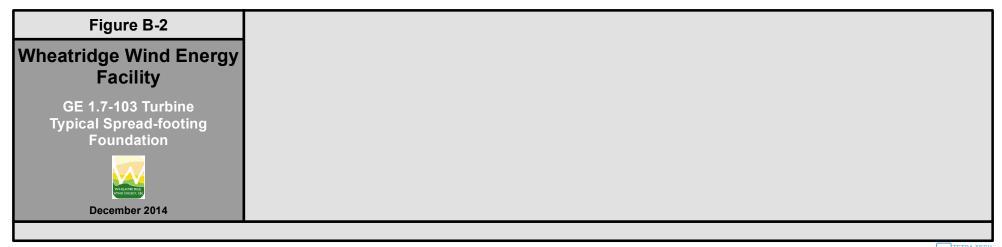
- APLIC (Avian Power Line Interaction Committee) 2006. Suggested Practices for Raptor Protection on Power Lines; the State of the Art in 2006. Edison Electric Institute, APLIC and the California Energy Commission Washington, D.C and Sacramento, CA.
- EPA (U.S. Environmental Protection Agency). 2006. Spill Prevention, Control, and Countermeasure (SPCC) Rule Amendment, Option for Qualified Oil-Filled Operational Equipment. EPA publication EPA-550-F-06-008. December 2006. Available online at: <a href="http://www.epa.gov/oem/content/spcc/factsheet-oilfilledeq-dec06.htm">http://www.epa.gov/oem/content/spcc/factsheet-oilfilledeq-dec06.htm</a>

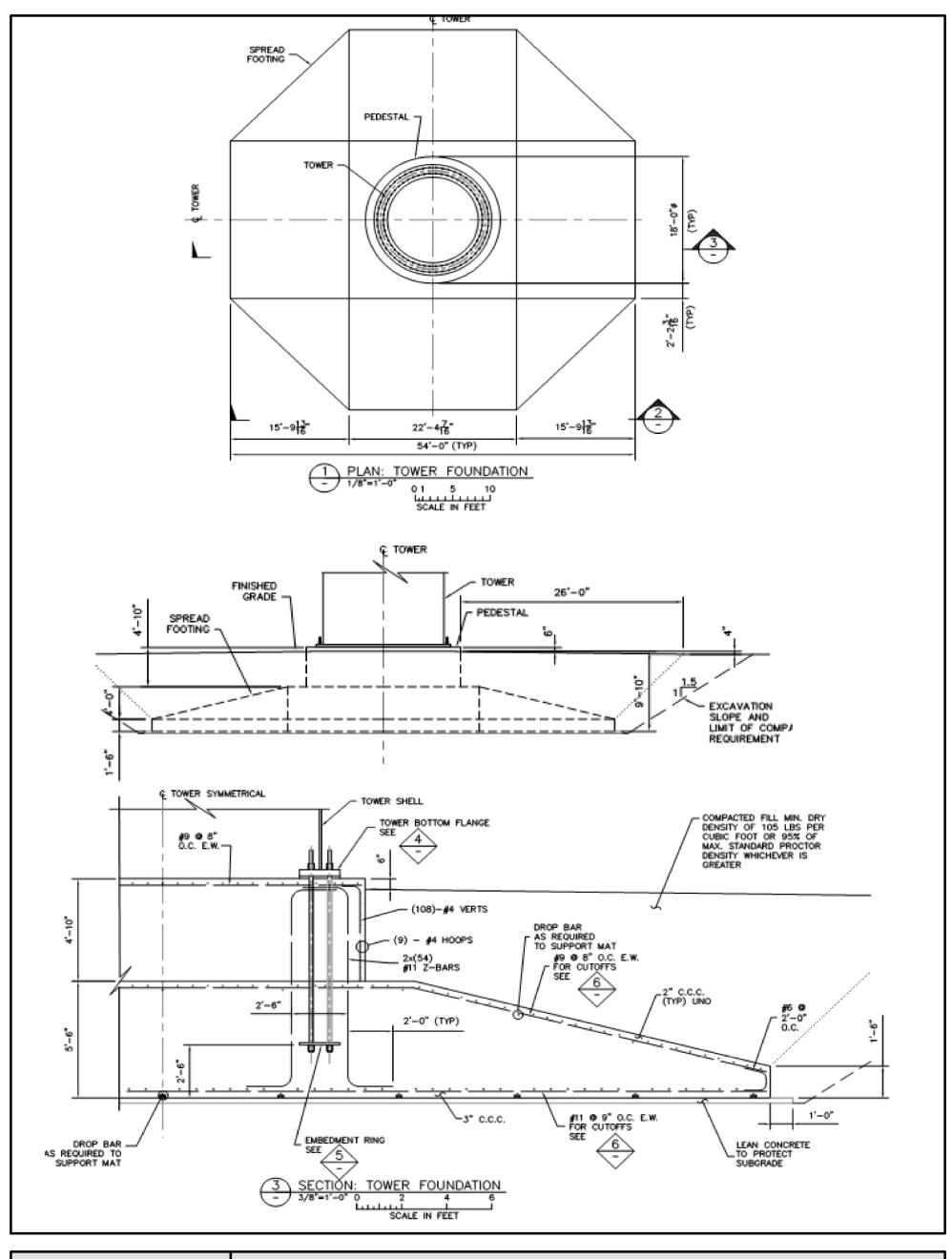




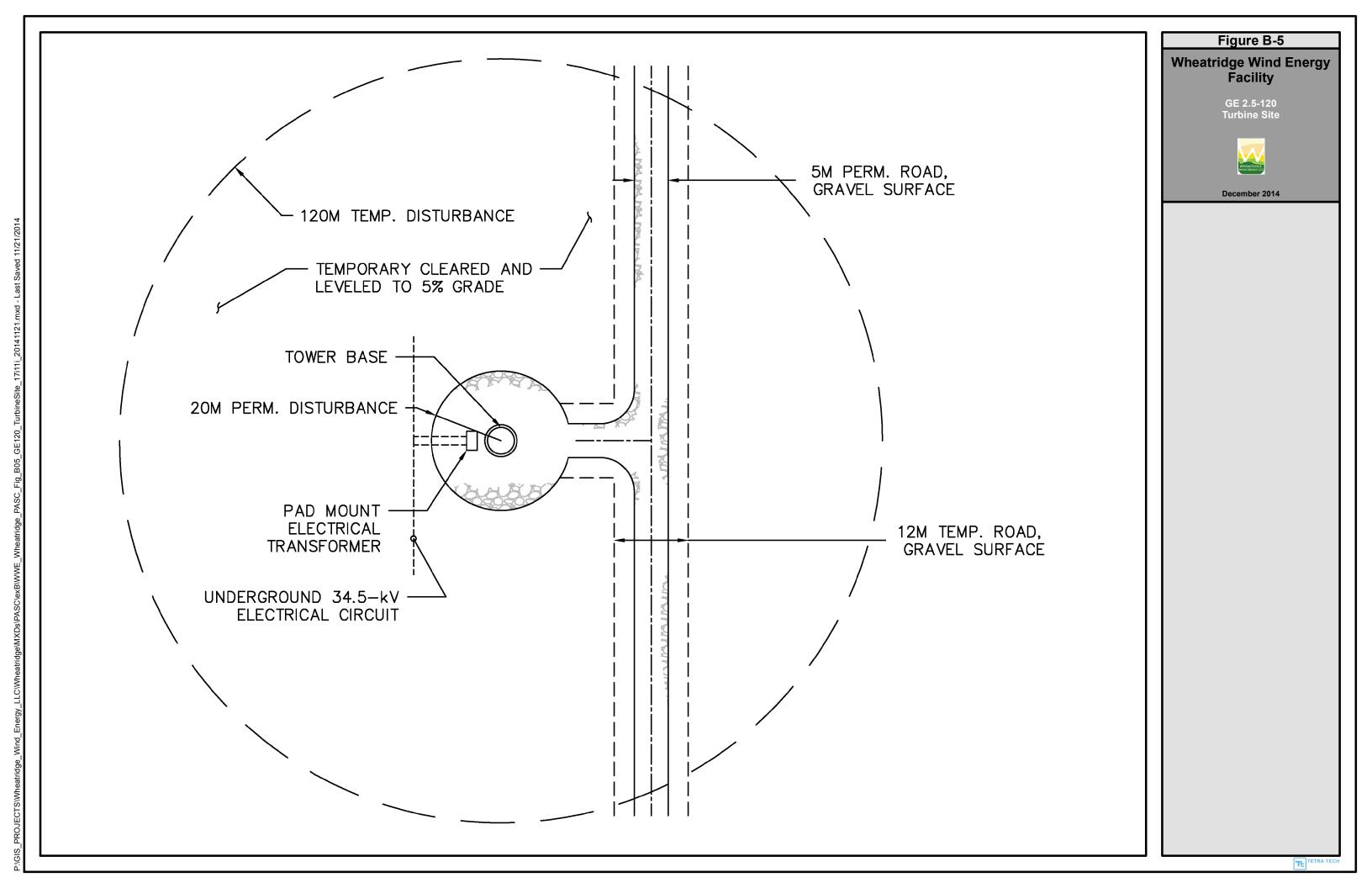


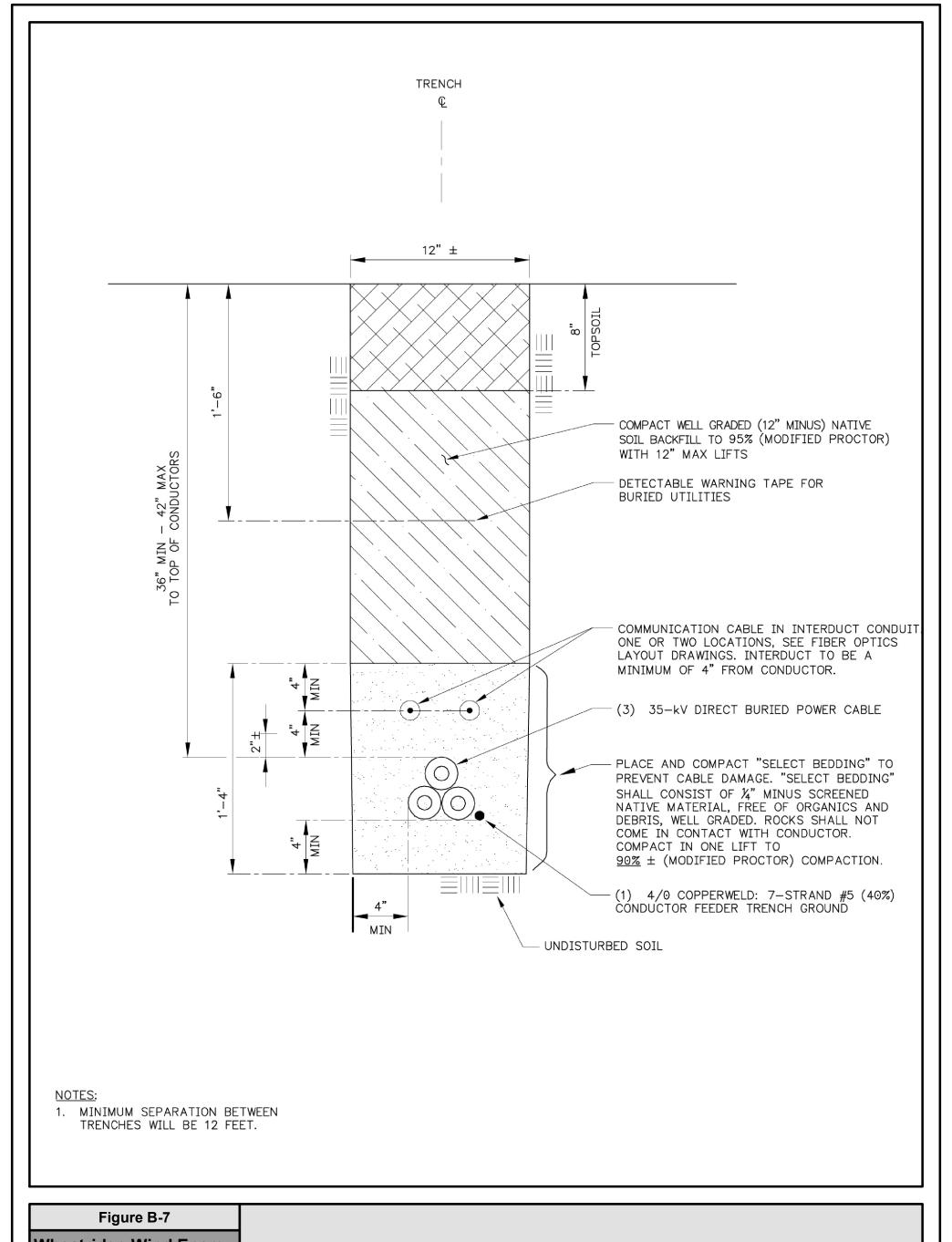




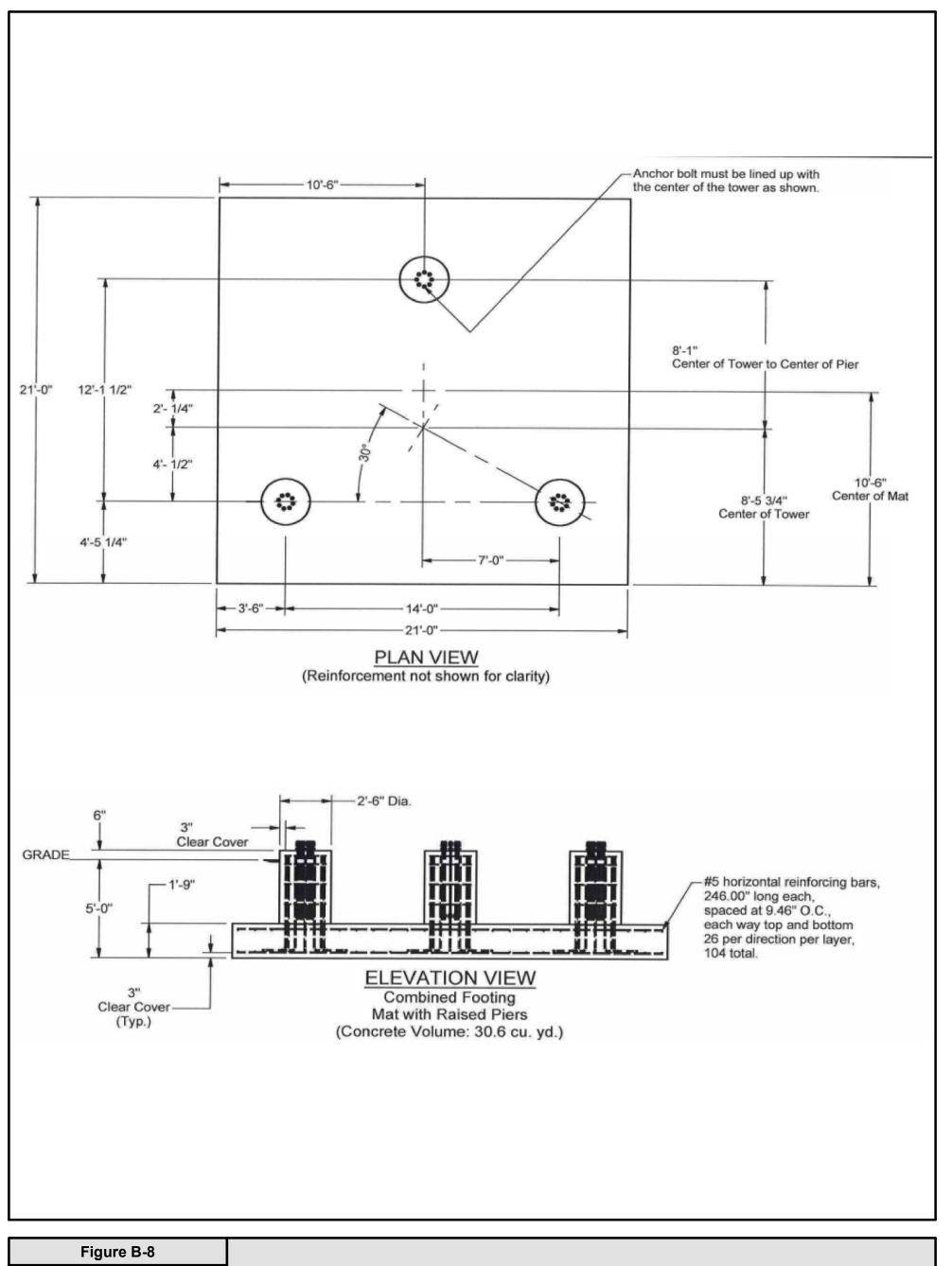








# Wheatridge Wind Energy Facility Typical Buried Collector Cable Duck Back December 2014





# **Exhibit C**

# **Project Location**

# **Prepared for**



# Wheatridge Wind Energy, LLC

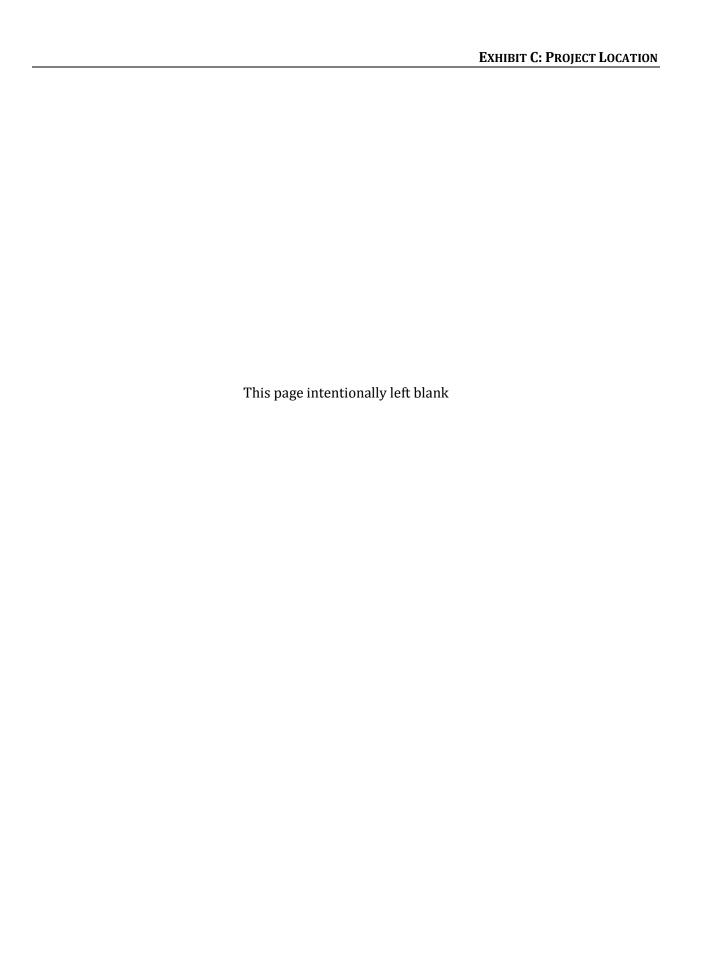
Wheatridge Wind Energy Facility

July 2015

Prepared by



Tetra Tech, Inc.



# **Table of Contents**

1.0	Introduction	1
2.0	General Location	. 1
3.0	Specific Location of Major and Supporting Facilities	2
4.0	Temporary and Permanent Disturbance Areas	. 3
5.0	Submittal Requirements and Approval Standards	(
5.1	Submittal Requirements	. (
5.2	Approval Standard	. 7
	List of Tables	
	C-1. Location of Site Boundary by Township, Range and Section	
	C-2. Disturbance Assumptions	
	C-3. Preliminary Disturbance Areas, GE 1.7-103 Turbine Layout	
	C-5. Preliminary Disturbance Areas by Intraconnection Line Option	
	C-6. Submittal Requirements Matrix	
	•	
	List of Figures	
Figure	e C-1. Vicinity Map	
Figure	e C-2. Facility Location	
Figure	e C-3. Energy Facilities within 10 Miles	
Figure	e C-4. Intraconnection Line(s) Options and UEC or UEC/CB Gen-tie Line(s) Options	
Figure	e C-5. Maximum Turbine Layout - GE 1.7-103 Turbines and Facilities	
Figure	e C-6. Maximum Turbine Layout - GE 1.7-103 Turbines and Facilities – Details Map Set	
Figure	e C-7. Minimum Turbine Layout - GE 2.5-120 Turbines and Facilities	
Figure	e C-8. Minimum Turbine Layout - GE 2.5-120 Turbines and Facilities – Details Map Set	
Figure	e C-9. Maximum Project Impact - GE 1.7-103 Facilities and Intraconnection Line Option 1 230kV Transmission Line – Details Map Set	
Figure	e C-10. Minimum Project Impact - GE 2.5-120 Facilities and Intraconnection Line Option 3 230kV Transmission Line – Details Map Set	

#### **Terms and Definitions**

Collector Line An underground or overhead electrical 34.5 kV line transmitting

power from the turbines to a Substation

Construction Yard The temporary area for construction activities and Project

component storage prior to installation

GE 1.7-103 Layout Project turbine layout comprised of 292 GE 1.7MW turbines with

80m hub heights and 103m rotor diameters

GE 2.5-120 Layout Project turbine layout comprised of 200 GE 2.5MW turbines with

85m hub heights and 120m rotor diameters

Gen-tie Line(s) One or two 230 kV transmission line(s) conveying power from the

Project to an interconnection point with the grid, which will be

permitted and built by UEC or UEC/CB

Intraconnection Corridor The intraconnection transmission line corridor connecting

Wheatridge East with Wheatridge West

Intraconnection Line(s) One or two overhead electrical 230 kV lines connecting the Project

Substations in Wheatridge East and Wheatridge West.

Met Tower Permanent meteorological tower

O&M Buildings Permanent operations and maintenance buildings, including parking

Project Wheatridge Wind Energy Facility

Site Access Road Private road to be constructed or improved for the purpose of

accessing turbines and associated Project facilities

Site Boundary The boundary within which all Project facilities will be constructed,

also known as the micrositing corridor

Substation A facility in which electric power from the turbines is aggregated,

stepped up in voltage, and connected to the Intraconnection Line(s)

or the Gen-tie Line(s)

Turbine A collective term for the foundation, tower, nacelle, blades and rotor

that comprise a wind turbine generator in the Project

Turbine Pad A cleared, graveled area around the base of each turbine

encompassing primarily the turbine's foundation

Wheatridge Wind Energy, LLC

Wheatridge East The eastern group of turbines

Wheatridge West The western group of turbines

# **Acronyms and Abbreviations**

CB Columbia Basin Electric Cooperative

kV Kilovolt

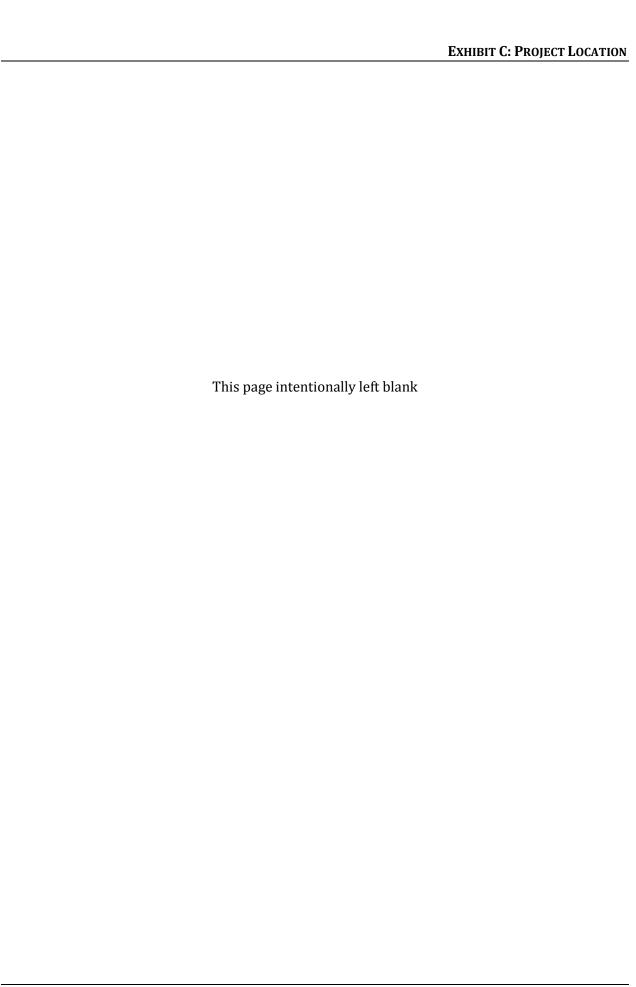
MW Megawatt

OAR Oregon Administrative Rules

ODOE Oregon Department of Energy

OR-## Oregon State Highway ##

UEC Umatilla Electric Cooperative



#### 1.0 Introduction

Exhibit C was prepared to meet the submittal requirements of Oregon Administrative Rule (OAR) 345-021-0010(1)(c) paragraphs (A) through (C). As required, this Exhibit provides a set of maps which show the location of the Wheatridge Wind Energy Facility (Project), including related and supporting facilities, and areas of temporary and permanent disturbance.

#### 2.0 General Location

Wheatridge Wind Energy, LLC (Wheatridge), proposes to construct the Wheatridge Wind Energy Facility (Project), a wind generation facility with a maximum nominal generating capacity of 500 megawatts (MW) in Morrow and Umatilla counties, Oregon (see Figures C-1 and C-2). The Project is comprised of up to 292 turbines divided into two groups: a western group of turbines (Wheatridge West) and an eastern group of turbines (Wheatridge East). Wheatridge West and Wheatridge East are electrically connected by an 'Intraconnection Corridor' containing up to two parallel overhead 230-kilovolt (kV) transmission lines (Intraconnection Lines), each no longer than 35 miles in length. Other Project components include access roads (Site Access Roads), an electrical collection and control system, the Project's substations (Substations), operations and maintenance buildings (O&M Buildings), and temporary construction yards (Construction Yards). These facilities are all described in greater detail in Exhibit B.

Wheatridge West is located entirely within Morrow County, approximately 5 miles northeast of Lexington, and approximately 7 miles northwest of Heppner. Wheatridge West is bisected by Oregon Highway 207 (OR-207). Wheatridge East is located approximately 16 miles northeast of Heppner and encompasses land in both Morrow and Umatilla counties. The Intraconnection Corridor is located entirely within Morrow County and adjoins to the southeastern portion of Wheatridge West and the southern portion of Wheatridge East.

As noted in Exhibit B, the Site Boundary is established as the micrositing corridor within which all Project facilities would be constructed. This approach allows some flexibility in specific component locations and design in response to site-specific conditions and engineering requirements to be determined prior to construction. The Site Boundary encompasses a total of 13,097 acres of privately owned land: 2,956 acres in Wheatridge East, 8,515 acres in Wheatridge West, and 1,626 acres in the Intraconnection Corridor. Table C-1 identifies the Public Land Survey System sections in which the Site Boundary is located.

Table C-1. Location of Site Boundary by Township, Range and Section				
Township	Range	Section(s)		
	Wheatridge East			
1N	28E	4, 5, 8, 9, 16, 17, 21		
2N	28E	2, 3, 9, 10, 11, 14, 15, 16, 21, 22, 27, 28, 29, 32, 33		
	Wheatridge West			
2N	25E	25, 26, 27, 34, 35, 36		
1N	25E	1, 2, 11, 12, 13, 14, 15, 22, 23, 24		
1N	26E	4, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 22, 28, 29, 30, 32, 33		
1S	25E	1,12		
18	26E	2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 34, 35, 36		
2S	26E	1, 12		
Intraconnection Corridor				
1S	27E	7, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24		
1S	28E	3, 4, 7, 8, 9, 16, 17, 18		
1N	28E	28, 33		

Figure C-1 is a large-scale vicinity map showing the location of the Project in relation to nearby cities and towns, county boundaries, and other geographic features. Figure C-2 shows the location of the Site Boundary in relation to existing public roads, county boundaries, larger area streams, the Boardman Bombing Range, and the city of Lexington. Figure C-3 shows the location of the Project in relation to other energy generation facilities that are known to be permitted at the state or local level within 10 miles of the Site Boundary.

# 3.0 Specific Location of Major and Supporting Facilities

Figures C-4a/b/c/d through C-10 show the location of all Project facilities, which are described in detail in Exhibit B.

Figures C-4a/b/c/d highlights the proposed Intraconnection Line(s) and the four routing options; this figure also shows conceptual routes for the planned Umatilla Electric Cooperative (UEC) and/or Columbia Basin Electric Cooperative (CB) Gen-tie line(s).

Figure C-5 shows the location of facilities throughout the Site Boundary associated with the GE 1.7-103 layout. Figure C-6 is a set of maps at a 1:24,000 scale that detail the location of all proposed facilities throughout the Site Boundary for the GE 1.7-103 layout.

Figure C-7 shows the location of facilities throughout the Site Boundary associated with the GE 2.5-120 layout. Figure C-8 is a set of maps at a 1:24,000 scale that detail the location of all proposed facilities throughout the Site Boundary for the GE 2.5-120 layout.

Figures C-9 and C-10 are each a set of maps at 1:12,000 scale that show the location of all temporary and permanent impacts associated with the Project. Figure C-9 shows the maximum Project footprint, associated with the GE 1.7-103 layout and the longest Intraconnection Line route

(Option 1). Figure C-10 shows the minimum necessary Project footprint, associated with the GE 2.5-120 layout and the shortest Intraconnection Line route (Option 3).

Although Figures C-4 through C-10 show turbine locations, the intent of this application is to permit the micrositing corridors that form the Site Boundary. Therefore, the turbine locations as shown should be considered conceptual in nature and representative of a constructible design. These turbine locations are used for impact calculation purposes only, and are subject to change at the time of construction with impacts less than or equal to the impacts s presented in the Application for Site Certificate.

### 4.0 Temporary and Permanent Disturbance Areas

Table C-2 presents assumptions regarding disturbance areas related to the Project. These assumptions were used to calculate areas of temporary and permanent disturbance for each of the turbine layouts, as presented in Tables C-3 and C-4. The individual component impact areas (for roads, laydown areas, towers, etc.) were calculated using preliminary design data and represent Wheatridge's best estimate of preliminary impacts for each component. However, the individual component impacts do not sum to the totals shown at the bottom of each table. This is because many of the individual component impact areas would overlap; simply summing the component impact areas would indicate greater impacts than would actually occur. Instead, the totals were calculated using consolidated data, with areas of overlap eliminated, to arrive at Wheatridge's best estimate for total temporary and permanent impact areas.

Table C-2. Disturbance Assumptions				
Disturbance Type	Temporary Disturbance	Permanent Disturbance		
Wind Turbines	100 meter (328 feet) diameter circle	20 meter (66 feet) diameter circle		
Collector Lines	8 meter (26 feet) wide corridor	1.5 meter (5 feet) diameter circle for each support pole <sup>1/</sup>		
Meteorological Towers	30 meter (98-feet) diameter circle	10 meter (33 feet) diameter circle		
Private access roads	-	-		
Existing access roads to be improved	12 meter (39 feet) wide corridor	5 meter (16 feet) wide corridor, minus 3 meters width of existing roadway		
New access roads	12 meter (39 feet) wide corridor	5 meter (16 feet) wide corridor		
Substations	Variable; 10 – 25 acres each	Variable; 1 to 2 acres each		
Intraconnection Line(s)		1.5 meter (5 feet) diameter circle for each support pole		
Intraconnection Line access roads	12 meter (39 feet) wide corridor	None		
Construction Staging areas	Variable; 15 to 20 acres each	None		
O&M Buildings/Sites	None	1.16 acres for Wheatridge West site; 1.09 acres for Wheatridge East site		
<sup>1/</sup> Where required, Collector Lines ma	y run above ground only in Wheatridge W	est for a total above-ground length of not		

<sup>1</sup>Where required, Collector Lines may run above ground only in Wheatridge West for a total above-ground length of not more than 10.83 miles. See Exhibit B, Section 3.2 for more detail on the potential use of overhead Collector Lines.

Table C-3 presents preliminary temporary and permanent disturbances areas associated with the construction of the GE 1.7-103 layout. Table C-4 presents preliminary temporary and permanent disturbances areas associated with the construction of the GE 2.5-120 layout.

Table C-3. Preliminary Disturbance Areas, GE 1.7-103 Turbine Layout				
Disturbance Type	Impact Multiplier	Temporary Disturbance (acres)	Permanent Disturbance (acres)	
	Wheat	tridge East		
Wind Turbines	66 turbines	112.73	5.10	
Collector Lines	18.68 miles	44.63	-	
Meteorological Towers	5 met towers	0.67	0.10	
Wind farm access roads	-	_	-	
<ul> <li>Existing access roads to be improved</li> </ul>	7.87 miles	21.62	6.26	
New access roads	13.63 miles	38.01	27.05	
Substations	1 substation	14.71	2.00	
Construction Yards	2 construction yards	28.18	-	
O&M Buildings	1 0&M building	-	1.09	
Wheatridge East Subtotals	-	260.55	41.6	
	Wheat	ridge West		
Wind Turbines	226 turbines	390.06	17.46	
Collector Lines	69.58 miles	169.04	0.17	
Meteorological Towers	7 met towers	0.93	0.14	
Wind farm access roads	-	-	-	
<ul> <li>Existing access roads to be improved</li> </ul>	4.32 miles	11.94	3.45	
New access roads	47.57 miles	133.15	94.72	
Substations	2 substations/1	43.35	12.0	
Construction Yards	2 construction yards	41.50	-	
O&M Buildings	1 0&M building	-	1.16	
Wheatridge West Subtotals	-	789.97	129.1	
	Tota	l Project		
Project Totals		1,050.02	170.7	

 $Disturbance\ totals\ do\ not\ equal\ the\ sum\ of\ the\ columns, since\ disturbance\ areas\ of\ different\ types\ overlap.$ 

<sup>1.</sup> Three substation sites are proposed within Wheatridge West to accommodate Intraconnection Line options; however, only up to two substations would be constructed, All three potential substations within Wheatridge West were considered for purposes of impact calculations.

Table C-4. Preliminary Disturbance Areas, GE 2.5-120 Turbine Layout			
Disturbance Type	Impact Multiplier	Temporary Disturbance (acres)	Permanent Disturbance (acres)
	Wheat	ridge East	
Wind Turbines	50 turbines	120.50	3.86
Collector Lines	17.81 miles	43.84	_
Meteorological Towers	5 met towers	0.67	0.10
Wind farm access roads	ı	-	-
<ul> <li>Existing access roads to be improved</li> </ul>	7.87 miles	21.70	6.26
New access roads	12.63 miles	35.21	25.05
Substations	1 substation	14.78	2.00
Construction Yards	2 construction yards	28.69	-
O&M Buildings	1 O&M building	-	1.09
Wheatridge East Subtotals	-	265.39	38.35
	Wheat	ridge West	
Wind Turbines	150 turbines	363.42	11.59
Collector Lines	62.19 miles	159.78	0.17
Meteorological Towers	7 met towers	0.94	0.14
Wind farm access roads	I	_	_
<ul> <li>Existing access roads to be improved</li> </ul>	3.87 miles	10.72	3.08
New access roads	40.52 miles	113.38	80.67
Substations	2 substations/1	43.35	12.0
Construction Yards	2 construction yards	40.04	-
O&M Buildings	1 0&M building	-	1.16
Wheatridge West Subtotals	_	731.63	108.81
	Tota	l Project	
Project Totals 997.02 14'			147.16

Disturbance totals do not equal the sum of the columns, since disturbance areas of different types overlap.

Table C-5 presents preliminary temporary and permanent disturbances areas associated with the Intraconnection Line(s). In keeping with Wheatridge's analytical approach of establishing minimum necessary and maximum allowed impact areas, Table C-5 provides impact areas associated with the shortest and the longest Intraconnection Line routes: Option 1 and Option 3, respectively. All calculated impact areas are subject to change as the Project design continues to be refined.

<sup>1.</sup> Three substation sites are proposed within Wheatridge West to accommodate Intraconnection Line options; however, only up to two substations would be constructed. All three potential substations within Wheatridge West were considered for purposes of impact calculations.

Table C-5. Preliminary Disturbance Areas by Intraconnection Line Option				
Disturbance Type	Impact Multiplier	Temporary Disturbance (acres)	Permanent Disturbance (acres)	
	Intraconnection Line Option 1 (Longest)			
Intraconnection Line/ Support Structures	31.5 miles, 415 towers	-	0.9	
Access Roads	31.2 miles	144.02	-	
Totals	-	144.02	0.9	
Intraconnection Line Option 3 (Shortest)				
Intraconnection Line/ Support Structures	24.5 miles, 325 towers	_	0.7	
Access Roads	24.3 miles	113.74	-	
Totals	-	113.74	0.7	

Disturbance totals do not equal the sum of the columns, since disturbance areas of different types overlap.

Tables C-3 through C-5 establish a range of permanent and temporary disturbance areas, that can be considered the minimum required and maximum allowed disturbance areas for the Project. The best-case minimum disturbance scenario would be the development of the Project utilizing the GE 2.5-120 turbine layout and the shortest Intraconnection Line route option, Option 3. Under this minimum disturbance scenario, the Project would result in approximately 147.69 acres of permanent disturbance and 1,110.76 acres of temporary disturbance. The worst-case impact scenario would be the development of the Project utilizing the greater number of turbines in the GE 1.7-103 turbine layout and the longest Intraconnection Line route option, Option 1. Under this worst-case development scenario, the Project would result in approximately 171.43 acres of permanent disturbance and 1,194.04 acres of temporary disturbance.

## 5.0 Submittal Requirements and Approval Standards

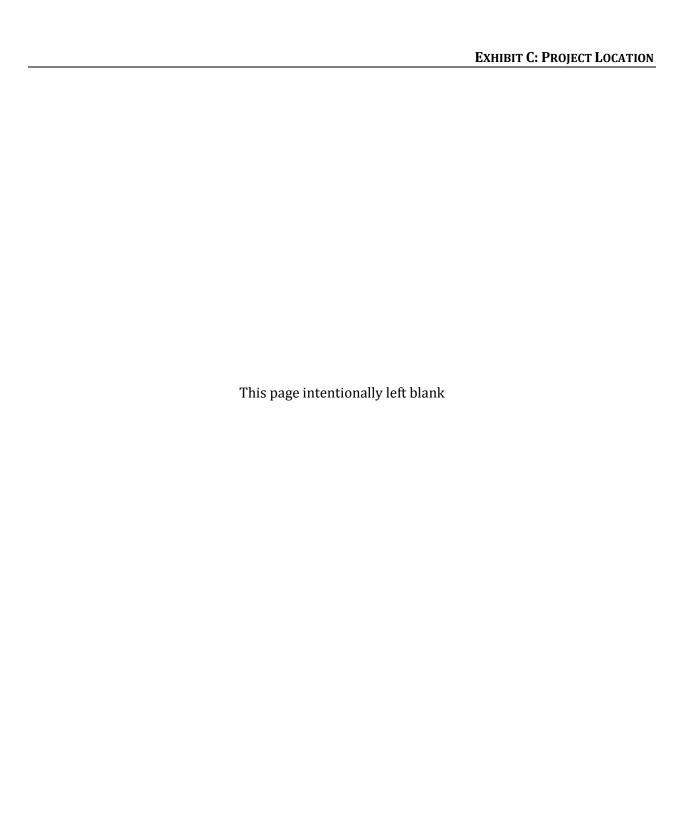
#### 5.1 Submittal Requirements

Table C-6. Submittal Requirements Matrix		
Requirement	Location	
OAR 345-021-0010(1)(c) Information about the location of the proposed facility, including:		
OAR 345-021-0010(1)(c)(A) A map or maps showing the proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features, using a scale of 1 inch = $2000$ feet or smaller when necessary to show detail;	Figures C-1 through C-10	

Table C-6. Submittal Requirements Matrix			
Requirement	Location		
OAR 345-021-0010(1)(c)(B) A description of the location of the proposed energy facility site, the proposed site of each related or supporting facility and areas of temporary disturbance, including the total land area (in acres) within the proposed site boundary, the total area of permanent disturbance, and the total area of temporary disturbance. If a proposed pipeline or transmission line is to follow an existing road, pipeline or transmission line, the applicant shall state to which side of the existing road, pipeline or transmission line the proposed facility will run, to the extent this is known.	Section 2.0 Figures C-5 through C-10 Tables C-1 through C-5		
OAR 345-021-0010(1)(c)(C) For energy generation facilities, a map showing the approximate locations of any other energy generation facilities that are known to the applicant to be permitted at the state or local level within the study area as defined in OAR 345-001-0010 for impacts to public services.	Figures C-4 a/b/c/d		
Project Order Comments	Location		
All paragraphs apply.	NA		
Maps included in the application should provide enough information for property owners potentially affected by the facility to determine whether their property is within or adjacent to the site. Major roads and other landmarks should be identified on the maps. As required by OAR $345-021-0010(1)(c)(A)$ , the Applicant must include maps drawn to a scale of 1 inch = $2,000$ feet or a scale sufficient to show necessary detail. Maps should indicate the "site boundary" as defined in OAR $345-001-0010(55)$ and should include GIS shapefiles clearly identifying the site boundary. The site boundary must include all areas within the proposed micrositing corridors for turbines or other components. The proposed turbine string layout should be indicated on the map, and it should include alternative layouts if the use of different turbine sizes would result in different string alignments.	Figures C-5 through C-10, GIS shapefiles provided separately to ODOE		

## 5.2 Approval Standard

OAR 345 Division 22 does not provide an approval standard specific to Exhibit C.





TETRA TECH

P:\G\S\_PROJECTS\Wheatridge\_Wind\_Energy\_LLC\Wheatridge\MXDs\PASC\exC\W\

TETRA TECH

P:\GIS\_PROJECTS\Wheatridge\_Wind\_Energy\_LLC\Wheatridge\MXDs\PASC\exC\WWE\_Wheatridge.

Figure C-6.16

TETRA TECH

P:\GIS\_PROJECTS\Wheatridge\_Wind\_Energy\_LLC\Wheatridge\MXDs\PASC\exC\WWE\_W

P:\GIS\_PROJECTS\Wheatridge\_Wind\_Energy\_LLC\Wheatridge\MXDs\PASC\exC\WWE\_Wheatridge\_

Figure C-8.16

GE 1.7-103 Project Facilities and

Figure C-9.2

**Data Sources** Wheatridge Wind Energy: project facilities / ESRI: roads, political boundaries / USDA NAIP: aerial imagery

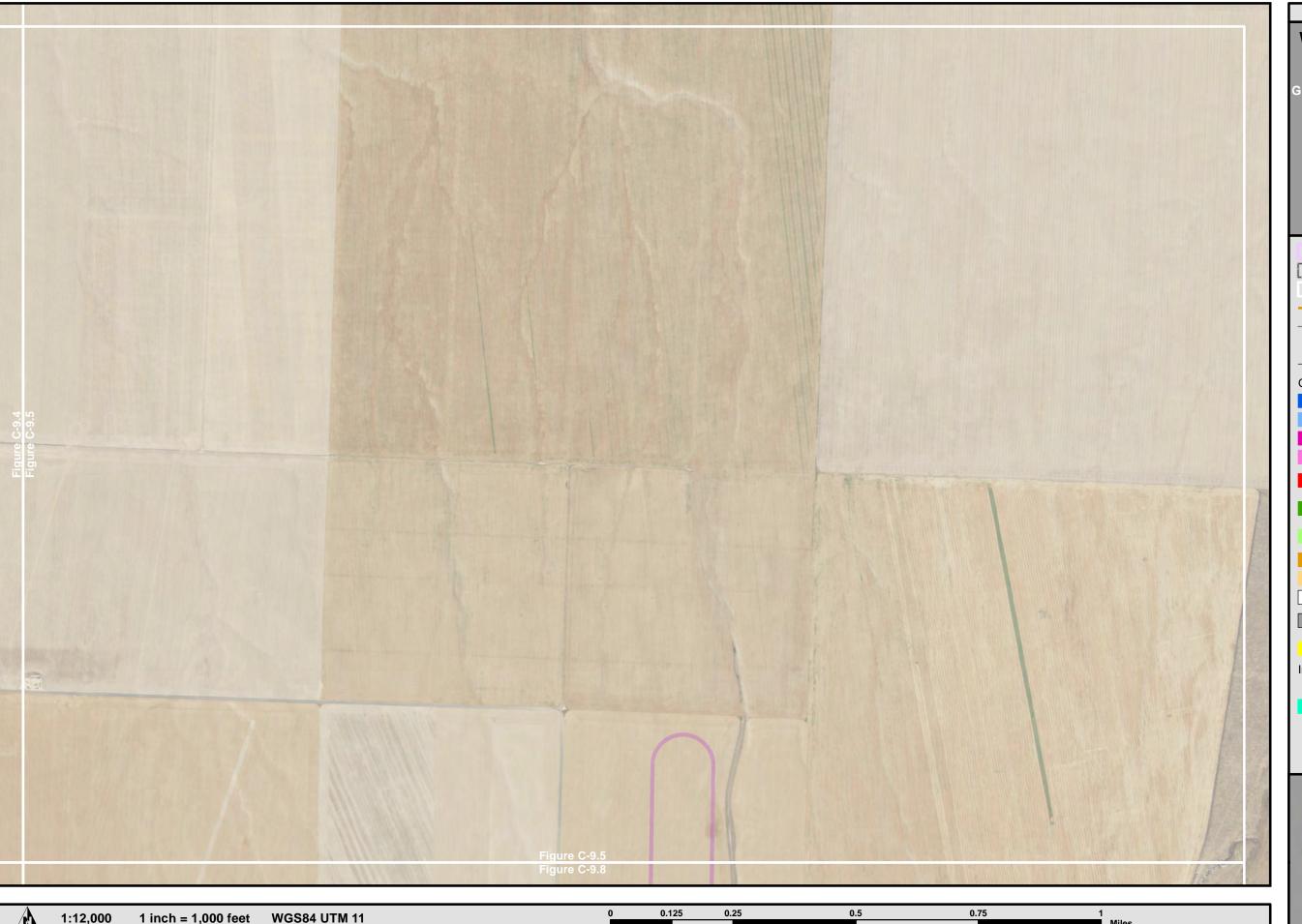


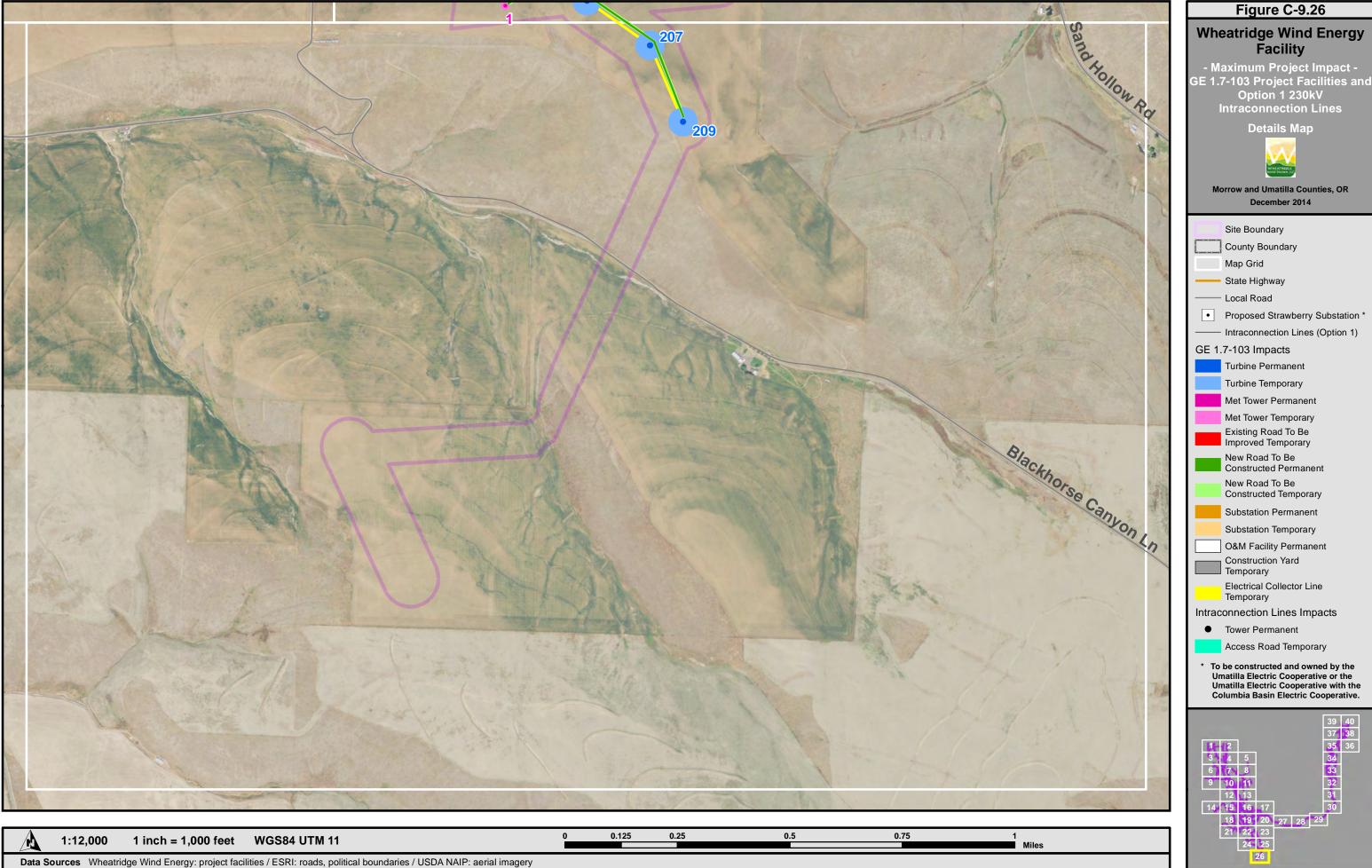
Figure C-9.5 **Wheatridge Wind Energy** Facility - Maximum Project Impact -GE 1.7-103 Project Facilities and Option 1 230kV Intraconnection Lines Details Map Morrow and Umatilla Counties, OR December 2014 Site Boundary County Boundary Map Grid State Highway Local Road Proposed Strawberry Substation \* Intraconnection Lines (Option 1) GE 1.7-103 Impacts Turbine Permanent Turbine Temporary Met Tower Permanent Met Tower Temporary Existing Road To Be Improved Temporary New Road To Be Constructed Permanent New Road To Be **Constructed Temporary** Substation Permanent Substation Temporary O&M Facility Permanent Construction Yard ■ Temporary Electrical Collector Line Temporary Intraconnection Lines Impacts Tower Permanent Access Road Temporary \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 37 38 1-12 35 36 34 3 4 5 33 32 6 7 8 9 10 11 31 12 13 30 14 15 16 17 18 19 20 27 28 29 21 22 23 24 25 26

**Wheatridge Wind Energy** GE 1.7-103 Project Facilities and Proposed Strawberry Substation \*

Figure C-9.14 **Wheatridge Wind Energy** Facility - Maximum Project Impact -GE 1.7-103 Project Facilities and Option 1 230kV **Intraconnection Lines Details Map** Morrow and Umatilla Counties, OR December 2014 Site Boundary County Boundary Map Grid State Highway - Local Road Proposed Strawberry Substation \* Intraconnection Lines (Option 1) GE 1.7-103 Impacts Turbine Permanent Turbine Temporary Met Tower Permanent Met Tower Temporary Existing Road To Be Improved Temporary New Road To Be Constructed Permanent New Road To Be **Constructed Temporary** Substation Permanent **Substation Temporary** O&M Facility Permanent Construction Yard Temporary Electrical Collector Line Temporary Intraconnection Lines Impacts Tower Permanent Access Road Temporary \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 37 38 1 2 35 36 34 3 4 5 33 32 6 7 8 9 10 11 31 12 13 30 14 15 16 17 18 19 20 27 28 29 21 22 23 24 25 26

TETRA TECH

Figure C-9.17



Option 1 230kV **Intraconnection Lines** Details Map Morrow and Umatilla Counties, OR December 2014 Proposed Strawberry Substation \* Intraconnection Lines (Option 1) Met Tower Permanent Met Tower Temporary Existing Road To Be Improved Temporary Constructed Permanent **Constructed Temporary** Substation Permanent **Substation Temporary O&M Facility Permanent** Electrical Collector Line Intraconnection Lines Impacts Access Road Temporary \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 37 38 35 36 34 33 32 31 30 18 19 20 27 28 29

**Wheatridge Wind Energy** - Maximum Project Impact -GE 1.7-103 Project Facilities and Proposed Strawberry Substation \* Intraconnection Lines (Option 1) Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 37 38 35 36

Figure C-9.30

Figure C-9.36

1:12,000

1 inch = 1,000 feet WGS84 UTM 11

**Data Sources** Wheatridge Wind Energy: project facilities / ESRI: roads, political boundaries / USDA NAIP: aerial imagery



Met Tower Temporary Existing Road To Be Improved Temporary New Road To Be Constructed Permanent New Road To Be **Constructed Temporary** Substation Permanent Substation Temporary O&M Facility Permanent Construction Yard Temporary Electrical Collector Line Temporary Intraconnection Lines Impacts Tower Permanent Access Road Temporary \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 39 40 37 38 1 2 35 36 34 3 4 5 33 32 31 30 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 27 28 29 21 22 23 24 25 26

Figure C-9.39

Facility

Option 1 230kV Intraconnection Lines Details Map

Morrow and Umatilla Counties, OR December 2014

Intraconnection Lines (Option 1)

Site Boundary County Boundary Map Grid State Highway Local Road

Turbine Permanent Turbine Temporary Met Tower Permanent

Figure C-9.40 **Wheatridge Wind Energy** - Maximum Project Impact -GE 1.7-103 Project Facilities and Intraconnection Lines Morrow and Umatilla Counties, OR Proposed Strawberry Substation \* Intraconnection Lines (Option 1) \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 39 40 37 38 35 36

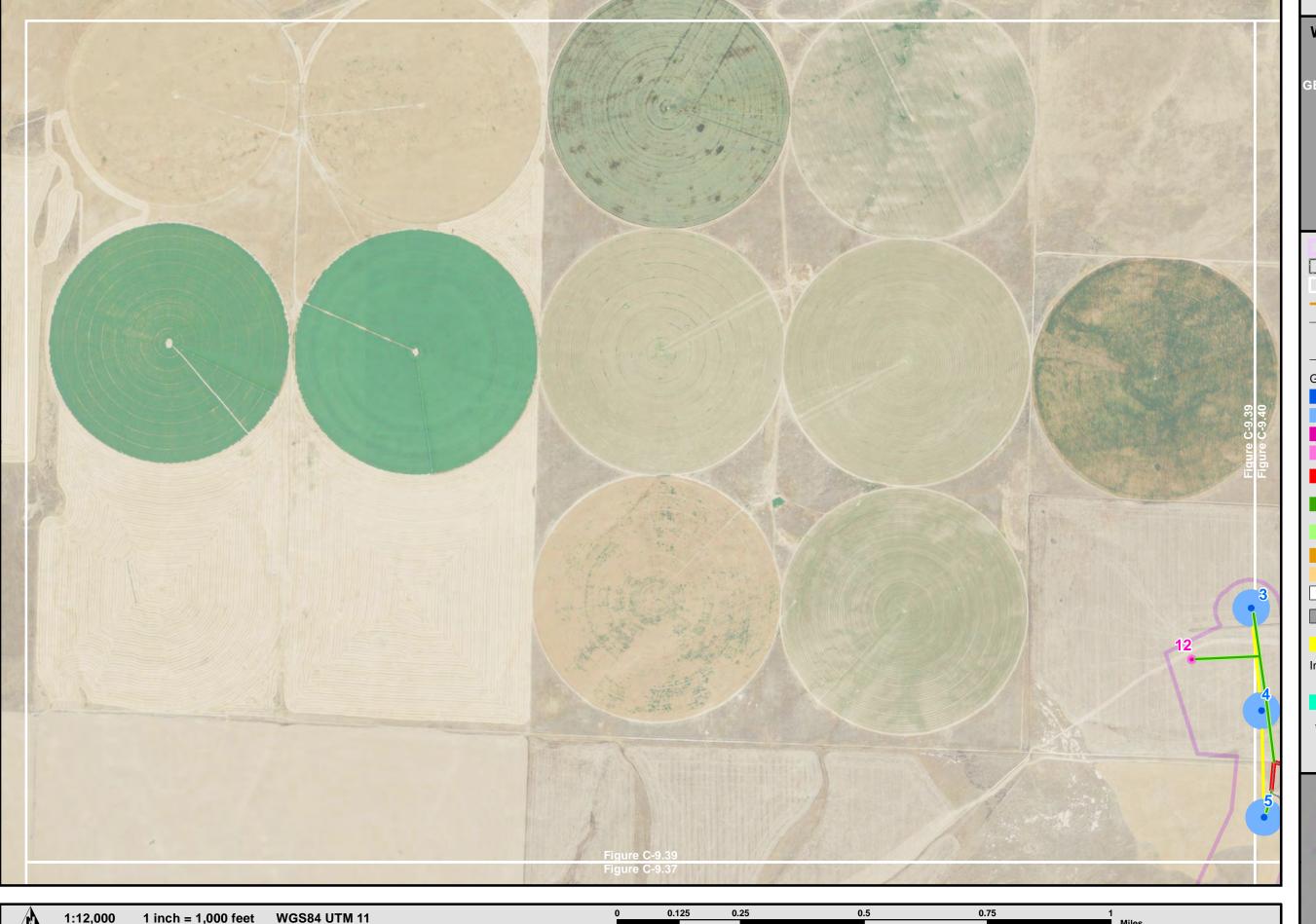
Figure C-10.1

Figure C-10.2

Figure C-10.5 **Wheatridge Wind Energy** Facility - Minimum Project Impact -GE 2.5-120 Project Facilities and Option 3 230kV Intraconnection Lines Details Map Morrow and Umatilla Counties, OR December 2014 Proposed Strawberry Substation \* — Intraconnection Lines (Option 3) Turbine Permanent Turbine Temporary Met Tower Permanent Met Tower Temporary Existing Road To Be Improved Temporary **Constructed Permanent Constructed Temporary** Substation Permanent **Substation Temporary** O&M Facility Permanent Electrical Collector Line Intraconnection Lines Impacts Access Road Temporary \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 37 38 35 36 34 33 32 31 30 18 19 20 27 28 29

Figure C-10.14 **Wheatridge Wind Energy** GE 2.5-120 Project Facilities and Proposed Strawberry Substation \*

**Data Sources** Wheatridge Wind Energy: project facilities / ESRI: roads, political boundaries / USDA NAIP: aerial imagery



**Figure C-10.39 Wheatridge Wind Energy** Facility - Minimum Project Impact -GE 2.5-120 Project Facilities and Option 3 230kV Intraconnection Lines Details Map Morrow and Umatilla Counties, OR December 2014 Site Boundary County Boundary Map Grid State Highway — Local Road Proposed Strawberry Substation \* Intraconnection Lines (Option 3) GE 1.7-103 Impacts Turbine Permanent Turbine Temporary Met Tower Permanent Met Tower Temporary Existing Road To Be Improved Temporary New Road To Be **Constructed Permanent** New Road To Be **Constructed Temporary** Substation Permanent Substation Temporary O&M Facility Permanent Construction Yard Temporary Electrical Collector Line Temporary Intraconnection Lines Impacts Tower Permanent Access Road Temporary \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 39 40 37 38 1 2 35 36 34 3 4 5 33 32 31 30 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 27 28 29 21 22 23 24 25

TETRA TECH

26

**Wheatridge Wind Energy** - Minimum Project Impact -GE 2.5-120 Project Facilities and Intraconnection Lines Morrow and Umatilla Counties, OR Proposed Strawberry Substation \* — Intraconnection Lines (Option 3) Intraconnection Lines Impacts \* To be constructed and owned by the Umatilla Electric Cooperative or the Umatilla Electric Cooperative with the Columbia Basin Electric Cooperative. 39 40 37 38 35 36 34 33 32 31 30

# **Exhibit D**

# **Applicant's Organizational Expertise**

## **Prepared for**



# Wheatridge Wind Energy, LLC

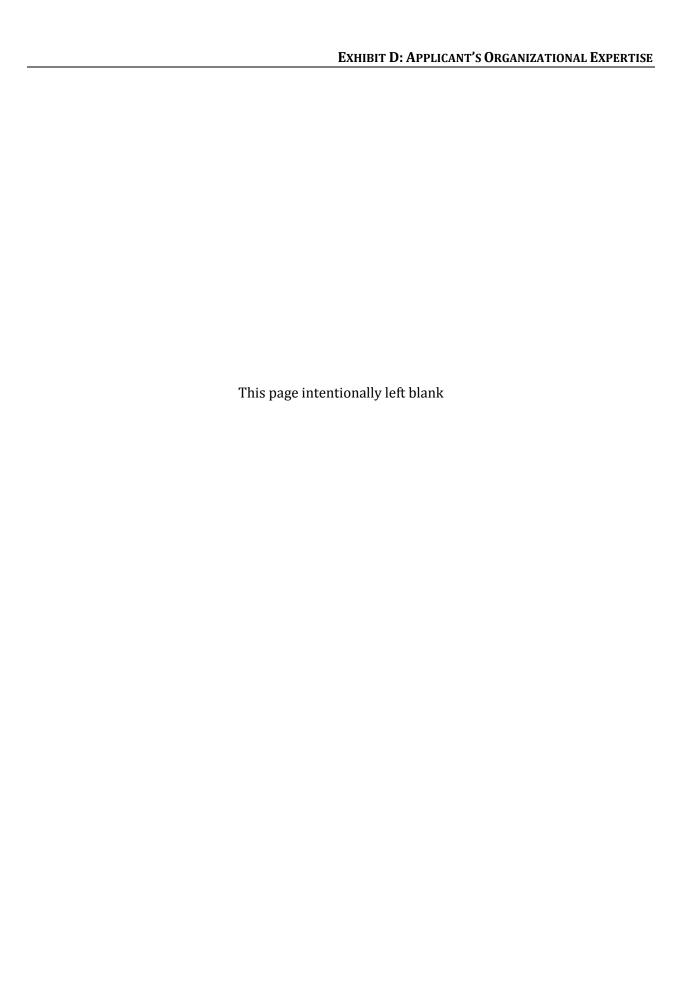
Wheatridge Wind Energy Facility

July 2015

Prepared by



Tetra Tech, Inc.



## **Table of Contents**

1.0	Introduction	. 1			
2.0	Applicant's Previous Experience – OAR 345-021-0010(1)(d)(A)	. 2			
3.0	Qualifications of Applicant's Personnel - OAR 345-021-0010(1)(d)(B)	. 2			
4.0	Qualifications of Known Contractors - OAR 345-021-0010(1)(d)(C)	. 5			
4.1	Engineering Design and Construction	. 5			
5.0	Applicant's Past Performance - OAR 345-021-0010(1)(d)(D)	. 5			
5.1	Construction and Operation	5			
5.2	Regulatory Compliance	6			
5.	2.1 Successful Completion of Mitigation Projects	. 6			
6.0	Warranty to Secure Necessary Expertise - OAR 345-021-0010(1)(d)(E)	. 7			
7.0	Not an ISO Certified Program	. 7			
8.0	Submittal Requirements and Approval Standards	. 8			
8.1	Submittal Requirements	8			
8.2	Approval Standard	ç			
	List of Tables				
Table	D-1. Submittal Requirements Matrix	. 8			
Table	Table D-2. Approval Standards				

### **List of Attachments**

Attachment D-1. Wheatridge Habitat Mitigation Area Option Recording Memo with Umatilla County

### **Terms and Definitions**

Applicant Wheatridge Wind Energy, LLC

BOP Building-of-plant

EFSC Energy Facility Siting Council

ISDC Ione Self-Determination Committee

MAP MAP Royalty, Inc.

MW Megawatts

NWC Northwest Wildlife Consultants, Inc.

OAR Oregon Administrative Rule

Project Wheatridge Wind Energy Facility

Swaggart Wind Power, LLC

Wheatridge Wind Energy, LLC

#### 1.0 Introduction

Exhibit D describes the sources and organizational, managerial and technical expertise extent of Wheatridge Wind Energy, LLC (Wheatridge), as required to meet the submittal requirements of Oregon Administrative Rule (OAR) 345-021-0010 (1)(d), paragraphs (A) through (G). This Exhibit also provides the qualifications of known contractors assisting in design and construction of the Wheatridge Wind Energy Facility (Project). This Exhibit shows that the Project complies with OAR 345-022-0010:

#### 345-022-0010 Organizational Expertise

- (1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.
- (2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.
- (3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.
- (4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the certificate holder shall not commence construction or operation as appropriate until the third party has obtained the necessary permit or approval and the applicant has a contract or other arrangement for access to the resource or service secured by that permit or approval.

## 2.0 Applicant's Previous Experience – OAR 345-021-0010(1)(d)(A)

Swaggart Wind Power, LLC (Swaggart), is a joint venture between Leprechaun Holdings, LLC, a local development company founded by a landowner from Ione, Oregon, and three investment funds managed by MAP Royalty, Inc. (MAP): MAP 2006, L.P., MAP 2006(A), L.P., and MAP 2009, L.P. Swaggart owns 100% of the interests in Wheatridge, which was formed to secure the real estate rights, permits, and interconnection rights necessary to construct and operate a wind energy facility within the project footprint.

Founded in 1987, MAP is one of the oldest and most successful private investment and management companies in the United States. MAP has raised in excess of \$2 billion to invest directly in natural gas and renewable energy interests throughout the United States. Through a unique strategy that includes multiple partners, MAP has directly funded the development of more than 25,000 megawatts (MW) of wind projects across the United States, including approximately 4,000 MW that are currently operating and an additional 3,000 MW that are under construction and will be operational by 2016. Specifically in Oregon, MAP funded the original development of the Biglow Canyon Wind Farm by Orion Energy prior to Portland General Electric's acquisition of the project in 2006. MAP's successful experience with a broad range of projects and partners provides unique access to a broad cross-section of the largest wind power operators and flexibility around future financing structures.

# 3.0 Qualifications of Applicant's Personnel - OAR 345-021-0010(1)(d)(B)

The development activities in Morrow and Umatilla Counties undertaken by Wheatridge are a partnership between MAP and an experienced team of development professionals based in Oregon with a long history of regional wind project development. The Oregon-based development team brings deep regional expertise, derived over years of successfully completing hundreds of MWs of wind energy projects in the region, deep local ties to the communities (four generations of farming in the area), and a history of understanding local economic development, permitting and environmental concerns.

Below are professional biographies for the Wheatridge management team:

**Jerry Rietmann** – Jerry Rietmann is a fourth-generation wheat grower from Morrow County, Oregon. As the local partner in the Project, Mr. Rietmann continues to help facilitate strong relationships with landowners, government officials, local utility partners, and community members living near the proposed Project.

Mr. Rietmann has served as the President of the local Ione, Oregon Chamber of Commerce and serves on the Board of Directors of Grow Ione Inc., a partnership between the local chamber and the Ione Education Foundation. Grow Ione Inc. recently completed a 19-lot subdivision in cooperation with the Port of Morrow, to provide affordable home sites in south Morrow County. In

addition, Mr. Rietmann served as the Chairman of the Ione Self-Determination Committee (ISDC). The ISDC successfully sought passage in the Oregon Legislature creating the Ione School District. Further, Mr. Rietmann was the past President of the Morrow County Wheat Growers League, as well as a past member of the State Board of Directors for the Oregon Wheat Growers League.

Mr. Rietmann has operated wheat farms in Morrow and Gilliam Counties since 1989 and currently farms approximately 30,000 acres. Prior to starting his farming operation, he was employed by Idaho First National Bank, serving the bank as a Senior Commercial Loan Officer focused on large commercial and agricultural lending relationships. Mr. Rietmann graduated from the University of Idaho in 1984 with a Bachelor of Science in Economics and Agribusiness Management.

Andrew O'Connell – Andrew O'Connell has 16 years of experience developing and financing utility scale wind projects. From 1998 to 2000, Mr. O'Connell worked in Spain developing and financing turnkey wind projects for American/Spanish developer Terranova/Eurovento. In 2001, he joined PPM Energy, moving into a project development role in 2004. As PPM/Iberdrola's lead Northwest developer, Mr. O'Connell played a critical role in PPM's successful development of several operating projects in the Pacific Northwest, including the 201 MW Big Horn project, the 50 MW Big Horn II project, and the 250 MW Juniper Canyon project in Washington State and, in Oregon, the 100.5 MW Leaning Juniper project, the 98.6 MW Pebble Springs project, the 24 MW Klondike project, and the 200 MW Leaning Juniper IIa and IIb projects. Additionally, he played a key role in the following operating projects: the 50 MW Buffalo Ridge project (MN), the 150 MW Shiloh and 250 MW Manzana projects (CA), the 150 MW Colorado Green project (CO), and the 120 MW Wyoming Wind project (WY). Mr. O'Connell received a Master's in Business Administration from the University of Oregon (1998) and a Bachelor of Arts in Mathematics, History and English from the University of Oregon Honors College (1994).

**Samuel E. Enfield -** Sam Enfield is an Investment Director at MAP, based in Palo Alto, California, supporting that organization's investments and activities in wind energy development. Mr. Enfield has experience in wind energy project development in numerous regions of the United States. Between 2000 and 2008, Mr. Enfield successfully developed several wind energy projects in the Mid-Atlantic region under the banners of Atlantic Renewable Energy Corporation, PPM Energy, and Iberdrola Renewables: managing site acquisition, project design and permitting, and other regulatory activities. Prior to joining Atlantic Renewable, he worked in the wind development group of FPL Energy.

Mr. Enfield has been involved in commercial wind power development since 1992. During the 1970s and 1980s, he worked in Washington, DC as a legislative staffer in the United States Senate, a renewable energy lobbyist, and a national renewable energy trade association executive. Mr. Enfield currently sits on the Board of Directors of the American Wind Energy Association and has done so for seven years, including one as its President. He also served as the first Chairman of that organization's Siting Committee. He has a Bachelor of Arts degree from Duke University and a Master's degree from the Yale School of Management. Mr. Enfield is a resident of Seattle, Washington.

**Aaron Zubaty** – Aaron Zubaty is a Senior Vice President at MAP and manages the team that oversees all renewable energy investments. Mr. Zubaty joined MAP in 2005 as the founding member of a team that is responsible for wind energy investment origination and analysis as well as the management of a portfolio of renewable energy projects and interests. Since the first wind energy investments made in early 2005, MAP's wind investment practice has deployed more than \$300 million of capital across more than 25,000 MW of wind energy development assets, including approximately 7,000 MW that will have reached commercial operations by 2016.

Before joining MAP, Mr. Zubaty worked for independent power producer AES Corporation, based in both London and Africa. Through his various roles in business development and financial management, he helped lead the planning, implementation, and financing of \$500 million of large energy projects and power plants as well as helping to direct the management and operation of the national utility serving the country of Cameroon. He holds a BS in Earth Systems (concentration: Energy) and an MS in Civil Engineering (concentration: Fluid Mechanics and Hydrology), both from Stanford University, and is a graduate of Choate Rosemary Hall.

**Peter J. Blum –** Peter Blum is a Development Director at MAP. Mr. Blum manages a broad portfolio of investment activities for the MAP investment group. Mr. Blum's primary responsibilities include deal origination, analysis, negotiation and documentation, as well as the management of a number of investment joint ventures. Mr. Blum came to MAP after working in the energy technology industry for several years at Itron and Silicon Energy, where he led product management and marketing efforts for software products facilitating transparency between wholesale and retail electricity markets. Mr. Blum's background also includes working at Edison International in the strategy and business development group focused on power plant acquisitions and asset optimization in the United States and abroad. His experience in energy markets spans across the United States domestic markets, the United Kingdom, Brazil and Chile. Mr. Blum holds a BS and MS in Civil Engineering, both from Stanford University.

Eric Stoutenburg – Eric Stoutenburg is the Engineering Manager for the wind investment group at MAP and leads all wind energy engineering and geographic mapping activities to support more than 25,000 MW of wind development across the United States. Mr. Stoutenburg's responsibilities include engineering work associated with project evaluation, development, and due diligence, meteorological tower campaign management, wind data analysis, wind flow modeling, project design, and energy estimates. Mr. Stoutenburg joined MAP in 2011 while completing his Ph.D. in renewable energy integration at Stanford University in the Department of Civil and Environmental Engineering. While at Stanford, he completed an internship at Energy and Environmental Economics Inc. on wind integration in California. He has a BS in aeronautical engineering from the United States Military Academy at West Point.

**Andrew Fales** – Andrew Fales, CPA, is the Wind Investment Internal Finance Consultant for MAP and works closely across MAP-funded wind energy development investments to coordinate financial analysis and bidding activities. Prior to joining MAP, Andrew was the Vice President of Finance at a MAP-funded renewable energy development company and was the founding partner of Fales & Co., CPAs in Boise, ID. Andrew began his career with PricewaterhouseCoopers' Mergers and

Acquisition tax group in New York, NY. Andrew's experience includes developing tax-efficient acquisition and financing structures through mergers, joint ventures, and acquisitions, as well as identifying tax and accounting exposures associated with M&A due diligence. He also has extensive experience working with venture capital-backed start-ups, renewable energy project finance, and Section 1031 like-kind exchange transactions. Andrew earned a bachelor degree in Accounting (BS) from Brigham Young University, a Master of Accountancy with an emphasis in Tax (MAcc-Tax), also from BYU, and a Master of Business Administration from The Wharton School at the University of Pennsylvania. While at BYU, Andrew was a two-time Academic All-Mountain West Conference linebacker and three-year letterman on BYU football team. He is a licensed Idaho Certified Public Accountant and a member of the Idaho Society of Certified Public Accountants.

## 4.0 Qualifications of Known Contractors - OAR 345-021-0010(1)(d)(C)

#### 4.1 Engineering Design and Construction

At this point in time, Wheatridge has not selected a turbine manufacturer for the Project's wind turbines or a specific contractor to construct the Project. This said, based on its team's vast experience developing over 8,500 MW of wind projects in the United States, Wheatridge will select qualified contractors, engineers, and manufacturers with experience in the wind industry. Wheatridge has extensive relationships with all the major wind turbine manufacturers as well as with the chief building-of-plant (BOP) contractors in the United States. Wheatridge has also relied on the input of external consultants with decades of relevant experience developing successful wind plants in the Pacific Northwest. For example, Ron Nierenberg, the meteorologist who has assisted in the design of the Project for Wheatridge, designed the nearby Shepherd's Flat project, and Portland-based DNV-GL performed the Project's independent energy assessment. The firm that performed the Project's wildlife field studies, Northwest Wildlife Consultants, has been studying wildlife and wind plants in the Columbia River Plateau for 20 years. The electrical engineering firm that helped design the Project's electrical collector system, Elcon Associates, has designed electrical systems for several operating wind projects in the state of Oregon and Corvallis-based TriAxis Engineering performed siting and preliminary design work on the Intraconnection Line(s). Moreover, Mortenson, one of foremost BOP contractors in the wind industry, reviewed the Project's design and provided many inputs to dimensions and drawings, and GE provided wind turbine specifications for the plant design and impact calculations. Finally, archeologists from the Confederated Tribes of the Umatilla Indian Reservation performed the archeological and cultural studies for the Project.

## 5.0 Applicant's Past Performance - OAR 345-021-0010(1)(d)(D)

#### 5.1 Construction and Operation

Wheatridge managers have substantial experience in managing all aspects of development and preconstruction activities across more than 5,500 MW of operating wind farms in the United States,

including several operating wind projects in Oregon (Biglow Canyon, Pebble Springs, Leaning Juniper, Leaning Juniper IIa/IIb and Klondike I), and an additional 3,000 MW that is currently under construction. In many cases, at or immediately after the start of construction of these projects developed by the Wheatridge managers, there have been additional equity and financing partners brought in and these equity partners have taken over the direct management of construction and operation of the projects, such as was the case with the sale of the Biglow Canyon Wind Farm from Orion Energy to Portland General Electric.

#### 5.2 Regulatory Compliance

In previous pre-construction activities, neither Wheatridge nor its managers have been in violation of any rules or regulations.

#### 5.2.1 Successful Completion of Mitigation Projects

Wheatridge relies on mitigation to demonstrate compliance with several approval standards, most importantly with the Oregon Department of Fish and Wildlife fish and wildlife habitat goals and standards, addressed in Exhibit P of this application. Wheatridge managers have substantial experience in designing habitat mitigation projects. Wheatridge will rely on the experience and expertise of Mr. Andrew O'Connell and Northwest Wildlife Consultants, Inc. (NWC) to successfully complete the mitigation required for the Wheatridge project. Additionally, Wheatridge has acquired a conservation easement in Gilliam County for 200 acres, within a 320 acre parcel; with the ability expand the mitigation parcel if needed (Attachment D-1).

As noted above in Section 3.0, Mr O'Connell has 16 years of experience financing and developing wind energy projects. He has successfully obtained county Conditional Use Permits for the Pebble Springs and Bighorn wind projects in Oregon, the Shilo wind project in California, as well as obtaining a Site Certificate from the Oregon Energy Facility Siting Council (EFSC) for the Leaning Juniper 1 wind project.

Wheatridge is working with NWC to implement habitat mitigation. NWC and its personnel (Karen Kronner, Bob Gritski, and others) have demonstrated success at all aspects of such a mitigation process as required for the Project, including drafting of initial concepts, contacting owners of potentially suitable mitigation areas, assessing (in concert with appropriate agency personnel) the suitability of such lands, implementation of protection and enhancement measures, monitoring of effectiveness, and validation of successful completion. Oregon and Washington wind energy projects for which NWC has completed some or all of these mitigation components include both those associated with county Conditional Use Permits and EFSC projects; some of these are Stateline 2, Stateline 3, Klondike III, Leaning Juniper I, Leaning Juniper II, Pebble Springs, Willow, Star Point, Rattlesnake Road, and Wheat Field.

6

# 6.0 Warranty to Secure Necessary Expertise - OAR 345-021-0010(1)(d)(E)

Not applicable.

## 7.0 Not an ISO Certified Program

Wheatridge does not propose to design, construct or operate the facilities according to an International Organization for Standardization (ISO) 9000 or ISO 14000 certified program.

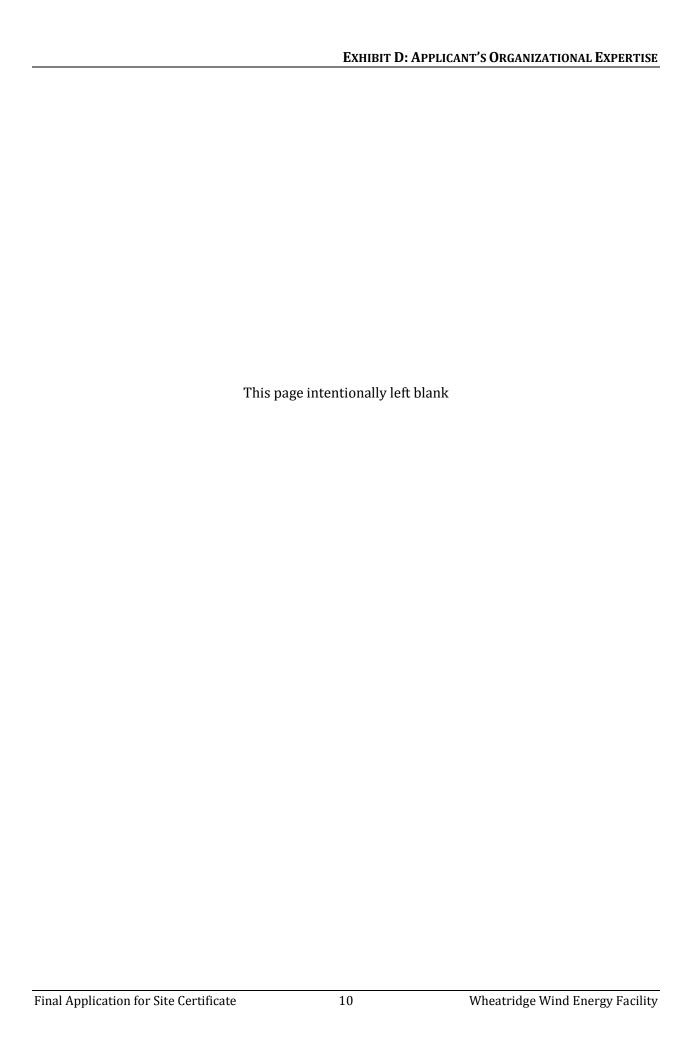
# 8.0 Submittal Requirements and Approval Standards

## 8.1 Submittal Requirements

Table D-1. Submittal Requirements Matrix		
Requirement	Location	
OAR 345-021-0010(1)(d) Information about the organizational expertise of the applicant to construct and operate the proposed facility, providing evidence to support a finding by the Council as required by OAR 345-022-0010, including:		
(A) The applicant's previous experience, if any, in constructing and operating similar facilities;	Section 2.0	
(B) The qualifications of the applicant's personnel who will be responsible for constructing and operating the facility, to the extent that the identities of such personnel are known when the application is submitted.	Section 3.0	
(C) The qualifications of any architect, engineer, major component vendor, or prime contractor upon whom the applicant will rely in constructing and operating the facility, to the extent that the identities of such persons are known when the application is submitted.	Section 4.0	
(D) The past performance of the applicant, including but not limited to the number and severity of any regulatory citations in constructing or operating a facility, type of equipment, or process similar to the proposed facility.	Section 5.0	
(E) If the applicant has no previous experience in constructing or operating similar facilities and has not identified a prime contractor for construction or operation of the proposed facility, other evidence that the applicant can successfully construct and operate the proposed facility. The applicant may include, as evidence, a warranty that it will, through contracts, secure the necessary expertise.	Section 6.0	
(F) If the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program, a description of the program.	N/A	
(G) If the applicant relies on mitigation to demonstrate compliance with any standards of Division 22 or 24 of this chapter, evidence that the applicant can successfully complete such proposed mitigation, including past experience with other projects and the qualifications and experience of personnel upon whom the applicant will rely, to the extent that the identities of such persons are known at the date of submittal.	Section 5.2.1	
Project Order Comments	Location	
Exhibit D should include a safety and environmental regulatory compliance history for the last three years, focused on similar facilities owned or operated by the Applicant. If possible, evidence of successful completion of mitigation projects should be provided.	Section 5.0	

# 8.2 Approval Standard

Table D-2. Approval Standards			
Requirement	Location		
OAR 345-022-0010 (1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.			
OAR 345-022-0010(2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.	Section 7.0		
OAR 345-022-0010 (3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.			
OAR 345-022-0010(4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the certificate holder shall not commence construction or operation as appropriate until the third party has obtained the necessary permit or approval and the applicant has a contract or other arrangement for access to the resource or service secured by that permit or approval.			



# **Attachment D-1:**

Wheatridge Habitat Mitigation Area Option Recording Memo with Umatilla County After Recording this Memorandum Return to: Wheatridge Wind Energy, LLC 3000 El Camino Real 5 Palo Alto Square, Suite 700 Palo Alto, CA 94306 Attn: Aleathia M. Hoster

#### MEMORANDUM OF OPTION FOR CONSERVATION EASEMENT

On the 27 day of November, 2014, Robert Gritski and Karen Kronner, as Owners, granted to Wheatridge Wind Energy, LLC, a Delaware limited liability company, as Optionee, an option to acquire one or more Conservation Easements to no more than 200 acres of the following described Gilliam County, Oregon real property, to which reference is made for all statements, matters, and things therein contained:

See Exhibit A which is attached hereto and by this reference incorporated herein.

The term of the option shall expire no later than eight years after the date of this memorandum first set forth above. Reference should be made to the option agreement for further particulars.

DATED this 28 day of Novembor, 2014.

Optionee: Wheatridge Wind Energy, LLC

By:

Andrew O'Connell
President

STATE OF OREGON
) ss.

County of MULTNIMATI

Before me on this \( \frac{100}{200} \) day of \( \sum\_{\text{ov}} \) 6000 \( \text{ov} \) (2014, personally appeared the above named Andrew O'Connell, President of Wheatridge Wind Energy, LLC and acknowledged on its behalf the foregoing instrument to be his voluntary act and deed.

OFFICIAL SEAL
CALEB J TOMULTY
NOTARY PUBLIC - OREGON
COMMISSION NO. 459974
MY COMMISSION EXPIRES JUNE 05, 2015

Notary Public for Oregon My Commission Expires: Owners:

Name: Robert Gritski

By: Karen Kronner
Name: Karen Kronner

STATE OF OREGON

) ss. County of UMATILA

Before me on this 19 day of Decline , 2014, personally appeared the above named of Robert Gritski and Karen Kronner, and acknowledged the foregoing instrument to be their voluntary act and deed.

OFFICIAL SEAL
PAULA M HANCOCK
NOTARY PUBLIC-OREGON
COMMISSION NO. 467618
MY COMMISSION EXPIRES MAY 19, 2016

Notary Public for Oregon My Commission Expires:

#### EXHIBIT A

A portion of that certain real property situated in Gilliam County, Oregon with Assessor's Parcel Number 1S21E 2901, described as follows:

Section 14: NW%, EXCEPT: Deed Book W, page 346, beginning at a point 4 chains West and 1.93 chains South of the Northeast corner of the NW% at a stone 8x8x15 inches marked with "X" on top, running thence South 78° 28' East, 2 chains to iron pin in ground; thence South 73° East, 1 chain to iron pin, thence South 57° East 50 links to iron pin, thence South 47° East 40 links to Rock Creek; thence South 47° East 3.40 chains to Rock Creek Bluff to rock marked "C" (which rock is witnessed by rock in bluff marked "X" 18.5 links below); thence in a Southeasterly direction along Rock Creek Bluff to where said bluff intersects the North and South center line of Section 14; thence North on said line to intersection of county road; thence West along South line of said county road a distance of 4 chains from the Northeast corner of NW%; thence South to the place of beginning.

ALSO, that part of the S½ lying South of a line described as follows and that part of the N½SW½ lying North of a line described as follows:

Starting at a point which is the Northwest corner of the S½NW¼SW¼ of Section 14; thence 90° East 2200 feet excluding the North tip of a plowed field (approximately 1½ acres), thence 160° South 1300 feet; thence 135° Southeast approximately 2800 feet to a point which is the Southwest corner of the N½NW¼NW¼, Section 24, same township and range; thence East along the S½NW¼NW¼, Section 24, to the property line.

Section 23: All of the N½, EXCEPT the parcel in the NE½NE½ which is North and East of the line which begins at the Northwest corner of S½NW½SW¼ and proceeds Southeasterly as described in the second paragraph of the description in Section 14, ALSO, the NE½SW½; SE½.

# **Exhibit E**

# **Applicable Permits**

## **Prepared for**



# Wheatridge Wind Energy, LLC

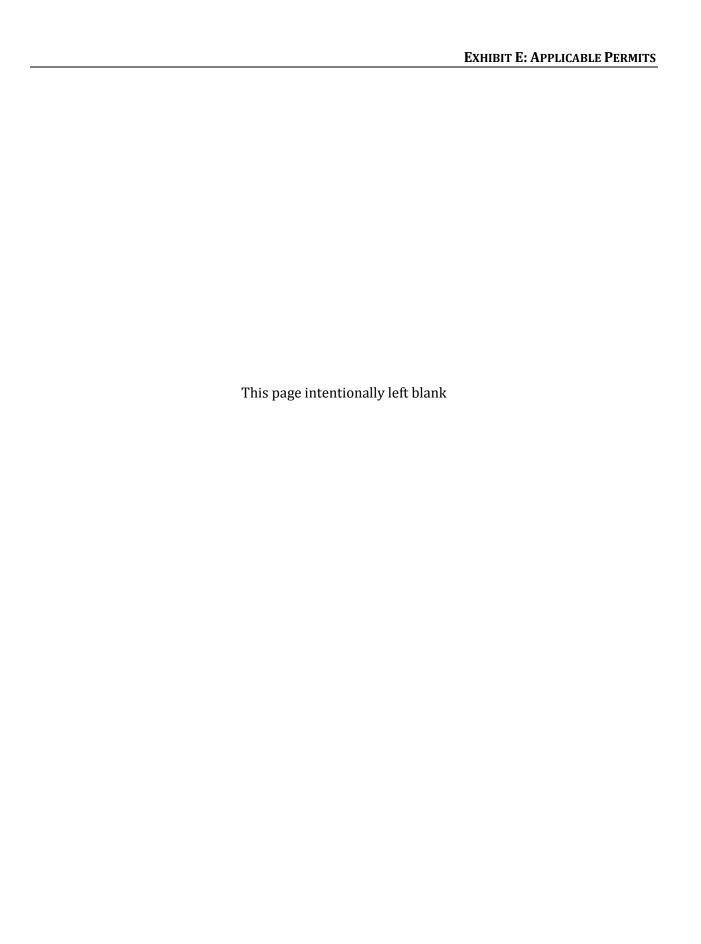
Wheatridge Wind Energy Facility

July 2015

Prepared by



Tetra Tech, Inc.



### **Table of Contents**

1.0	Introduction	
2.0	Federal Permits	1
3.0	Federal-Delegated Permits - OAR 345-021-0010(1)(e)(D)	3
4.0	Tribal Permits - OAR 345-021-0010(1)(e)(A) and (B)	4
5.0	State Permits – OAR 345-021-0010(1)(e)(A) and (B)	5
6.0	Local Permits – OAR 345-021-0010(1)(e)(A) and (B)	13
7.0	Third Party Permits	18
8.0	Third-Party Entities	21
9.0	Monitoring Program – OAR 345-021-0010(1)(e)(G)	25
10.0	Submittal Requirements and Approval Standards	25
10.3	Submittal Requirements	25
10.2	2 Approval Standard	26
	List of Tables	
Table	E-1. Submittal Requirements Matrix	25

#### **List of Attachments**

Attachment E-1. Oregon DEQ Acceptance of NPDES 1200-C/ESCP Permit Application

Attachment E-2. Letter from Steven Eldrige at Umatilla Electric Cooperative Regarding Future Interconnection of Wheatridge to UEC Transmission Lines

## **Acronyms and Abbreviations**

EFSC Energy Facility Siting Council

NPDES National Pollutant Discharge Elimination System

OAR Oregon Administrative Rule

ODOT Oregon Department of Transportation

ORS Oregon Revised Statutes

Project Wheatridge Wind Energy Facility

Wheatridge Wind Energy, LLC

#### 1.0 Introduction

Exhibit E provides information about permits needed for construction and operation of the Wheatridge Wind Energy, LLC's (Wheatridge) Wheatridge Wind Energy Facility (Project), as required to meet the submittal requirements of Oregon Administrative Rule (OAR) 345-021-0010(1)(e) paragraphs (A) through (G). While OAR 345 Division 22 does not provide an approval standard specific to Exhibit E, permits identified in this exhibit are identified in each applicable exhibit.

#### 2.0 Federal Permits

**Responsible Agency:** US Army Corps of Engineers (USACE)

Permit: Clean Water Act, Section 404 Permit

**Authority:** 33 USC 1344; 33 CFR parts 320, 323, 325-328, and 330

#### **Contact Information:**

Peter D. Olmstead

Project Manager / Biologist US Army Corp of Engineers

Portland District, Regulatory Branch

La Grande Field Office

3502 SW Highway 30

La Grande Oregon, 97850-5628

(541) 962 0401

Peter.d.olmstead@usace.army.mil

**Description:** A Section 404 Permit will be required if dredge or fill occurs in waters of the United States. This permit will not be required because no impacts to waters of the United States will occur during construction or operation of the Project.

Relevant ASC Exhibit: Exhibit I

Responsible Agency: National Oceanic and Atmospheric Administration (NOAA) Fisheries

**Permit:** Endangered Species Act (ESA) Section 7 Incidental Take Statement for marine and anadromous fish.

**Authority:** 16 USC 1536, 1539; 50 CFR 402

#### **Contact Information:**

Will Stelle

Regional Administrator

National Oceanic and Atmospheric Administration, National Marine Fisheries Service

7600 Sand Point Way NE

Seattle, WA 98115 (206) 526-6150

### Will.stelle@noaa.gov

**Description:** Consultation under the ESA Section 7 as to marine and anadromous fish, if required. This permit will not be required as no waterways harboring marine or anadromous fish will be impacted during construction or operation of the Project.

Relevant ASC Exhibit: Exhibits P and Q

**Responsible Agency:** US Fish and Wildlife Service (USFWS)

**Permit: Endangered Species Act (**ESA) Section 7 Incidental Take Statement for terrestrial species and fresh water fish.

**Authority:** 16 USC 1536, 1539; 50 CFR 402

#### **Contact Information:**

Suzanne Anderson USFWS – La Grande Office 3502 Hwy 30, La Grande OR, 97850 (541) 962-8583

#### suzanne anderson@fws.gov

**Description:** Consultation under the ESA Section 7 as to terrestrial species and freshwater fish, if required. This permit will not be required because no ESA-listed or candidate terrestrial species or freshwater fish species will be impacted during construction or operation of the Project.

**Relevant ASC Exhibit:** Exhibits P and Q

**Responsible Agency:** US Fish and Wildlife Service (USFWS)

**Permit:** Programmatic Eagle Permit or other authorization

**Authority:** Bald and Golden Eagle Protection Act; 50 CFR Parts 13 and 22 Eagle Permits; Take Necessary to Protect Interests in Particular Localities; Final Rules FR 46836 Sept 11, 2009

#### **Contact Information: Suzanne Anderson**

Suzanne Anderson

USFWS – La Grande Office 3502 Hwy 30, La Grande OR, 97850

(541) 962-8583

suzanne anderson@fws.gov

**Description:** Consultation is ongoing to determine if any permits are necessary.

Relevant ASC Exhibit: Exhibits P and Q

## 3.0 Federal-Delegated Permits – OAR 345-021-0010(1)(e)(D)

Responsible Agency: Oregon Department of Environmental Quality (ODEQ)

Permit: National Pollutant Discharge Elimination System (NPDES) Permit

**Authority:** Clean Water Act, Section 402; ORS 468 and 468B; OAR Chapter 340, Divisions 14, 41, 45, 52, and 55

#### **Contact Information:**

**Jackie Ray** 

Oregon Department of Environmental Quality

700 SE Emigrant, #330

Pendleton, OR 97801

(541) 278-4605

Ray.jackie@deq.state.or.us

**Description:** The US Environmental Protection Agency has delegated authority to ODEQ to issue NPDES Storm Water Discharge permits for construction and operation activities. This permit is required for construction activity that would disturb more than 0.5 acres of land. The Applicant has prepared an NPDES 1200-C permit application for the Project; it is included as Attachment I-2 to Exhibit I.

Relevant Exhibit: Exhibit I, Exhibit J

**Responsible Agency:** Oregon Department of Environmental Quality (ODEQ)

**Permit:** Clean Water Act Section 401 Water Quality Certification

Authority: ORS 468 and 468B; OAR Chapter 340, Division 48,

33 USCA 1341, Section 401; OAR Chapter 340, Division 48

#### **Contact Information:**

Jackie Ray
Oregon Department of Environmental Quality
700 SE Emigrant, #330
Pendleton, OR 97801
(541) 278-4605

#### Ray.jackie@deq.state.or.us

**Description:** The EPA has delegated authority to conduct water quality certification pursuant to Section 401 of the Clean Water Act to the Oregon DEQ. Section 401 Water Quality Certification process would be triggered during the USACE Section 404 permitting process if the impacts of the Project to waters of the US would require the issuance of an Individual Section 404 permit. Because the Project is designed to avoid impacts to waters of the US that would require a Section 404 permit, Section 401 Certification would not be required.

Relevant Exhibit: Exhibit J

## 4.0 Tribal Permits – OAR 345-021-0010(1)(e)(A) and (B)

None.

## 5.0 State Permits – OAR 345-021-0010(1)(e)(A) and (B)

**Responsible Agency:** Oregon Department of Energy (ODOE); Energy Project Siting Council

(EFSC)

**Permit:** Site Certificate

Authority: Oregon Revised Statute (ORS) 469.300 et seq.; OAR Chapter 345

#### **Contact Information:**

Andrea Goodwin

**Energy Facility Analyst** 

**Oregon Department of Energy** 

625 Marion St. NE

Salem, OR 97301

(503) 302 8834

andrea.goodwin@odoe.state.or.us

**Description:** The Site Certificate is the subject of this application.

**Responsible Agency:** Oregon Department of Fish & Wildlife (ODFW)

**Permit:** Fish Passage Plan

**Authority:** ORS 509.580-910; OAR 635, Division 412

#### **Contact Information:**

Steve Cherry

District Wildlife Biologist54173 Highway 74

PO Box 363

Heppner, OR 97836

(541) 676 5230

#### steve.p.cherry@state.or.us

**Description:** This approval would be needed for the installation of culverts or bridges across waters that currently or historically harbored anadromous fish species, to ensure that the culvert is designed to allow for fish passage. This permit will not be required because construction and operation of the Project will not impact any streams in which anadromous fish currently or historically occur.

**Relevant Exhibits:** Exhibits I and P

**Responsible Agency:** Oregon Department of State Lands (ODSL)

Permit: Removal-Fill Permit

**Authority:** ORS 196.800-990 (Removal of Material; Filling); and OAR Chapter 141, Division 85 (Administrative Rules Governing the Issuance and Enforcement of Removal-Fill Authorizations Within Waters of Oregon Including Wetlands).

#### **Contact Information:**

Heidi Harman

Resource Coordinator

Oregon Department of State Lands

1645 NE Forbes Rd, Suite 112

Bend, OR 97701

(541) 388-6060

Heidi.m.hartman@state.or.us

**Description:** A removal-fill permit is required if 50 cubic yards or more of material is removed, filled or altered within a jurisdictional water of the State. This permit will not be required because no impacts to waters of Oregon will occur during construction or operation of the Project. Although it is not required for the Project, this permit would normally be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit J

**Responsible Agency:** Oregon Parks and Recreation Department (OPRD) – State Historic Preservation Office (SHPO)

**Permit:** Archaeological Excavation Permit

**Authority:** ORS 97.745 (Indian Graves and Protected Objects); ORS 358.920 (Archaeological Objects and Sites); ORS 390.010 (Outdoor Recreation); ORS 390.235 (Archaeological Sites and Historical Material); and OAR Chapter 736, Division 51 (Archaeological Permits).

#### **Contact Information:**

Dr. Dennis Griffin State Archaeologist Oregon Department of Parks and Recreation 725 Summer Street, NE, Suite C Salem, OR 97301 (503) 986-0674

#### dennis.griffin@state.or.us

**Description:** Ground-disturbing activity that may affect a known or unknown archaeological resource on public or private lands requires a permit issued by the Oregon Parks and Recreation Department. Because the Project has been designed to avoid all known archaeological resources, this permit would be needed only in the event that a previously unknown archaeological resource is discovered during construction, and is located such that it cannot be avoided. If there is an inadvertent discovery during construction, Wheatridge and the construction contractor will coordinate with SHPO regarding appropriate treatment and will determine at that time whether this permit would be necessary. This permit should not be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit S

**Responsible Agency:** Oregon Water Resources Department (OWRD)

Permit: Water Right Limited Use License

**Authority:** ORS Chapters 536 through 540 (Water Resources/Water Rights); and OAR Chapter 690 (Water Resources Department), Divisions 1 through 410.

#### **Contact Information:**

Tim Wallin
Water Rights Manager
Oregon Water Resources Department Division of Water Rights
725 Summer Street NE, Suite A
Salem, OR 97301
(503) 986-0801

#### timothy.wallin@state.or.us

**Description:** If water for construction is not available from existing permitted sources, Wheatridge could seek temporary authorization for water use. However, Wheatridge does not anticipate that a Limited Use License would be needed because water for construction will be obtained from municipal suppliers with sufficient existing water rights. Information regarding the municipal water providers that would supply water for Project construction is provided in Exhibit O. All of the municipalities from which water would be obtained have sufficient existing water rights as documented in Exhibit O; none would need to obtain additional permits, licenses or water rights in order to provide water for Project construction.

Relevant Exhibit: Exhibit O

**Responsible Agency:** Oregon Department of Transportation (ODOT)

**Permit:** Oversize Load Movement Permit/Load Registration

**Authority:** ORS 818.030, OAR 734 Division 82

#### **Contact Information:**

Christy Jordan

Over-Dimensional Permit Unit and Freight Mobility Manager

Oregon Department of Transportation Motor Carrier Transportation Division 550 Capitol Street NE Salem, OR 97301-2530

(503) 378-6192

#### Christy.A.Jordan@odot.state.or.us

**Description:** This permit will be required to transport loads that exceed standard size and/or weight limits on state and federal highways. Movement of construction cranes and other equipment and materials such as turbine blades, nacelles and substation equipment is likely to require this permit. This permit will be obtained by the construction contractor or designated transportation company(ies) prior to the movement of each oversize/overweight load and should not be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit U

Responsible Agency: ODOT

**Permit:** Permit to Occupy or Perform Operations Upon a State Highway

**Authority:** OAR Chapter 734, Division 55 (Pole Lines, Buried Cables, and Miscellaneous

Operations)

#### **Contact Information:**

Tina Juel

ODOT Utility and Miscellaneous Permit Specialist

Oregon Department of Transportation Office of Maintenance and Operations

800 Airport Road SE

Salem, OR 97301

(503) 986-3031

Tina.Juel@odot.state.or.us

**Description:** This permit would be required to install utilities within or across the right-of-way of a state highway. This permit will be required because of the crossing or OR-207 by the Intraconnection Line(s). This permit will be obtained by the construction contractor prior to stringing the Intraconnection Line(s) across the state highway and should not be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit U

Responsible Agency: ODOT

**Permit:** Access Management Permit

**Authority:** OAR 734 Division 51

#### **Contact Information:**

Marcus Berlin

Access Management Planner

Oregon Department of Transportation – Access Management Unit

4040 Fairview Industrial Drive SE, MS 1

Salem, OR 97301-1142

(503) 986-3914

#### marcus.a.berlin@odot.state.or.us

**Description:** A state access permit would be required for construction of a Project access road that would that intersect with a state highway, or if improvements to an existing public road would substantially alter an intersection with a state highway. The access permit would be issued by the local ODOT District Offices. Based on the current Project layout a state access permit will be required. This permit would be obtained by Wheatridge or its designated construction contractor prior to constructing or improving a state highway access; it should not be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit U

**Responsible Agency:** Oregon Department Consumer & Business Services, Building Codes Division

**Permit:** Building Permit for construction in Umatilla County

**Authority:** OAR 734 Division 51

#### **Contact Information:**

Michael Ward Inspector/Plans Examiner 20 S Bonanza Echo, OR 97826 (541) 922-3226

#### mward@hermiston.or.us

**Description:** Building permits are required prior to beginning construction of structures including turbine and substation foundations and the O&M buildings. Umatilla County does not have its own building department; building permits are issued by the Oregon State Building Codes Agency. A building permit will be obtained by the construction contractor prior to construction of each component for which a building permit would be required and should not be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit E

**Responsible Agency:** Oregon Department Consumer & Business Services, Building Codes Division

**Permit:** State Electrical Permit

**Authority:** OAR 919 Division 309

#### **Contact Information:**

**BCD** Pendleton Office

800 SE Emigrant Ave., Suite 360

Pendleton, OR 97801 Phone: 541-276-7814 **Description:** A state electrical permit is required prior to the installation of electric, phone or cable service to the O&M buildings or the Project substations. Electrical permits may be obtained in person at the BCD Pendleton office, or online through the state's e-permitting system (available at: <a href="http://www.oregon-epermitting.info/">http://www.oregon-epermitting.info/</a>). Electrical permits for facilities in Morrow County may also be obtained through the City of Boardman Building Department (see below under Local Permits). A state electrical permit will be obtained by the construction contractor prior to construction of each component for which electrical, phone or cable service would be required and should not be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit E

Responsible Agency: Oregon Department of Environmental Quality

**Permit:** Onsite septic system permits in Morrow or Umatilla counties

**Authority:** OAR 340 Division 71

#### **Contact Information:**

DEQ Pendleton Office 700 SE Emigrant, Suite 330 Pendleton, OR 97801

Phone: 541-276-4063

**Description:** An onsite septic system permit is required to provide sanitation at each of the Operation and Maintenance (O&M) buildings. This permit will be obtained by the construction contractor prior to construction of each O&M building, and should not be included in or governed by the Site Certificate.

Relevant Exhibit: Exhibit V

## 6.0 Local Permits – OAR 345-021-0010(1)(e)(A) and (B)

Wheatridge intends to satisfy the Energy Facility Siting Council's (EFSC) land use standard by seeking an EFSC determination of compliance with the land use standards under Oregon Revised Statutes (ORS) 469.504(1)(b). Wheatridge will provide information necessary to demonstrate compliance with the applicable substantive criteria.

Responsible Agency: Morrow County Planning

**Permit:** Conditional Use Permit and Zoning Permit

**Authority:** Morrow County Zoning Ordinance Section 3.010(D)

#### **Contact Information:**

Carla McLane
Planning Director
Morrow County – Planning Department
205 NE Third Street
Irrigon, OR 97844
(541) 922-4624

#### cmclane@co.morrow.or.us

**Description:** Construction of the Project in Morrow County would require both a Conditional Use Permit and a Zoning Permit. Under ORS 469.401(3), following issuance of the Site Certificate, the County, upon the applicant's submission of the proper application and fee, shall issue the permits addressed in the Site Certificate, subject only to the conditions set forth in the Site Certificate and without hearings or other proceedings. This permit should be included in and governed by the Site Certificate.

**Responsible Agency:** Morrow County Planning/ City of Boardman Building Department

Permit: Building Permit for construction of wind turbines in Morrow County

**Authority:** OAR 734 Division 51

#### **Contact Information:**

Brett Cook
Building Official
City of Boardman Building Department
200 City Center Circle
PO Box 229
Boardman, OR 97818

(541) 481-9252

#### brettc@cityofboardman.com

**Description:** Building permits are required prior to beginning construction of structures including turbine and substation foundations and the O&M buildings. Morrow County does not have its own building department, so relies on the City of Boardman Building Department for review and approval of all building permits in the county. A building permit will be obtained by the construction contractor prior to construction of each component for which a building permit would be required; this permit should not be included in or governed by the Site Certificate.

Responsible Agency: Morrow County Public Works

**Permit:** Utility Crossing Permit

Authority: ORS 374.305

#### **Contact Information:**

**Bob Nairns** 

**Assistant Director** 

Morrow County Public Works

PO Box 428

Lexington, OR 97839

(541) 989-8584

bnairns@co.morrow.or.us

**Description:** A Utility Crossing permit is required any time a utility is constructed within or across a County road right-of-way, and will be required for locations where Project electrical collection lines or the Intraconnection Lines would cross County roads. This permit will be obtained by the construction contractor prior to construction of each crossing of a county road by electrical collector lines or the Intraconnection Lines. This permit should not be included in or governed by the Site Certificate.

Responsible Agency: Morrow County Public Works

Permit: Access Approach Site Permit

**Authority:** ORS 374.305, Morrow County Zoning Ordinance Section 4.010(B)

#### **Contact Information:**

Bob Nairns Assistant Director Morrow County Public Works PO Box 428 Lexington, OR 97839 (541) 989-8584

#### bnairns@co.morrow.or.us

**Description:** An Approach Site Approval will be required for each location where a Project access roads intersect with county roads, or if necessary upgrades to existing access roads affect a county road. This permit will be obtained by the construction contractor prior to construction of each access road intersection with a county road. This permit should not be included in or governed by the Site Certificate.

Responsible Agency: Morrow County Public Works

**Permit:** Construction Permit to Build on Right-of-Way

**Authority:** Morrow County Zoning Ordinance Section 4.010(B)

#### **Contact Information:**

**Bob Nairns** 

**Assistant Director** 

Morrow County Public Works

PO Box 428

Lexington, OR 97839

(541) 989-8584

#### bnairns@co.morrow.or.us

**Description:** A construction permit is required to make improvements to access roads that intersect with county road rights-of-way or to make improvements to existing public roads. This permit will be obtained by the construction contractor prior to construction of each access road intersection with a county road. This permit should not be included in or governed by the Site Certificate.

Responsible Agency: Morrow County Public Works

**Permit:** Oversize Load Movement Permit

**Authority:** Morrow County Zoning Ordinance Section 4.010(B)

#### **Contact Information:**

**Bob Nairns** 

**Assistant Director** 

Morrow County Public Works

PO Box 428

Lexington, OR 97839

(541) 989-8584

#### bnairns@co.morrow.or.us

**Description:** This permit will be required to transport loads that exceed standard size and/or weight limits on county roads. Movement of construction cranes and other equipment and materials such as turbine blades, nacelles and substation equipment is likely to require this permit. This permit will be obtained by the construction contractor or designated transportation company(ies) prior to the movement of each oversize/overweight load and should not be included in or governed by the Site Certificate.

Responsible Agency: Umatilla County Department of Land Use Planning

**Permit:** Conditional Use Permit and Zoning Permits

**Authority:** Umatilla County

#### **Contact Information:**

Tamra Mabbott
Planning Director
Umatilla County Department of Land Use Planning
205 NE Third Street
Irrigon, OR 97844
(541) 278-6252

#### tamra@co.umatilla.or.us

**Description:** Construction of the Project in Umatilla County would require both a Conditional Use Permit and a Zoning Permit. Under ORS 469.401(3), following issuance of the Site Certificate, the County, upon the applicant's submission of the proper application and fee, shall issue the permits addressed in the Site Certificate, subject only to the conditions set forth in the Site Certificate and without hearings or other proceedings. This permit should be included in and governed by the Site Certificate.

Responsible Agency: Umatilla County Public Works

Permit: Installation of Utilities on County and Public Roads Permit

**Authority:** ORS 374.305 to 374.325

#### **Contact Information:**

Tom Fellows Public Works Director Umatilla County Road Department 3920 Westgate Street

Pendleton, OR 97801

(541) 278-5424

#### tfellows@umatillacounty.net

**Description:** A Utility Crossing permit is required any time a utility is constructed within or across a county road right-of-way, and will be required for locations where Project electrical collection lines or the Intraconnection Line(s) would cross County roads. This permit will be obtained by the construction contractor prior to construction of each crossing of county roads by electrical collector lines or the Intraconnection Line(s). This permit should not be included in or governed by the Site Certificate.

Responsible Agency: Umatilla County Public Works

Permit: Construction of Road Approaches and Private Road Crossings Permit (Access Approach

Permit)

**Authority:** ORS 375.305 to 375.325

#### **Contact Information:**

Tom Fellows
Public Works Director
Umatilla County Road Department
3920 Westgate Street
Pendleton, OR 97801
(541) 278-5424

#### tfellows@umatillacounty.net

**Description:** An access approach permit will be required for each location where a Project access road intersects with a county road, or if necessary upgrades to existing access roads affect a county road. This permit will be obtained by the construction contractor prior to construction of each access road intersection with a county road. This permit should not be included in or governed by the Site Certificate.

### 7.0 Third Party Permits

Wheatridge may rely on its construction contractors to obtain some required permits, as discussed above. Additional permits that may be obtained either by the construction contractor or by a third party are those permits related to the use of concrete batch plants.

In order to identify all potentially required permits, Wheatridge assumes that the construction contractor would utilize on-site temporary concrete batch plants rather than existing nearby concrete suppliers; however, the construction contractor may utilize nearby suppliers and not use on-site batch plants. In the event that concrete batch plants are used, such plants may be operated by either the contractor or a third party subcontractor. The contractor would be required to obtain all necessary permits.

Wheatridge understands that mobile concrete batch plant sites may be covered by the Project's National Pollutant Discharge Elimination System (NPDES) 1200-C permit, and that an NPDES 1200-A permit would be required for each mobile batch plant if the plants were to discharge stormwater from a point source to surface water or to a conveyance system that discharges to surface water. Additionally, each mobile batch plant would carry its own associated Air Contaminant Discharge Permit.

**Responsible Agency:** Oregon Department of Environmental Quality (ODEQ)

**Permit:** National Pollutant Discharge Elimination System (NPDES) Permit

Authority: OAR Chapter 340, Division 45

#### **Contact Information:**

Jackie Ray

Oregon Department of Environmental Quality

700 SE Emigrant, #330 Pendleton, OR 97801 (541) 278-4605

#### Ray.jackie@deq.state.or.us

**Description:** Operating a mobile concrete batch plant requires an NPDES permit for each location where it is set up. If mobile concrete batch plants are used for construction of the Project, they will be located within the construction staging yards and will be covered by the overall Project's NPDES permit instead of having an independent permit. The Applicant has prepared an NPDES 1200-C permit application for the Facility included as Attachment I-2 to Exhibit I.

Relevant Exhibit: Exhibit V

**Responsible Agency:** Oregon Department of Environmental Quality (ODEQ)

**Permit:** Air Contaminant Discharge Permit (ACDP)

Authority: OAR Chapter 340, Division 216

#### **Contact Information:**

Jackie Ray

Oregon Department of Environmental Quality

700 SE Emigrant, #330 Pendleton, OR 97801

(541) 278-4605

#### Ray.jackie@deq.state.or.us

**Description:** Each mobile concrete batch plant used will require an associated Air Contaminant Discharge Permit. Depending on the anticipated volume of concrete to be made by each plant, either a Basic or General ACDP would be required. This permit is associated with the batch plant and moves with it rather than being associated with a particular location. The contractor selected to supply and operate batch plants will obtain and maintain the necessary permit prior to construction. This permit should not be included in or governed by the Site Certificate.

Responsible Agency: Morrow County Planning Department

**Permit:** Conditional Use Permit (CUP) for use of temporary concrete batch plant

**Authority:** Morrow County Zoning Sections 3.010, 3.070

#### **Contact Information:**

Carla McLane
Planning Director
Morrow County – Planning Department
205 NE Third Street
Irrigon, OR 97844
(541) 922-4624

#### cmclane@co.morrow.or.us

**Description:** A Conditional Use Permit is required in order to site and use a mobile concrete batch plant in Morrow County. If the use of mobile concrete batch plants is determined to be necessary, a Conditional Use Permit would be required to establish and use temporary concrete batch plants to support construction of the Project. The construction contractor selected to supply and operate mobile concreate batch plants during Project construction would obtain and maintain any necessary permits required by Morrow County. This permit should not be included in or governed by the Site Certificate.

Responsible Agency: Umatilla County Department of Land Use Planning

**Permit:** Conditional Use Permit (CUP) for use of temporary concrete batch plant

**Authority:** Umatilla County Development Code Section 152.060

#### **Contact Information:**

Tamra Mabbott
Planning Director
Umatilla County Department of Land Use Planning
205 NE Third Street
Irrigon, OR 97844
(541) 278-6252

tamra@co.umatilla.or.us

**Description:** A Conditional Use Permit is required in order to site and use a mobile concrete batch plant in Umatilla County. If the use of mobile concrete batch plants is determined to be necessary, a Conditional Use Permit would be required to establish and use temporary concrete batch plants to support construction of the Project. The construction contractor selected to supply and operate mobile concreate batch plants during Project construction would obtain and maintain any necessary permits required by Umatilla County. This permit should not be included in and governed by the Site Certificate.

### 8.0 Third-Party Entities

The entities and organization listed below do not require a permit as required by (OAR) 345-021-0010(1)(e). These entities are included in this exhibit as they are referenced in multiple exhibits in the ASC. These listed entities are examples, provided in this exhibit at the request of ODOE, and should not be considered a definitive list of entities with whom Wheatridge may choose to utilize at the time of construction of the Project.

**Responsible Agency:** Umatilla Electric Cooperative (UEC) or UEC in partnership with Columbia Basin Electric Cooperative (CB)

**Permit:** Conditional Use Permit(s) from Morrow and/or Umatilla County authorizing construction of Gen-tie line(s)

**Authority:** Morrow County Zoning Sections 3.010, 3.070; Umatilla County Development Code Sections 152.059, 152.616

#### **Contact Information:**

Steve Eldrige, General Manager & CEO Umatilla Electric Cooperative 745 West Elm Avenue Post Office Box 1148 Hermiston, Oregon 97838 **Description:** Wheatridge anticipates that the Project will connect to the Bonneville Power Administration (BPA) transmission system via overhead 230kV transmission line(s) (Gen-tie Line[s]) to be owned by either Umatilla Electric Cooperative (UEC) or UEC in partnership with the Columbia Basin Electric Cooperative (CB), but operated by BPA. The Gen-tie Line(s) will be permitted by UEC and/or CB separately from the Wheatridge Project. It is understood that the Gen-tie line(s) will be permitted through county conditional use permits, and that construction of the line(s) will require additional construction permits and approvals, independent of the Wheatridge Project.

Wheatridge has negotiated an agreement with UEC (Attachment E-2) for transmission capacity on the Gen-Tie line(s) sufficient to convey the cumulative power generation of the Project.

Relevant Exhibit: Exhibit B

Responsible Agency: Hermiston Department of Public Works

Permit: None

**Authority:** Water Right Certificate Number: G6831

#### **Contact Information:**

Roy Bicknell

Water Superintendent

City of Hermiston Department of Public Works

180 NE 2nd Ave.

Hermiston, OR 97838

541-567-5521

#### water@hermiston.or.us

**Description:** Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates. Attachment 2 in Exhibit 0 is a record of correspondence with the Water Superintendent at the City of Hermiston confirming they will be able to provide service to the Project.

Relevant Exhibit: Exhibit O

Responsible Agency: Stanfield Department of Public Works

**Permit:** None

**Authority:** Water Right Certificate Numbers: 12224 and 66058

#### **Contact Information:**

**Scott Morris** 

Public Works Director City of Stanfield City Hall 160 S. Main St. Stanfield, OR 97875 541-449-3831

#### smorris@citvofstanfield.com

**Description:** Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates. Attachment 3 in Exhibit O is a record of correspondence with the Public Works Director at the City of Stanfield confirming they will be able to provide service to the Project.

Relevant Exhibit: Exhibit O

Responsible Agency: Boardman Department of Public Works

Permit: None

Authority: Water Right Certificate Numbers: 40336 and 2624

#### **Contact Information:**

**Dave Winters** 

Public Works Director 200 City Center Circle

PO Box 229

Boardman, OR 97818

541-481-9252

#### publicworks@cityofboardman.com

**Description:** Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates. Attachment 1 to Exhibit O is a record of correspondence with the Director of the Public Works Department at the City of Boardman confirming they will be able to provide service to the Project.

**Relevant Exhibit:** Exhibit O

**Responsible Agency:** Port of Morrow

Permit: None

**Authority:** Water Right Certificate Number: G7158, G8263, G5332, G10975, G12729, G13283, G10312, G4626, G10312, G4626, G12370

#### **Contact Information:**

Gary Neal General Manager 2 Marine Drive PO Box 200 Boardman, OR 97818

541-481-2679

#### garyn@portofmorrow.com

**Description:** Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates. Attachment 4 in Exhibit O is a record of correspondence with the General Manager at the Port of Morrow confirming they will be able to provide service to the Project.

Relevant Exhibit: Exhibit O

Responsible Agency: W.I. Construction Inc.

Permit: None

**Authority:** 

#### **Contact Information:**

Jack Ingram

President

W.I. Construction, Inc.

18122 Hulden Rd.

Arlington, OR 97821

541-454-2244

**Description:** Provider of aggregate and concrete for project construction. There is no permit associated with this entity as they are licensed to supply aggregate and any permits associated with on-site concrete batch plants would be acquired and maintained by the construction contractor through either Morrow or Umatilla County. Attachment 1 in Exhibit G is a record of correspondence with the owner of W.I. Construction, Inc. confirming that they have the means and equipment to supply all aggregate and concrete needs for the Project.

Relevant Exhibit: Exhibits G and U

## 9.0 Monitoring Program – OAR 345-021-0010(1)(e)(G)

Wheatridge's monitoring program for compliance with permit conditions is discussed in the specific exhibits to which the permits pertain.

## 10.0 Submittal Requirements and Approval Standards

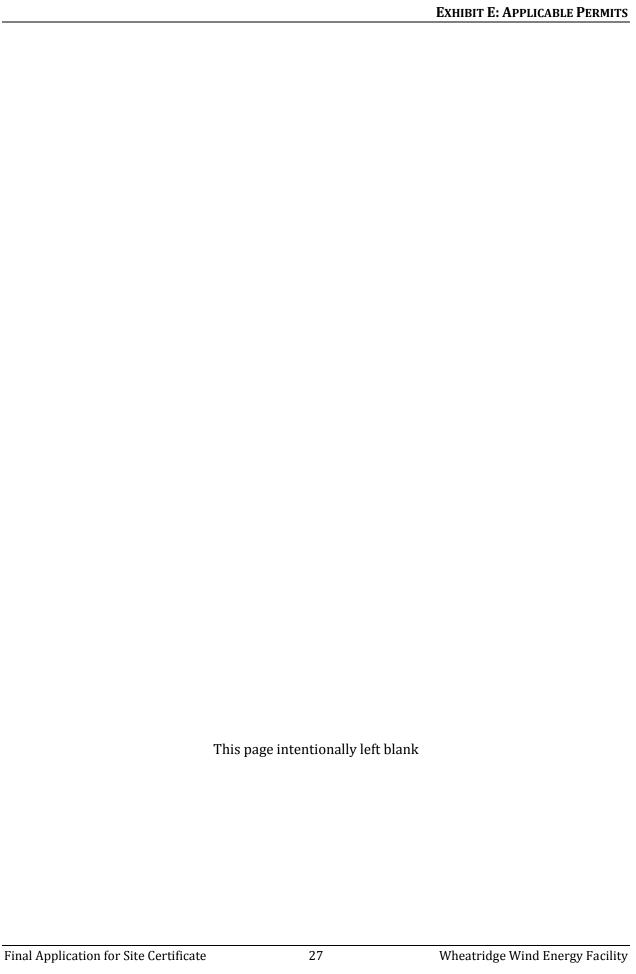
#### **10.1 Submittal Requirements**

Table E-1. Submittal Requirements Matrix		
Requirement	Location	
OAR 345-021-0010(1)(e) Information about permits related to the siting of the facility, including:		
(A) Identification of all federal, state and local government permits related to the siting of the proposed facility, a legal citation of the statute, rule or ordinance governing each permit, and the name, mailing address, email address and telephone number of the agency or office responsible for each permit.	Sections 2 through 5	
(B) A description of each permit, the reasons the permit is needed for construction or operation of the facility and the applicant's analysis of whether the permit should or should not be included in and governed by the site certificate.	Sections 2 through 5 and 7	
(C) For any state or local government agency permits, licenses or certificates that are proposed to be included in and governed by the site certificate, evidence to support findings by the Council that construction and operation of the proposed facility will comply with the statutes, rules and standards applicable to the permit. The applicant may show this evidence:		
(i) In Exhibit J for permits related to wetlands.	Exhibit J	
(ii) In Exhibit O for permits related to water rights	Exhibit O	
(D) For federally-delegated permit applications, evidence that the responsible agency has received a permit application and the estimated date when the responsible agency will complete its review and issue a permit decision.	Section 6; permit applications and agency permit review completion dates pending	
(E) If the applicant relies on a state or local government permit or approval issued to a third party, identification of any such third party permit and for each:	Section 3	

Table E-1. Submittal Requirements Matrix		
Requirement	Location	
(i) Evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit.		
(ii) Evidence that the third party has, or has a reasonable likelihood of obtaining, the necessary permit.		
(iii) An assessment of the impact of the proposed facility on any permits that a third party has obtained and on which the applicant relies to comply with any applicable Council standard.		
(F) If the applicant relies on a federally-delegated permit issued to a third party, identification of any such third-party permit and for each:	Section 7	
(i) Evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit.	N/A	
(ii) Evidence that the responsible agency has received a permit application.	N/A	
(iii) The estimated date when the responsible agency will complete its review and issue a permit decision.	N/A	
(G) The applicant's proposed monitoring program, if any, for compliance with permit conditions.	Section 8	
Project Order Comments	Location	

### 10.2 Approval Standard

OAR 345 Division 22 does not provide an approval standard specific to Exhibit E; however, the information contained herein supports demonstration of compliance with the Organizational Expertise approval standard (OAR 345-022-0010), addressed in Exhibit D.



# **Attachment E-1:**

# Oregon DEQ Acceptance of NPDES 1200-C/ESCP Permit Application



#### Department of Environmental Quality

Eastern Region Bend Office 475 NE Bellevue Drive, Suite 110 Bend, OR 97701-7415 (541) 388-6146 Fax (541) 388-8283 TTY 711

March 11, 2015

Andrea Goodwin, JD Energy Facility Siting Analyst Oregon Department of Energy 625 Marion St. NE Salem, OR 97301

Re:

Confirmation of Permit Application for Wheatridge Wind Energy, LLC

1200-C Construction Stormwater Permit

Morrow and Umatilla County

Dear Ms. Goodwin:

On December 8<sup>th</sup>, 2014, the Department of Environmental Quality (DEQ) received a National Pollutant Discharge Elimination System (NPDES) 1200-C permit application for stormwater discharge from Wheatridge Wind Energy Facility proposed construction. The application was submitted to Jackie Ray, Eastern Region Water Quality Permit Coordinator, in DEQ's Pendleton office. Payment for the permit application was processed by Ms. Ray on December 17<sup>th</sup>, 2014.

Now that payment has been received, the permit application is complete with the exception of a site certification from the Oregon Department of Energy (ODOE) and submittal of a final Erosion and Sediment Control Plan (ESCP). The permit will be assigned once a final ESCP meets the permit requirements and pending the determination by the Energy Facility Siting Council Final Order.

I have reviewed the submitted documents and I expect that DEQ will be able to issue the NPDES 1200-C construction stormwater permit for Wheatridge within 30 days of receiving the site certificate from ODOE. The ESPC submitted is very thorough; however, DEQ anticipates at the close of the Siting process, some additional information will be needed.

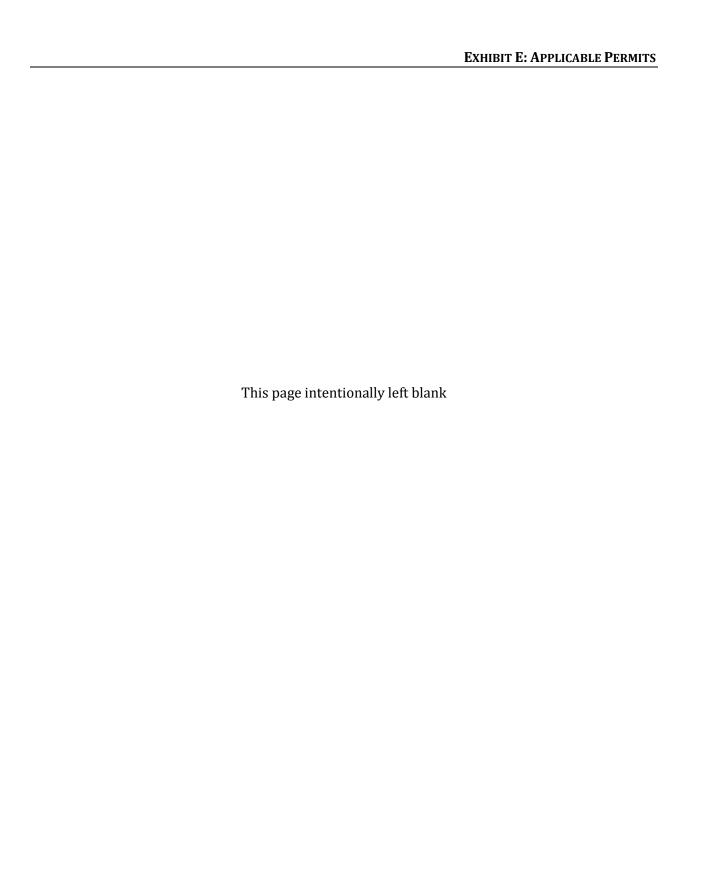
Should you have any questions about the content of this letter, please contact me at 541-633-2033 or <a href="mailto:ratliff.krista@deq.state.or.us">ratliff.krista@deq.state.or.us</a>.

Sincerely,

Krista Ratliff

Natural Resource Specialist, Stormwater

DEQ - Eastern Region



# **Attachment E-2:**

Letter from Steven Eldrige at Umatilla Electric Cooperative Regarding Future Interconnection of Wheatridge to UEC Transmission Lines



April 14, 2015

Andrew O'Connell, President Wheatridge Wind Energy, LLC 245 West Main Street, Suite 200 Post Office Box 133 Ione, Oregon 97843

Dear Mr. O'Connell:

This letter is intended to express Umatilla Electric's (UEC) understanding of the proposed Wheatridge Wind Energy Project. The proposed project includes plans for the construction of a wind generation facility with a nominal generating capacity of 500MW located in portions of Morrow and Umatilla Counties in Oregon. Project construction is estimated to begin in 2016 and extend through 2020, pending a Site Certification being issued from the Oregon Energy Facility Siting Council.

UEC and Wheatridge Wind Energy, LLC (Wheatridge) have engaged in discussions concerning multiple definitive agreements which if ultimately developed, then UEC will design, construct and own a 230kV transmission line to connect the proposed wind project to Bonneville Power Administration's (BPA) transmission network. The two parties have executed Letters of Intent (LOIs) addressing UEC's design, construction and ownership of a proposed 230kV transmission line to be either constructed in Umatilla County to connect Wheatridge's 500MW wind project to BPA's proposed Stanfield 500kV substation or to BPA's proposed Longhorn 500kV substation in Morrow County.

The transmission routes to either BPA's Stanfield or Longhorn substation would be permitted at the county level through either Umatilla or Morrow Counties since the respective routes will be constructed entirely in the same county. UEC and Wheatridge will negotiate an Operating and Maintenance Agreement as contemplated in the various LOIs for any transmission facility constructed. UEC will provide for adequate transmission capacity to be made available for Wheatridge to transmit all power generated from their project to the BPA substation, either Stanfield or Longhorn, into which the UEC transmission line will connect.

UEC looks forward to a successful Wheatridge project, the development of the definitive agreements and the delivery of additional renewable energy in Oregon.

Sincerely,

M. Steven Eldrige

General Manager & CEO

teven Eldrige

Phone: (541) 567-6414 Fax: (541) 567-8142 Toll Free: 800-452-2273

# **Exhibit F**

# **Property Owners**

# **Prepared for**



# Wheatridge Wind Energy, LLC

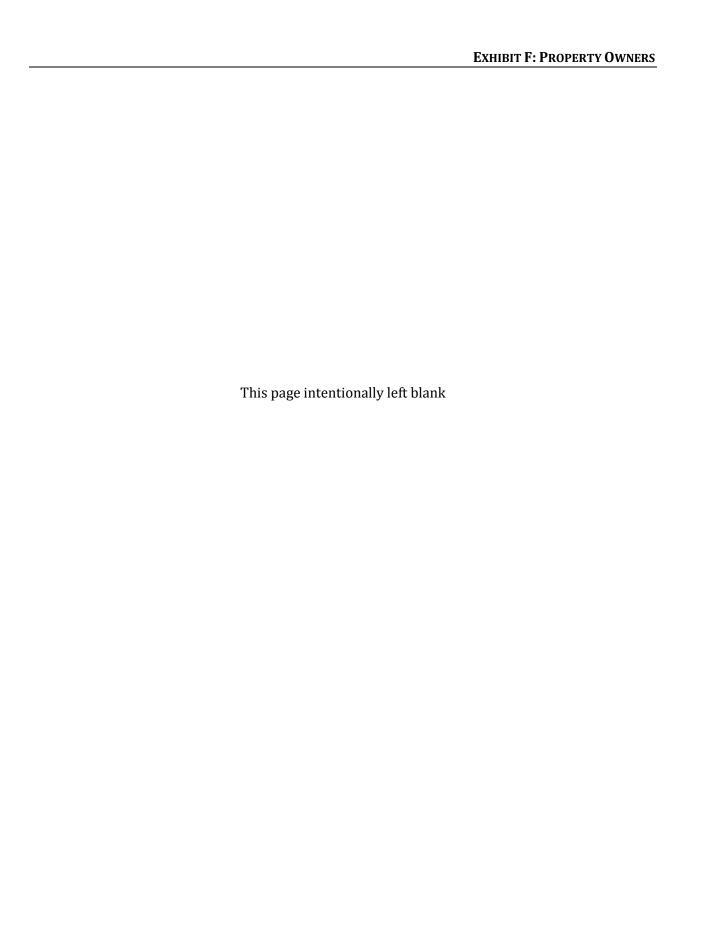
Wheatridge Wind Energy Facility

July 2015

Prepared by



Tetra Tech, Inc.



### **Table of Contents**

1.0	Introduction	. 1
2.0	Notification Area	. 1
3.0	Property Owners to Be Notified	. 1
4.0	Submittal Requirements and Approval Standards	. 2
4.1	Submittal Requirements	. 2
4.2	Approval Standard	. 2
	List of Tables	
Table	F-1. Submittal Requirements Matrix	. 2

## **List of Figures**

Figure F-1. Taxlot Parcel ID Index Map

Figure F-2. Taxlot Parcel ID – Details Map Set

### **Attachments**

Attachment F-1. Leased Parcel Landowners and Landowners Within 500 Feet of Leased Parcels

Attachment F-2. CD containing Electronic Format Mailing Labels: Morrow and Umatilla County Landowners Within 500 Feet of Leased Parcels

**Terms and Definitions** 

Construction Yard The temporary area for construction activities and Project

component storage prior to installation

GE 1.7-103 Layout Project turbine layout comprised of 292 GE 1.7MW turbines with

80m hub heights and 103m rotor diameters

GE 2.5-120 Layout Project turbine layout comprised of 200 GE 2.5MW turbines with

85m hub heights and 120m rotor diameters

Intraconnection Corridor The intraconnection transmission line corridor connecting

Wheatridge East with Wheatridge West

Intraconnection Line(s) One or two overhead electrical 230 kV lines connecting the Project

Substations in Wheatridge East and Wheatridge West.

O&M Buildings Permanent operations and maintenance buildings, including parking

Project Wheatridge Wind Energy Facility

Site Access Road Private road to be constructed or improved for the purpose of

accessing turbines and associated Project facilities

Site Boundary The boundary within which all Project facilities will be constructed,

also known as the micrositing corridor

Substation A facility in which electric power from the turbines is aggregated,

stepped up in voltage, and connected to the Intraconnection Line(s)

or the Gen-tie Line(s)

Turbine A collective term for the foundation, tower, nacelle, blades and rotor

that comprise a wind turbine generator in the Project

Wheatridge Wind Energy, LLC

Wheatridge East The eastern group of turbines

Wheatridge West The western group of turbines

# **Acronyms and Abbreviations**

kV kilovolts

MW megawatts

OAR Oregon Administrative Rules



This page intentionally left blank

#### 1.0 Introduction

Wheatridge Wind Energy, LLC (Wheatridge), proposes to construct the Wheatridge Wind Energy Facility (Project), a wind generation facility with a maximum nominal generating capacity of 500 megawatts (MW) in Morrow and Umatilla counties, Oregon (see Figures C-1 and C-2). The Project is comprised of up to 292 turbines divided into two groups: a western group of turbines (Wheatridge West) and an eastern group of turbines (Wheatridge East). Wheatridge West and Wheatridge East are electrically connected by an 'Intraconnection Corridor' containing up to two parallel overhead 230-kilovolt (kV) transmission lines (Intraconnection Lines), each no longer than 35 miles in length. Other Project components include access roads (Site Access Roads), an electrical collection and control system, the Project's substations (Substations), operations and maintenance buildings (O&M Buildings), and temporary construction yards (Construction Yards). These facilities are all described in greater detail in Exhibit B.

Wheatridge West is located entirely within Morrow County, approximately 5 miles northeast of Lexington, and approximately 7 miles northwest of Heppner. Wheatridge West is bisected by Oregon Highway 207 (OR-207). Wheatridge East is located approximately 16 miles northeast of Heppner and encompasses land in both Morrow and Umatilla counties. The Intraconnection Corridor is located entirely within Morrow County and adjoins to the southeastern portion of Wheatridge West and the southern portion of Wheatridge East.

#### 2.0 Notification Area

Oregon Administrative Rule (OAR) 345-021-0010(1)(f)(C) requires notice to be provided to the owners of all properties located within 500 feet of the parcels leased for the Project (participating landowner parcels).

### 3.0 Property Owners to Be Notified

Attachment F-1 provides a full list of names and addresses of all property owners within 500 feet of the Project's leased parcels, and Attachment F-2 is a CD containing this list in electronic format for the preparation of mailing labels. Figure F-1 shows the relationship of the Site Boundary to the leased parcels, and Figure F-2 is a detail map set identifying the leased parcels and those adjacent properties for which the owners would receive notice. The property owners' names and addresses and parcel numbers are all derived from updated taxrolls obtained from both Morrow and Umatilla counties in December 2014.

# 4.0 Submittal Requirements and Approval Standards

## 4.1 Submittal Requirements

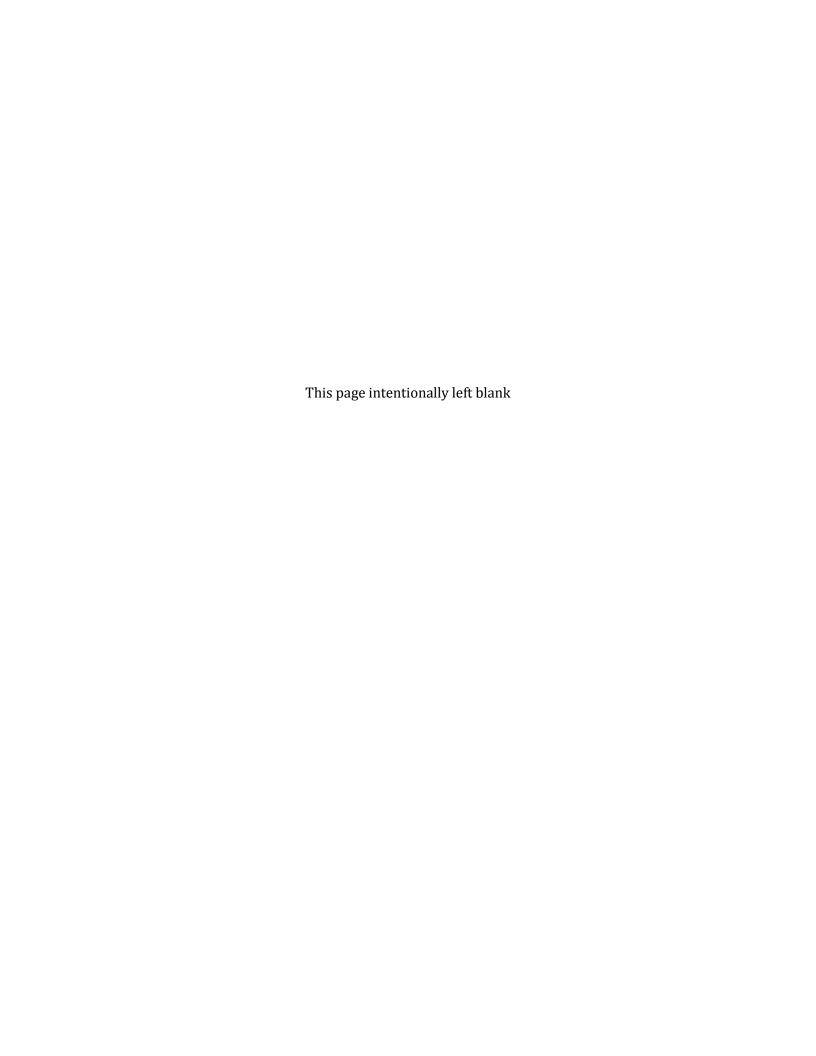
Table F-1. Submittal Requirements Matrix		
Requirement	Location	
OAR 345-021-0010(1)(f) A list of the names and mailing addresses of all owners of record, as shown on the most recent property tax assessment roll, of property located within or adjacent to the site boundary as defined in OAR 345-001-0010. The applicant shall submit an updated list of property owners as requested by the Department before the Department issues notice of any public hearing on the application for a site certificate as described in OAR 345-015-0220. In addition to incorporating the list in the application for a site certificate, the applicant shall submit the list to the Department in an electronic format approved by the Department. Property adjacent to the site boundary means property that is:	Attachment F-1 and F-2 Figures F-1 and F-2	
OAR 345-021-0010(1)(f)(A) Within 100 feet of the site boundary where the site, corridor or micrositing corridor is within an urban growth boundary.	NA	
OAR 345-021-0010(1)(f)(B) Within 250 feet of the site boundary where the site, corridor or micrositing corridor is outside an urban growth boundary and not within a farm or forest zone.	NA	
OAR 345-021-0010(1)(f)(C) Within 500 feet of the site boundary where the site, corridor or micrositing corridor is within a farm or forest zone.	Attachment F-1 and F-2 Figures F-1 and F-2	
Project Order Comments	Location	
None	N/A	

### 4.2 Approval Standard

OAR 345 Division 22 does not provide an approval standard specific to Exhibit F.

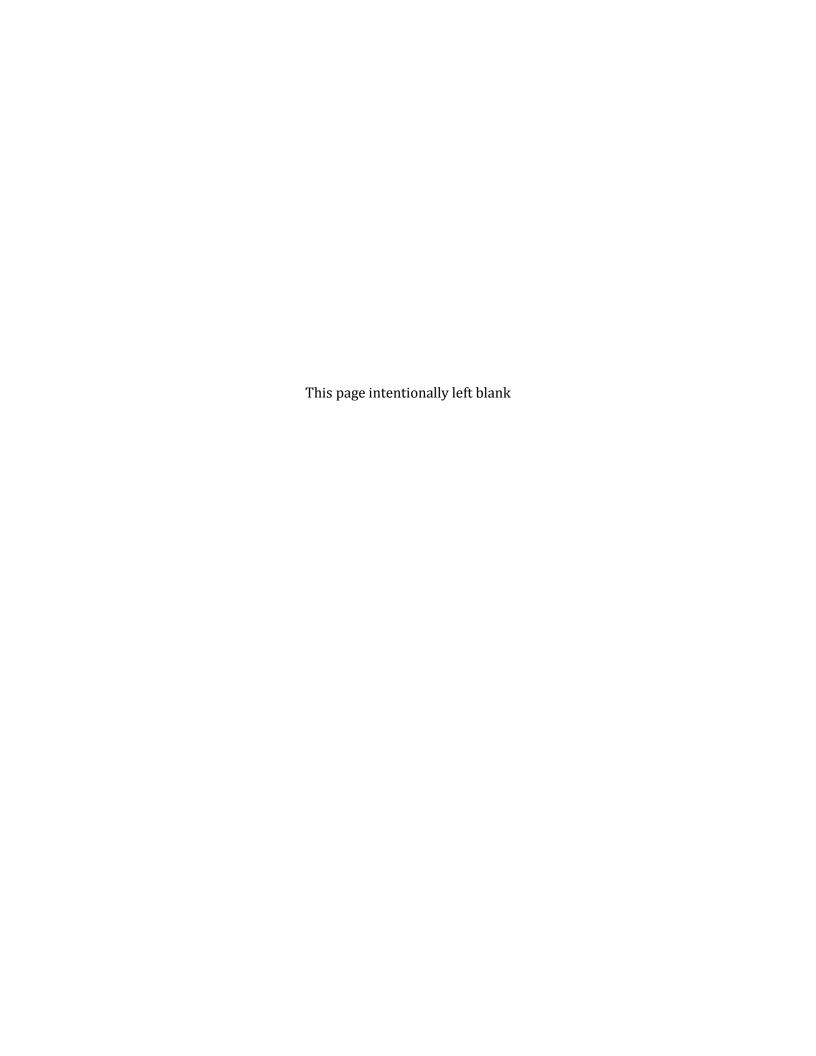
# **Attachment F-1:**

Leased Parcel Landowners and Landowners Within 500 Feet of Leased Parcels

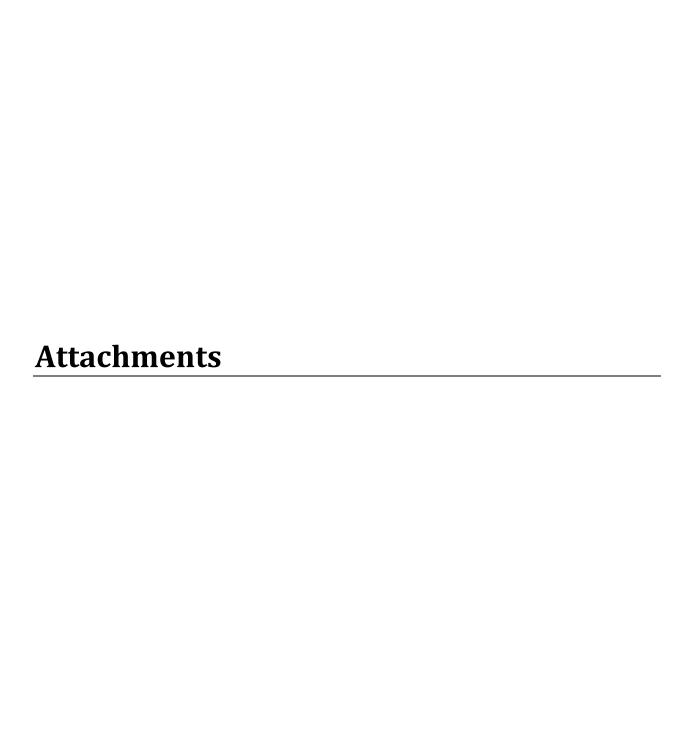


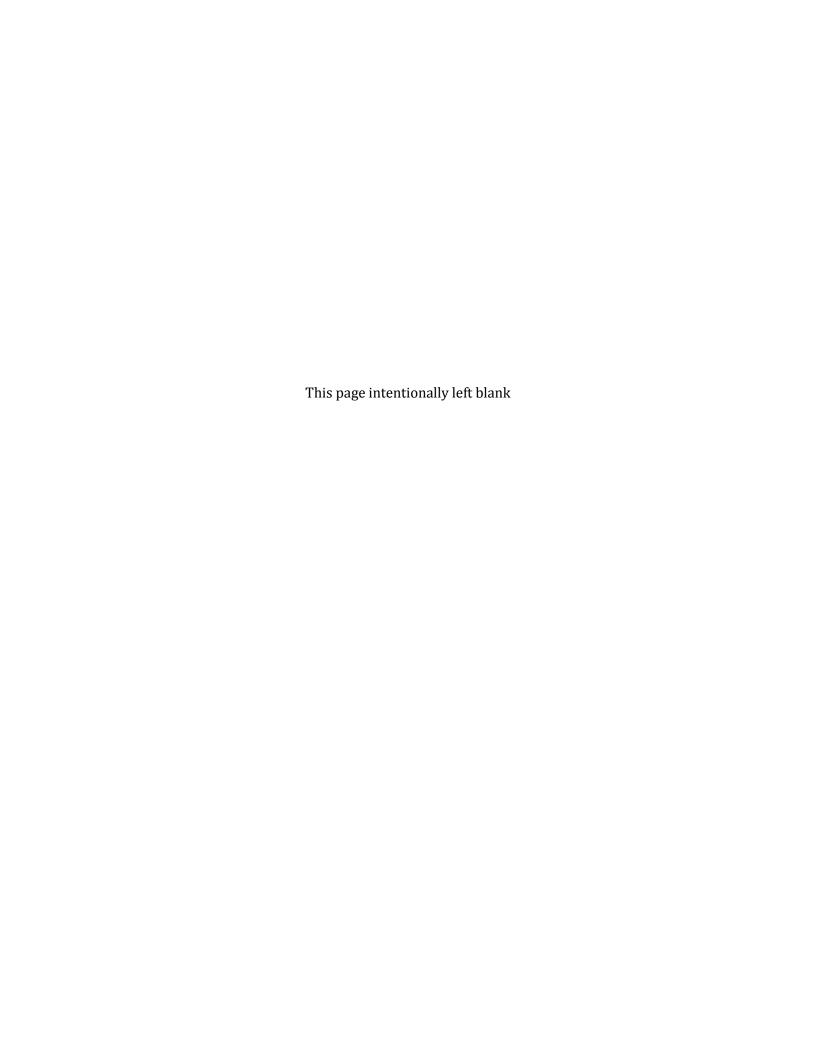
# **Attachment F-2:**

CD containing Electronic Format Mailing Labels: Morrow and Umatilla County Landowners Within 500 Feet of Leased Parcels (Digital)



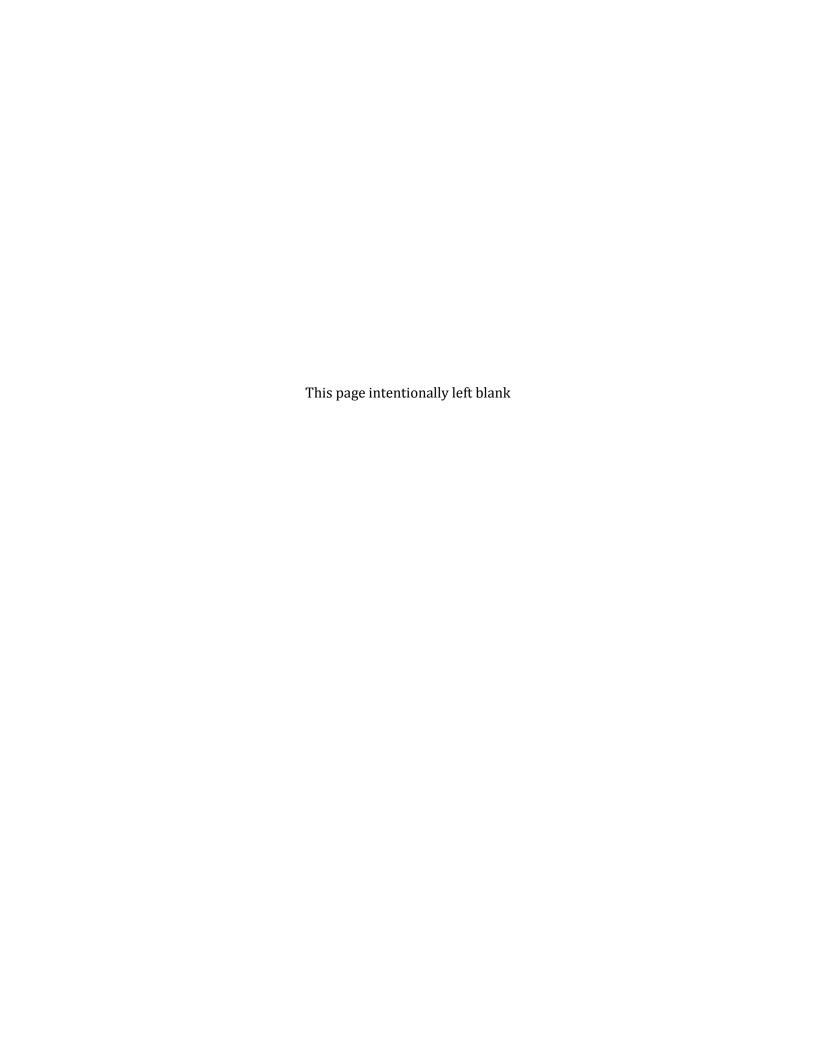






# **Attachment F-1:**

Leased Parcel Landowners and Landowners Within 500 Feet of Leased Parcels



MapTaxLot	County	Name	Organization	Land Owner Address	City	State	Zip
01n25 00100	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00100	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00100	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00100	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00200	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00300	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00301	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00302	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00400	Morrow		Nature Conservancy, The	821 SE 14TH AVE PORTLAND, OR 97214	PORTLAND	OR	97214
01n25 00400	Morrow		Nature Conservancy, The	821 SE 14TH AVE PORTLAND, OR 97214	PORTLAND	OR	97214
01n25 00500	Morrow	Marquardt, Betty Lou		PO BOX 582 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 00501	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00502	Morrow		Nature Conservancy, The	821 SE 14TH AVE PORTLAND, OR 97214	PORTLAND	OR	97214
01n25 00502	Morrow		Nature Conservancy, The	821 SE 14TH AVE PORTLAND, OR 97214	PORTLAND	OR	97214
01n25 00503	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00600	Morrow	Morrow County		PO BOX 788 HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 00700	Morrow		Eugene A Doherty 2/3, Thomas & Darlene Doherty Trust 1/3	PO BOX 913 HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 01400	Morrow		Majo Marquardt Hughes Trust	67554 JUNIPER CANYON RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01400	Morrow		Majo Marquardt Hughes Trust	67554 JUNIPER CANYON RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01400	Morrow		Majo Marquardt Hughes Trust	67554 JUNIPER CANYON RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01401	Morrow	Randy Hughes		67554 JUNIPER CANYON RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01500	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 01500	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n25 01600	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01600	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01700	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01700	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01800	Morrow		Majo Marquardt Hughes Trust	67554 JUNIPER CANYON RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01900	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 01900	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 02000	Morrow	Wilbur Berry, Cherie Evans, Margaret Evans		2264 GREEN ST APT 4, SAN FRANCISCO, CA 94123-4767	SAN FRANCISCO	CA	94213-4767
01n25 02600	Morrow		Majo Marquardt Hughes Trust	67554 JUNIPER CANYON RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 02803	Morrow	Lindsay, Lawrence D &		PO BOX 307 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 02803	Morrow	Lawrence D. & Corrie Ann Lindsay		PO BOX 307 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 02803	Morrow	Lawrence D. & Corrie Ann Lindsay		PO BOX 307 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 02900	Morrow	Lindsay, Lawrence D &		PO BOX 307 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 03000	Morrow	Patrick K. Martin		5343 AYERS WAY THE DALLES, OR 97058	THE DALLES	OR	97058
01n25 03000	Morrow	Patrick K. Martin		5343 AYERS WAY THE DALLES, OR 97058	THE DALLES	OR	97058
01n25 03000	Morrow	Patrick K. Martin		5343 AYERS WAY THE DALLES, OR 97058	THE DALLES	OR	97058
01n25 03100	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839

MapTaxLot	County	Name	Organization	Land Owner Address	City	State	Zip
01n25 03100	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 03200	Morrow	Sheila Munkers & James M. Healy		PO BOX 34 COTTONWOOD, ID 83522	COTTONWOOD	ID	83522
01n25 03200	Morrow	Sheila Munkers & James M. Healy		PO BOX 34 COTTONWOOD, ID 83522	COTTONWOOD	ID	83522
01n25 03202	Morrow	Thomas Martin & Shirley Martin		PO BOX 335 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 03202	Morrow	Thomas Martin & Shirley Martin		PO BOX 335 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n25 04000	Morrow		Bill & Rena Marquardt LLC	67070 LEXINGTON GRANGE RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 00400	Morrow	Doherty, William J		70644 DOHERTY RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 00400	Morrow	Doherty, William J		70644 DOHERTY RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 00400	Morrow	Doherty, William J		70644 DOHERTY RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 00600	Morrow		Grieb Farms, Inc	PO BOX 308 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 00700	Morrow	Doherty, William J		70644 DOHERTY RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 00701	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 00800	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01100	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01100	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01101	Morrow	Stanley M. & Jamie Ann Rauch		72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01102	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01200	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01300	Morrow	Doherty, William J		70644 DOHERTY RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01301	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01500	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LANE LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01500	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LANE LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 01700	Morrow	Doherty, William J		70644 DOHERTY RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 02202	Morrow		Kemp Land LLC	516 NW 4TH PENDLETON, OR 97801	PENDLETON	OR	97801
01n26 02400	Morrow	William J. Doherty		70644 DOHERTY RD, LEXINGTON, OR 97839-5436	LEXINGTON	OR	97839-5436
01n26 02500	Morrow	John & Patricia Monagle		517 NW 7TH AVE	PENDLETON	OR	97801
01n26 02600	Morrow		Turner-Lindsay Farms, LLC	75655 BASELINE RD HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 02601	Morrow		Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97837	HEPPNER	OR	97836
01n26 02602	Morrow	Loren A. & Della K. Heideman		22948 FAIRVIEW LN IONE, OR 97843	IONE	OR	97843
01n26 02700	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 02700	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 02800	Morrow	Loren A. & Della K. Heideman		22948 FAIRVIEW LN IONE, OR 97843	IONE	OR	97843
01n26 02801	Morrow		4GD Land Co	PO BOX 45 IONE, OR 97843	IONE	OR	97843
01n26 02802	Morrow		Karyl Smith, Inc	8720 E BIG MEADOWS RD, CHATTAROY, WA 99003	CHATTAROY	WA	99003
01n26 02803	Morrow		Karyl Smith, Inc	8720 E BIG MEADOWS RD, CHATTAROY, WA 99003	CHATTAROY	WA	99003
01n26 02804	Morrow		Karyl Smith, Inc	8720 E BIG MEADOWS RD, CHATTAROY, WA 99003	CHATTAROY	WA	99003
01n26 02805	Morrow	Loren A. & Della K. Heideman		22948 FAIRVIEW LN IONE, OR 97843	IONE	OR	97843
01n26 02806	Morrow		4GD Land Co	PO BOX 45 IONE, OR 97843	IONE	OR	97843
01n26 02807	Morrow		4GD Land Co	PO BOX 45 IONE, OR 97843	IONE	OR	97843
01n26 02808	Morrow		4GD Land Co	PO BOX 45 IONE, OR 97843	IONE	OR	97843

MapTaxLot	County	Name	Organization	Land Owner Address	City	State	Zip
01n26 02900	Morrow		Darrel and Wilma Coppock Rev Tr	26675 ICE HARBOR DR BURBANK, WA 99323	BURBANK	CA	99323
01n26 02900	Morrow		Darrel and Wilma Coppock Rev Tr	26675 ICE HARBOR DR BURBANK, WA 99323	BURBANK	CA	99323
01n26 03000	Morrow		Morrow County Grain Growers	PO BOX 367 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03100	Morrow		Darrel and Wilma Coppock Rev Tr	26675 ICE HARBOR DR BURBANK, WA 99323	BURBANK	CA	99323
01n26 03200	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03201	Morrow	Christian & Katherine A. Rauch		72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03300	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03301	Morrow	Stephen & Tana Jo Hill		73114 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03400	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03500	Morrow		Robert J. Kilkenny Trust	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 03501	Morrow	Robert Kilkenny		565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 03502	Morrow		Robert J. Kilkenny Trust	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 03600	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03600	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 03700	Morrow		State Of Oregon	417 TRANSPORTATION BLDG SALEM, OR 97310	SALEM	OR	97310
01n26 03800	Morrow	Loren A. & Della K. Heideman		22948 FAIRVIEW LN IONE, OR 97843	IONE	OR	97843
01n26 04300	Morrow	Ellen F. Mason & Janet R. Switzer		PO BOX 161523 BIG SKY, MT 59716	BIG SKY	MT	59716
01n26 04300	Morrow	Ellen F. Mason & Janet R. Switzer		PO BOX 161523 BIG SKY, MT 59716	BIG SKY	MT	59716
01n26 04400	Morrow	Eric M. & Brandi L. Orem		PO BOX 202 IONE, OR 97843	IONE	OR	97843
01n26 04500	Morrow	Robert & Suezanne Duncan, Trustees		1547 ALPENSEE STRASSE LEAVENWORTH, WA 98826	LEAVENWORTH	WA	98826
01n26 04600	Morrow	James & Katherine Martin		PO BOX 336 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01n26 04700	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 04700	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 04700	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 04700	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 04800	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01n26 04800	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01n27 01400	Morrow	Britt, Sidney R & Randy R		78540 BIG BUTTER CREEK RD ECHO, OR 97826	ЕСНО	OR	97826
01n27 01400	Morrow	Britt, Sidney R & Randy R		78540 BIG BUTTER CREEK RD ECHO, OR 97826	ЕСНО	OR	97826
01n27 01600	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n27 01600	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00200	Morrow		Pine Canyon Ranch, Gp	PO BOX 4965 PASO ROBLES, CA 93447	PASO ROBLES	CA	93447
01n28 00200	Morrow		Pine Canyon Ranch, Gp	PO BOX 4965 PASO ROBLES, CA 93447	PASO ROBLES	CA	93447
01n28 00201	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00201	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00300	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00301	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00301	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00301	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00303	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826

MapTaxLot	County	Name	Organization	Land Owner Address	City	State	Zip
01n28 00304	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00304	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00400	Morrow	George & Beatrice Luciani, Trustees		76763 BUTTERCREEK RD ECHO, OR 97826	ЕСНО	OR	97826
01n28 00600	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00600	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00900	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01n28 00900	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01s25 00100	Morrow		Monty Crum Ranches, LLC	PO BOX 121 IONE, OR 97843	IONE	OR	97843
01s25 00100	Morrow		Monty Crum Ranches, LLC	PO BOX 121 IONE, OR 97843	IONE	OR	97843
01s25 00100	Morrow		Monty Crum Ranches, LLC	PO BOX 121 IONE, OR 97843	IONE	OR	97843
01s25 00400	Morrow		Bill and Rena Marquardt Living Trust	67070 LEXINGTON GRANGE RD, LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s25 00602	Morrow		Bill & Rena Marquardt LLC	67070 LEXINGTON GRANGE RD, LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s25 02000	Morrow	Jeffrey Cutsforth		PO BOX 415	LEXINGTON	OR	97839
01s25 02000	Morrow	Jeffrey Cutsforth		PO BOX 415	LEXINGTON	OR	97839
01s25 02100	Morrow		W W & O Farms, Inc	PO BOX 157	CONNELL	WA	99326
01s25 02100	Morrow		W W & O Farms, Inc	PO BOX 157	CONNELL	WA	99326
01s25 02100	Morrow		W W & O Farms, Inc	PO BOX 157	CONNELL	WA	99326
01s25 04000	Morrow	Jeffrey Cutsforth		PO BOX 415,	LEXINGTON	OR	97839
01s26 00100	Morrow		Fritz Cutsforth Land Co	67191 SANDHOLLOW RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00100	Morrow		Fritz Cutsforth Land Co	67191 SANDHOLLOW RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00200	Morrow		Fritz Cutsforth Land Co	67191 SANDHOLLOW RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00300	Morrow		Mason, Ellen F. Rev Tr	PO BOX 161523 BIG SKY, MT 59716	BIG SKY	MT	59716
01s26 00300	Morrow		Mason, Ellen F. Rev Tr	PO BOX 161523 BIG SKY, MT 59716	BIG SKY	MT	59716
01s26 00400	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00500	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00500	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00600	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00700	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00800	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00800	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00800	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00800	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 00900	Morrow		Monty Crum Ranches, LLC	PO BOX 121 IONE, OR 97843	IONE	OR	97843
01s26 00900	Morrow		Monty Crum Ranches, LLC	PO BOX 121 IONE, OR 97843	IONE	OR	97843
01s26 00900	Morrow		Monty Crum Ranches, LLC	PO BOX 121 IONE, OR 97843	IONE	OR	97843
01s26 01000	Morrow		W W & O Farms, Inc	PO BOX 157 CONNELL, WA 99326	CONNELL	WA	99326
01s26 01100	Morrow	Eric M. & Brandi L. Orem		PO BOX 202 IONE, OR 97836	IONE	OR	97836
01s26 01100	Morrow	Eric M. & Brandi L. Orem		PO BOX 202 IONE, OR 97836	IONE	OR	97836
01s26 01100	Morrow	Eric M. & Brandi L. Orem		PO BOX 202 IONE, OR 97836	IONE	OR	97836
01s26 01300	Morrow	Mark T. and Shannon E. Miller		67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836

MapTaxLot	County	Name Organization	Land Owner Address	City	State	Zip
01s26 01400	Morrow	Stan, James & Curtis Cutsforth	675 HAGER ST, HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 01500	Morrow	Mark T. and Shannon E. Miller	67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 01600	Morrow	Steven R. Wagenblast	65936 DOLVEN RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s26 01602	Morrow	Steven R. Wagenblast	65936 DOLVEN RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s26 01602	Morrow	Steven R. Wagenblast	65936 DOLVEN RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s26 01702	Morrow	Mark T. and Shannon E. Miller	67775 CUTSFORTH RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 01800	Morrow	Steven R. Wagenblast	65936 DOLVEN RD LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s26 01801	Morrow	Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97838	HEPPNER	OR	97836
01s26 01802	Morrow	Fritz Cutsforth Land Co	67191 SANDHOLLOW RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 01802	Morrow	Fritz Cutsforth Land Co	67191 SANDHOLLOW RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 02000	Morrow	Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97838	HEPPNER	OR	97836
01s26 02000	Morrow	Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97838	HEPPNER	OR	97836
01s26 02000	Morrow	Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97838	HEPPNER	OR	97836
01s26 02100	Morrow	Elden Lee Padberg	18407 NE 21ST ST REDMOND, WA	REDMOND	WA	98052
01s26 02100	Morrow	Elden Lee Padberg	18407 NE 21ST ST REDMOND, WA 98052	REDMOND	WA	98052
01s26 02101	Morrow	Greenup, William D & Cynthia M	PO BOX 488 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s26 02200	Morrow	Elden Lee & Bryan E. Padberg	18407 NE 21ST ST REDMOND, WA 98052	REDMOND	WA	98052
01s26 02300	Morrow	W W & O Farms, Inc	PO BOX 157 CONNELL, WA 99326	CONNELL	WA	99326
01s26 02400	Morrow	Elden Lee & Bryan E. Padberg	18407 NE 21ST ST REDMOND, WA 98052	REDMOND	WA	98052
01s26 02401	Morrow	Padberg, Elden Lee, Tr & Jill Tr	18407 NE 21ST ST REDMOND, WA 98052	REDMOND	WA	98052
01s26 02500	Morrow	Jeffrey Cutsforth	PO BOX 415 LEXINGTON, OR 97839	LEXINGTON	OR	97839
01s26 02600	Morrow	Anthony J Doherty	73779 BLACK HORSE CANYON LN HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 02900	Morrow	Triple JT	PO BOX 447, HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 02900	Morrow	Triple JT	PO BOX 447, HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 02900	Morrow	Triple JT	PO BOX 447, HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 02901	Morrow	Stan, James & Curtis Cutsforth	675 HAGER ST, HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 02902	Morrow	Loren Duvall Wickersham etal	8000 SW 6TH PORTLAND, OR 97219	PORTLAND	OR	97219
01s26 02903	Morrow	Loren Duvall Wickersham etal	8000 SW 6TH PORTLAND, OR 97219	PORTLAND	OR	97219
01s26 03000	Morrow	Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97838	HEPPNER	OR	97836
01s26 03100	Morrow	Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97839	HEPPNER	OR	97836
01s26 03200	Morrow	Rolling Ranch LLC	8385 WHEATLAND RD N SALEM, OR 97303	SALEM	OR	97303
01s26 03201	Morrow	Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97840	HEPPNER	OR	97836
01s26 03300	Morrow	Douglas A. and Carley E. Drake	64598 SANDHOLLOW RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03400	Morrow	James W. & Diana M. Cutsforth	2604 S HARRISON CT KENNEWICK, WA 99338	KENNEWICK	WA	99338
01s26 03500	Morrow	Triple JT	PO BOX 447 HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03500	Morrow	Triple JT	PO BOX 447 HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03600	Morrow	Anthony J Doherty	73779 BLACK HORSE CANYON LN HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03600	Morrow	Anthony J Doherty	73779 BLACK HORSE CANYON LN HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03601	Morrow	Anthony J Doherty	73779 BLACK HORSE CANYON LN HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03601	Morrow	Anthony J Doherty	73779 BLACK HORSE CANYON LN HEPPNER, OR 97836	HEPPNER	OR	97836

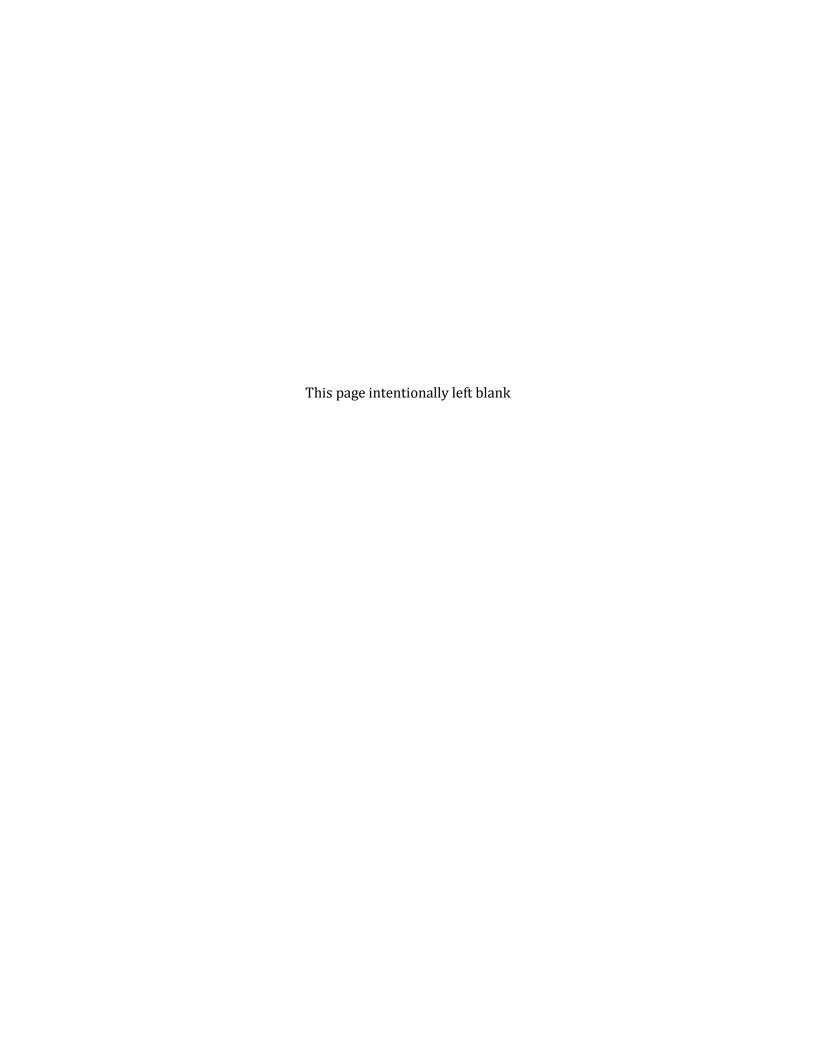
MapTaxLot	County	Name	Organization	Land Owner Address	City	State	Zip
01s26 03602	Morrow	Anthony J Doherty		73779 BLACK HORSE CANYON LN HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03800	Morrow	Thorpe, Carl W		61101 BALM FORK RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s26 03900	Morrow	James W. & Diana M. Cutsforth		2604 S HARRISON CT KENNEWICK, WA 99338	KENNEWICK	WA	99338
01s26 04000	Morrow	Loren Wickersham & Lois Duvall		8000 SW 6TH PORTLAND, OR 97219	PORTLAND	OR	97219
01s26 04100	Morrow	James W. & Diana M. Cutsforth		2604 S HARRISON CT KENNEWICK, WA 99338	KENNEWICK	WA	99338
01s26 04100	Morrow	James W. & Diana M. Cutsforth		2604 S HARRISON CT KENNEWICK, WA 99338	KENNEWICK	WA	99338
01s27 00200	Morrow	Warren H. Voge etal		64889 LITTLE BUTTER CREEK RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00500	Morrow	Patricia Dougherty		66317 SPUR LOOP RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00503	Morrow	Patricia Dougherty		66317 SPUR LOOP RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00505	Morrow	Patricia Dougherty		66317 SPUR LOOP RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00507	Morrow	Patricia Dougherty		66317 SPUR LOOP RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00509	Morrow	Patricia Dougherty		66317 SPUR LOOP RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00510	Morrow	Clifford, Patricia, and Cindy Dougherty		66317 SPUR LOOP RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00512	Morrow	Clifford Dougherty etal		65450 SPUR LOOP ROAD, HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00515	Morrow		Patricia Dougherty Tr	66317 SPUR LOOP RD. HEPPNER, OR 97836	HEPPNER	OR	97836
01s27 00600	Morrow		Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97840	HEPPNER	OR	97836
01s27 00600	Morrow		Turner Ranch, Inc	75655 BASELINE RD HEPPNER, OR 97840	HEPPNER	OR	97836
01s27 01000	Morrow	Warren H. Voge etal		16838 NE HOYT PORTLAND, OR 97230	PORTLAND	OR	97230
01s27 01500	Morrow	Douglas A. and Carley E. Drake		64598 SANDHOLLOW RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s28 00200	Morrow	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
01s28 00400	Morrow		Lazy K Land, LLC	60732 LITTLE BUTTER CREEK RD HEPPNER, OR 97836-7234	HEPPNER	OR	97836
01s28 00500	Morrow		Lazy K Land, LLC	60732 LITTLE BUTTER CREEK RD HEPPNER, OR 97836-7234	HEPPNER	OR	97836
01s28 00600	Morrow	Warren H. Voge etal		64889 LITTLE BUTTER CREEK RD HEPPNER, OR 97836	HEPPNER	OR	97836
01s28 00600	Morrow	Warren H. Voge etal		64889 LITTLE BUTTER CREEK RD HEPPNER, OR 97836	HEPPNER	OR	97836
02n25 00200	Morrow		USA (Bombing Range)	Rick McArdle - NAS Widbey Island. 3730 North Charles Porter Ave. Bldg 385, Room 127. Oak Harbor, WA 98278	OAK HARBOR	WA	98278
02n25 00400	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
02n25 00500	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
02n25 00500	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
02n25 00500	Morrow		Kilkenny Land Co	565 HAGER ST HEPPNER, OR 97836	HEPPNER	OR	97836
02n25 00600	Morrow	Kenneth Michael Klinger		68280 IMMIGRANT LN IONE, OR 97843	IONE	OR	97843
02n25 00700	Morrow	Doherty, Matthew P & Doris L		79972 AGNEW RD HERMISTON, OR 97838			
02n25 01400	Morrow		Eugene A Doherty 2/3, Thomas & Darlene Doherty Trust 1/3	PO BOX 913 HEPPNER, OR 97836	HEPPNER	OR	97836
02n25 01600	Morrow		Eugene A Doherty 2/3, Thomas & Darlene Doherty Trust 1/3	PO BOX 913 HEPPNER, OR 97836	HEPPNER	OR	97836
02n25 01700	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LANE LEXINGTON, OR 97839	LEXINGTON	OR	97839
02n25 01700	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LANE LEXINGTON, OR 97839	LEXINGTON	OR	97839
02n25 01800	Morrow		North Lex Power and Land, LLC	72967 STRAWBERRY LN LEXINGTON, OR 97839	LEXINGTON	OR	97839
02n26 00500	Morrow		Baker Produce South, Inc	PO BOX 6812 KENNEWICK, WA 99336	KENNEWICK	WA	99338
02n26 01200	Morrow		Grieb Farms, Inc	PO BOX 308 LEXINGTON, OR 97839	LEXINGTON	OR	97839

MapTaxLot	County	Name	Organization	Land Owner Address	City	State	Zip
02n26 01200	Morrow		Grieb Farms, Inc	PO BOX 308 LEXINGTON, OR 97839	LEXINGTON	OR	97839
02n26 01600	Morrow	Carmichael, Miriam S, 1/4 & Wood, Walt 3/4		3448 CANOGA PL CAMARILLO, CA	CAMARILLO	CA	93010
02n26 01700	Morrow	Carmichael, Miriam S, 1/4 & Wood, Walt 3/4		3448 CANOGA PL CAMARILLO, CA	CAMARILLO	CA	93010
02n26 01900	Morrow	Carmichael, Miriam S, 1/4 & Wood, Walt 3/4		3448 CANOGA PL CAMARILLO, CA	CAMARILLO	CA	93010
02s26 00100	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00100	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00100	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00100	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00100	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00101	Morrow	Loren Duvall Wickersham, Lois Duvall		8000 SW SIXTH AVE PORTLAND, OR 97219	PORTLAND	OR	97219
02s26 00200	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00200	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00300	Morrow	Loren Duvall Wickersham, Lois Duvall		8000 SW SIXTH AVE PORTLAND, OR 97219	PORTLAND	OR	97219
02s26 00304	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 00400	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s26 01800	Morrow		Cx5 Limited	3043 N 25 WEST PROVO, UT 84604	PROVO	UT	84604
02s27 00800	Morrow		Rolling Ranch LLC	8385 WHEATLAND RD N SALEM, OR 97303	SALEM	OR	97303
02s27 01000	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s27 01000	Morrow	Colin & Erin M. Anderson		75257 BLACKHORSE CYN LN HEPPNER, OR 97836	HEPPNER	OR	97836
02s27 01100	Morrow		Cx5 Limited	3043 N 25 WEST PROVO, UT 84604	PROVO	UT	84604
2N280000 00100	Umatilla	Snow H Richard 1/2 & (Trs) 1/2		33263 OREGON TRAIL RD ECHO, OR 97826	ЕСНО	OR	97826
2N280000 00300	Umatilla		Eagle Ranch	32327 OREGON TRAIL RD ECHO, OR 97826	ЕСНО	OR	97826
2N280000 00300	Umatilla		Eagle Ranch	32327 OREGON TRAIL RD ECHO, OR 97826	ЕСНО	OR	97826
2N280000 00400	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 00500	Umatilla		Eagle Ranch	32327 OREGON TRAIL RD ECHO, OR 97826	ЕСНО	OR	97826
2N280000 00600	Umatilla		Eagle Ranch	32327 OREGON TRAIL RD ECHO, OR 97826	ЕСНО	OR	97826
2N280000 00700	Umatilla		Eagle Ranch	32327 OREGON TRAIL RD ECHO, OR 97826	ЕСНО	OR	97826
2N280000 00800	Umatilla		Westland Enterprises LLC	822 HWY 395 S PMB 423 HERMISTON, OR 97838			
2N280000 01600	Umatilla		Hale Farms LLC	73120 HWY 207 ECHO, OR 97826-9019	ЕСНО	OR	97826
2N280000 01700	Umatilla		Hale Farms LLC	73120 HWY 207 ECHO, OR 97826-9019	ЕСНО	OR	97826
2N280000 01800	Umatilla	Chester J & Rosalie Prior		32327 OREGON TRAIL RD ECHO, OR 97826	ЕСНО	OR	97826
2N280000 01900	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 01901	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 02000	Umatilla		USA Bureau of Land MGT	PO BOX 2965 PORTLAND, OR 97208	PORTLAND	OR	97208
2N280000 02100	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 02200A1	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 02300	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 02400	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 02500	Umatilla	Mccarty Carole Mae & Nation Kay Louise		110 NW 8TH ST PENDLETON, OR 97801	PENDLETON	OR	97801
2N280000 02700	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826

MapTaxLot	County	Name	Organization	Land Owner Address	City	State	Zip
2N280000 02800	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 02900	Umatilla	Marilyn Schiller		69958 SCHILLER DR ECHO, OR 97826	ЕСНО	OR	97826
2N280000 03000	Umatilla		Hawkins Co Inc	78771 EGGERS RD PENDLETON, OR 97801	PENDLETON	OR	97801
2N280000 03100	Umatilla		Hawkins Co Inc	78771 EGGERS RD PENDLETON, OR 97801	PENDLETON	OR	97801
2N280000 03200	Umatilla	Seeger Casey A & Cody Robert		PO BOX 310 ECHO, OR 97826	ЕСНО	OR	97826
2N280000 03300	Umatilla		USA Bureau of Land MGT	PO BOX 2965 PORTLAND, OR 97208	PORTLAND	OR	97208
2N280000 03400	Umatilla	Luciani George J & Beatrice		76763 BUTTERCREEK RD ECHO, OR 97826-9046	ЕСНО	OR	97826-9046
2N280000 03500	Umatilla		Pine Canyon Ranch Gp	PO BOX 4965 PASO ROBLES, CA 93447	PASO ROBLES	CA	93447

## **Attachment F-2:**

CD containing Electronic Format Mailing Labels: Morrow and Umatilla County Landowners Within 500 Feet of Leased Parcels (Digital)



## **Exhibit G**

# **Materials Analysis**

### **Prepared for**



# Wheatridge Wind Energy, LLC

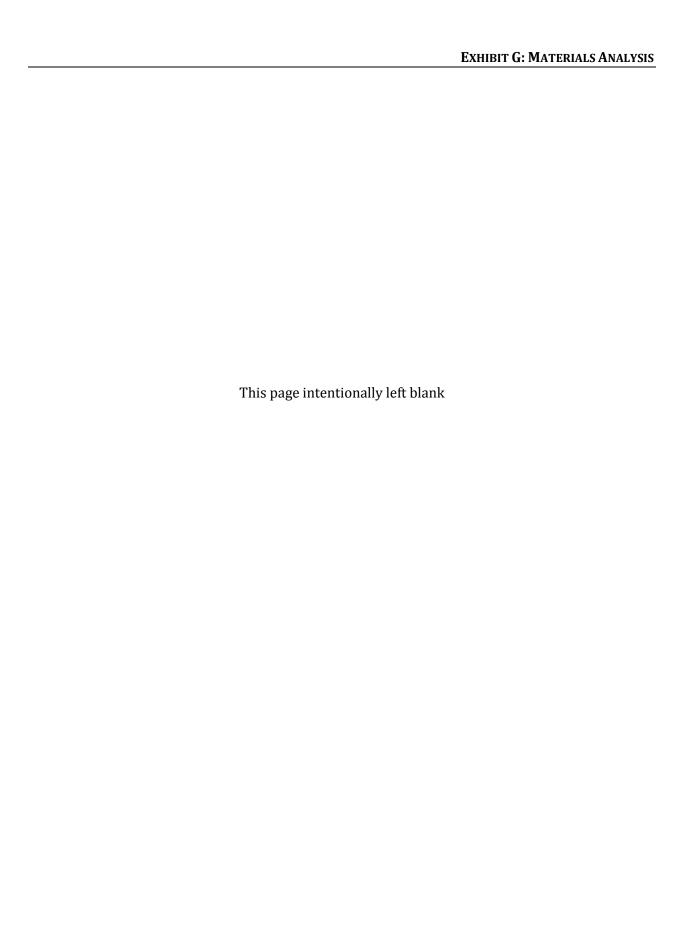
Wheatridge Wind Energy Facility

July 2015

Prepared by



Tetra Tech, Inc.



### **Table of Contents**

1.0	Introduction	1
2.0	Construction Materials Inventory – OAR 345-021-0010(1)(g)(A)	1
3.0	Operational Materials Inventory	3
4.0	Hazardous Materials Handling and Management	5
4.1	Construction Materials	
4.2	Operational Materials	8
5.0	Non-Hazardous Waste Management	9
6.0	Submittal Requirements and Approval Standards	10
6.1	Submittal Requirements	10
6.2	Approval Standard	10
	List of Tables	
Table	G-1. Inventory of Materials to be Used During Construction of the Project	2
Table	G-2. Inventory of Materials to be Used During Operation of the Project	4
Table	G-3. Submittal Requirements Matrix	10

## **List of Figures**

Figure G-1. Location of Construction Yards, Batch Plants and O&M Facilities

#### **List of Attachments**

Attachment G-1. Aggregate Supplier Letter

#### **Terms and Definitions**

Collector Line An underground or overhead electrical 34.5 kV line transmitting

power from the turbines to the substations

Construction Yard The temporary area for construction activities and Project

equipment storage

GE 1.7-103 Layout Project turbine layout comprised of 292 GE 1.7MW turbines with

80m hub heights and 103m rotor diameters

GE 2.5-120 Layout Project turbine layout comprised of 200 GE 2.5MW turbines with

85m hub heights and 120m rotor diameters

Gen-tie Line(s) One or two 230 kV transmission lines conveying power from the

Project to an interconnection point with the grid; to be permitted

and built by UEC or UEC/CB

Intraconnection Corridor The intraconnection transmission line corridor connecting

Wheatridge East with Wheatridge West

Intraconnection Line(s) One or two overhead electrical 230 kV lines connecting the Project

substations in Wheatridge East and Wheatridge West.

Met Tower Permanent meteorological tower

O&M Building Permanent operations and maintenance building, including parking

Project Wheatridge Wind Energy Facility

Site Access Road Private road to be constructed or improved for the purpose of

accessing wind turbines and associated Project facilities

Site Boundary The boundary within which all Project facilities will be constructed,

also known as the micrositing corridor

Substation A facility in which power from the wind turbines is aggregated,

stepped up in voltage, and connected into the Intraconnection Lines

or the Gen-tie Line

Turbine A collective term for foundation, tower, nacelle, blades and rotor that

comprise a wind turbine generator

Turbine pad A cleared, graveled area around the base of each turbine

encompassing primarily the turbine foundation

Wheatridge Wind Energy, LLC

Wheatridge East The eastern group of Project turbines

Wheatridge West The western group of Project turbines

### **Acronyms and Abbreviations**

GSU Generator step-up transformer

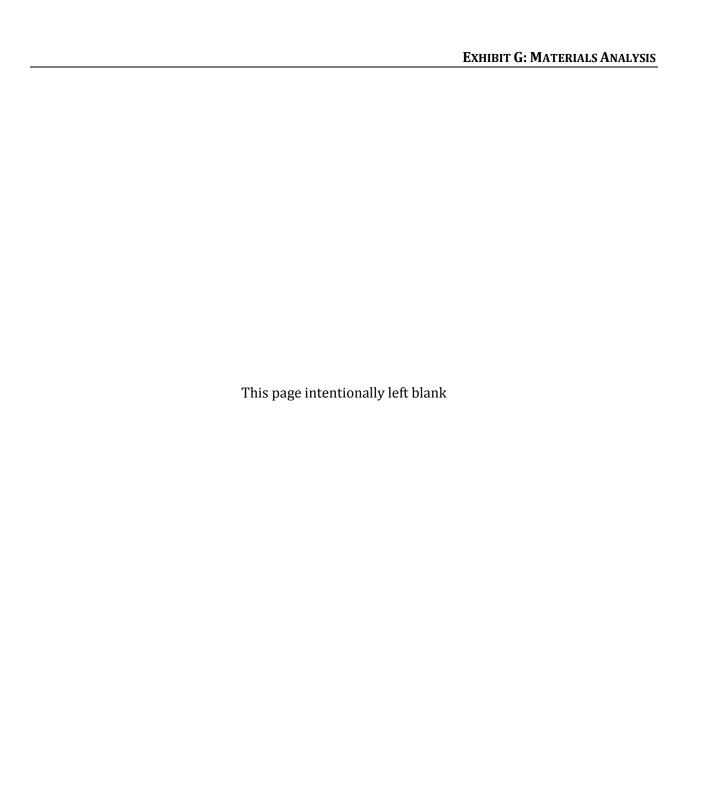
I-84 Federal Interstate Highway 84

kV Kilovolt

MW Megawatt

OAR Oregon Administrative Rules

OR-## Oregon State Highway ##



#### 1.0 Introduction

Wheatridge Wind Energy, LLC (Wheatridge), proposes to construct the Wheatridge Wind Energy Facility (Project), a wind generation facility with a maximum nominal generating capacity of 500 megawatts (MW) in Morrow and Umatilla counties, Oregon (see Figures C-1 and C-2). The Project is comprised of up to 292 wind turbines divided into two groups: the 'Wheatridge West' wind turbine group and the 'Wheatridge East' wind turbine group. Wheatridge West and Wheatridge East are electrically connected by an 'Intraconnection Corridor' containing up to two parallel overhead 230 kilovolt (kV) transmission lines (Intraconnection Lines), each no longer than 35 miles in length. Other Project components include on-site access roads, an electrical collection and control system, substations, operations and maintenance buildings (O&M Buildings), and temporary construction yards. These facilities are all described in greater detail in Exhibit B.

Wheatridge West is located entirely within Morrow County, approximately 5 miles northeast of Lexington, and approximately 7 miles northwest of Heppner. Wheatridge West is bisected by Oregon Highway 207 (OR-207). Wheatridge East is located approximately 16 miles northeast of Heppner and encompasses land in both Morrow and Umatilla counties. The Intraconnection Corridor is located entirely within Morrow County and adjoins to the southeastern portion of Wheatridge West and the southern portion of Wheatridge East.

Exhibit G provides an analysis of construction materials for the Project, as required to meet the submittal requirements of Oregon Administrative Rule (OAR) 345-021-0010(1)(g) paragraphs (A) through (C). OAR 345 Division 22 does not provide an approval standard specific to Exhibit G.

#### 2.0 Construction Materials Inventory – OAR 345-021-0010(1)(g)(A)

The primary raw materials needed for construction of the Project are rock, gravel, sand, water, cement, and steel rebar. Substantial amounts of steel reinforcing bar and concrete are required for wind turbine foundations; making concrete requires gravel, sand, water and cement. Rock and aggregate materials will also be needed for access road construction and for other permanent and temporary gravel-surfaced areas. Aggregate suppliers in the vicinity of the Project have been contacted and are able to meet the requirements of Project construction, see Attachment G-1. Additional materials include the turbine and meteorological tower (Met Tower) components, substations and other electrical equipment, conductor wires, fiber optic communications cables, transmission line support poles for the Intraconnection Line(s), and insulators and connecting hardware.

The following items were considered when developing this materials inventory:

- Steel and concrete for turbine foundations;
- Conductor wires;
- Insulators and hardware:

- Fiber optic communications lines;
- Substation steel structures;
- Substation foundations:
- 0&M Buildings;
- Access road construction; and
- Surface materials for Substations, O&M Buildings, and temporary Construction Yards.

Volumes of water are addressed in Exhibit O.

Most construction materials would enter the Project area via one of the construction yards. The locations of the construction yards are shown in Figure C-5 and Figure C-7 for the GE 1.7-103 and GE 2.5-120 layouts. Some materials, particularly turbine components, would be delivered directly to the location at which they will be used. Material quantities evaluated in Exhibit G are for the GE 1.7-103 layout, as this option encompasses a greater number of turbines and supporting facilities (e.g., Site Access Roads, Collector Lines, etc.) than the GE 2.5-120 layout; therefore, it presents the greatest quantity of materials required for construction.

Table G-1 provides an inventory of industrial materials that would be used within the Project area in substantial quantities during construction of the GE 1.7-103 layout.

Table G-1. Inventory of Materials to be Used During Construction of the Project							
Material	Quantity/Units	Ultimate Disposition					
Rock/gravel	300,000 to 350,000 tons for up to approximately 73 miles of private access road (approximately 61 miles of new road, and 12 miles of existing road improvement).  10,000 tons for approximately 18 acres of graveled areas associated with the O&M facilities, substations, and construction yards and laydown areas.	Maintained as on-site roadbed or graveled area associated with the O&M buildings and collector substations.					
Concrete foundation materials	300 to 320 cubic yards per turbine foundation, plus foundations for substations and 0&M buildings, totaling up to:  • 98,000 tons of aggregate;  • 72,000 tons of sand;  • 31,000 tons of Portland cement,  • 10,000 tons of steel reinforcing bar; and  • 3.65 million gallons of water.	Incorporated into turbine pads, substation equipment foundations, and O&M building foundations.					
Wind turbine components	Up to 292 turbines, each comprising approximately  • 196 tons of steel;  • 196 tons of iron;  • 33 tons of fiberglass/carbon fiber; and  • 46 tons of other material.	Incorporated into turbine towers, nacelles and other internal components.					

Table G-1. Inventory of Materials to be Used During Construction of the Project			
Material	Quantity/Units	Ultimate Disposition	
Met Towers	Up to 12 units; approximately 8 tons of steel per met tower.	Aboveground structure.	
34.5kV electrical collection system	Up to approximately 280 miles of conductor cable.	Buried underground. 1/	
34.5kV electrical collection system support poles	Up to approximately 380 poles, either H-frames or monopoles, likely of wood or steel.	Aboveground connection and support structures as required if site conditions make buried cable infeasible	
230kV Intraconnection Line(s)	Up to approximately 210 miles of conductor cable.	Aboveground connection and support structures between the substations in Wheatridge East and Wheatridge West	
Communications/shield wire lines	Up to approximately 200 miles of fiber optic cable.	Strung with Intraconnection Line(s) or with Collector Lines.	
Intraconnection Line Support Poles	Up to approximately 500 poles, either H-frames or monopoles, likely of wood or steel.	Aboveground connection and support structures between the Substations in Wheatridge East and Wheatridge West.	
GSU electrical transformers	Up to 292 GSU transformers.	Mounted on concrete pad adjacent to turbine tower.	
Substation transformers	Up to four transformers, the largest of which would be 300MVA.	Constructed in a central location within the Site Boundary.	
O&M Buildings	Two units, largest of which is approximately 9,000 sq. ft.	Aboveground structure and graveled parking area.	

 $<sup>^{1/}</sup>$  Wheatridge does not anticipate having to run the 34.5kV electrical collection system aboveground. However, should site conditions present a situation where burying the electrical collection is infeasible, up to approximately 11 miles of the electrical collection system may be run aboveground in a manner similar to the 230kV Intraconnection Line(s)

## 3.0 Operational Materials Inventory

No substantial quantities of industrial materials will be stored on the Project during operations. Up to two 55 gallon drums each of hydraulic oil and gearbox oil may be kept on-site for periodic maintenance activities; these would be stored within the 0&M buildings. Lubricating and dielectric mineral oils and antifreeze solutions will be present at the Project, and will be fully contained within the turbines and electrical transformers. Transformer dielectric oils are not normally replaced. Lubricating oils and antifreeze are drained and replaced periodically; new oil will be brought in on an as-needed basis and the old oil removed for recycling. These maintenance activities will utilize specialized vehicles and equipment designed to prevent spills. If heavy equipment is necessary for major maintenance issues, such as the replacement of a turbine gearbox or generator, its use would be similar to the construction stage. Fuel or oils needed for maintenance would be delivered by a licensed maintenance contractor on an as-needed basis, and no substantial quantities would be stored on-site.

It is possible that major turbine or electrical components may need to be replaced during the lifetime of the Project. Major maintenance issues may require the replacement of turbine gearboxes, generators, blades, or other components; however, due to the unpredictable nature of major maintenance problems, no estimate has been provided for the amount of major components that may be needed. Minor maintenance may also require the replacement and removal of smaller components, which are not expected to constitute substantial amounts of industrial materials. Minor and potentially hazardous materials could include oily rags or similar materials related to turbine lubrication and other maintenance.

Small quantities of lubricating and dielectric oils, cleaners, antifreeze, or herbicides and pesticides may be stored in the O&M Buildings for use during Project operations. None would be present in substantial reportable quantities; the amounts present (if any) would be no greater than household quantities.

Table G-2 provides an inventory of industrial materials to be used within the Project area during operations.

Table G-2. Inventory of Materials to be Used During Operation of the Project				
Mineral oils (turbine lubricant and transformer coolant)	876 gallons (3 gallons per turbine) per year.	Up to 110 gallons (two 55-gal drums) stored in 0&M Buildings for minor maintenance; full oil change done as-needed by a specialized contractor and used oils removed for recycling.		
Synthetic oils (turbine lubricant, gear oil)	2,920 gallons (10 gallons per turbine) per year.	Up to 110 gallons (two 55-gal drums) stored in 0&M Buildings for minor maintenance; full oil change done as-needed by a specialized contractor and used oils removed for recycling.		
Simple Green (general cleaner)	876 gallons (3 gallons per turbine) per year.	Up to 5 gallons stored in O&M Buildings for minor maintenance.		
WD-40; grease (general lubricant)	1,460 gallons (5 gallons per turbine) per two years.	Up to 55 gallons stored in O&M Buildings for minor maintenance.		
Ethylene glycol (anti-freeze)	876 gallons (3 gallons per turbine) per year.	Up to 55 gallons stored in O&M Buildings for minor maintenance.		
Round-up and 2,4-D (weed control)	2 gallons for spot weed control; subcontract out for major weed control per year.	Up to 2 gallons stored in O&M Buildings.		

## 4.0 Hazardous Materials Handling and Management

#### 4.1 Construction Materials

Hazardous materials that will be used at the Project include fuels, lubricating oils, cleaners, and pesticides, as shown in Tables G-1 and G-2. These materials would be used primarily during operations but potentially during construction as well.

During construction of the Project, small quantities of a few hazardous materials may be utilized or stored in the construction yards. Such materials may include cleaners, insecticides or herbicides, paint, or solvents. None would be present in substantial, reportable quantities<sup>1</sup>; the amounts present (if any) would be no greater than household quantities<sup>2</sup> of up to a few gallons each. When not in use these would be stored in a secure location within the construction yards.

Fuels would be the only hazardous material that may be stored in substantial quantities on-site during construction; Wheatridge anticipates that up to 1000 gallons of diesel fuel and 500 gallons of gasoline may be kept on-site for fueling of construction equipment. These would both be stored in temporary above-ground tanks in the construction yard(s), within an area that provides for secondary containment. Fuels would be delivered to the construction yard by a licensed specialized tanker vehicle. There would be no substantial quantities of lubricating oils, hydraulic fluid for construction equipment, or other hazardous materials maintained on-site during construction. Lubricating oil or hydraulic fluids for construction equipment would similarly be brought in on an as-needed basis for equipment maintenance by a licensed contractor using a specialized vehicle, and waste oils removed by the same maintenance contractor. Lubricating oils and hydraulic oils for the turbines and dielectric oils for the transformers would similarly arrive on an as-needed basis and transferred into the receiving components, such that none would be stored on-site.

Hazardous materials will be used in a manner that is protective of human health and the environment and will comply with all applicable local, state, and federal environmental laws and regulations. Due to the potential quantities of hazardous materials that may be present during construction, the construction contractor will be required to develop a Spill Prevention, Control and Countermeasure (SPCC) Plan prior to beginning construction of the Project. Accidental releases of hazardous materials will be prevented or minimized through proper containment of these substances during use and transportation to the Project site, and observance of appropriate handling procedures during transfer from the delivery vehicle to the equipment being filled. Equipment oil-filling, fueling, or maintenance activities will take place a substantial distance from waterways or wetlands to prevent water quality impacts in the event of an accidental release. Any

<sup>&</sup>lt;sup>1</sup> "Reportable quantity" refers to the amount of hazardous substance that has to be released into the environment before the EPA requires notification of the release to the National Response Center pursuant to the Comprehensive Environmental Release, Compensation, and Liability Act (CERCLA), also known as Superfund. These numerical designations are listed under 49 CFR 172.101 Appendix A, Table 1 and Table 2. <sup>2</sup> "Household quantity" refers to container sizes designed for consumer use, which are sized such that each container would hold less than a reportable quantity of any constituent hazardous chemical.

oily waste, rags, or dirty or hazardous solid waste will be collected in sealable drums at the construction yards, to be removed for recycling or disposal by a licensed contractor.

In the unlikely event of an accidental hazardous materials release, any spill or release will be cleaned up and the contaminated soil or other materials disposed of and treated according to applicable regulations. See Exhibit CC for a listing of applicable regulations. Spill kits containing items such as absorbent pads will be located on equipment and in on-site temporary storage facilities to respond to accidental spills, if any were to occur. Employees handling hazardous materials will be instructed in the proper handling and storage of these materials, as well as to the locations of spill kits.

The following list provides a summary of typical measures that will be implemented during Project construction to ensure safe handling, transport, use and disposal of hazardous materials:

• The general contractor will be responsible for preparing a Spill Prevention, Control, and Countermeasure Plan prior to the start of construction and maintaining the program through the duration of construction activities. The Spill Prevention, Control, and Countermeasure Plan will be revised for the operational period of the Project.

#### **Preventive Procedures to Avoid Spills**

- Chemical Storage: All hazardous chemicals will be stored in a manner that provides secondary containment. This will be accomplished via double wall containers, lined ground storage sites including dikes and berms or other vessels. Chemical storage areas will be located at least 100 feet from the edge of perennial and intermittent streams and wetlands.
- Chemical Transfer: When space provides, hazardous chemical transfer will occur within the secondary containment. In the event this is not possible, sorbent pads or materials will be strategically placed at the transfer point to capture any possible leak. Transfer of materials from large to small containers will be performed using appropriate equipment, including pumps, hoses, and safety equipment; hand pouring techniques will not be utilized.
- Transportation: Procedures for loading and transporting fuels and other hazardous materials will meet the minimum requirements established by U.S. Department of Transportation (USDOT) and the Oregon Department of Transportation (ODOT) and other pertinent regulations. At all times, all hazardous materials used for the Project will be properly stored in approved USDOT containers and labeled, including during transportation. Smaller containers will be used on-site to transport needed amounts of hazardous materials to a specific location.
- Fueling and Servicing: Construction vehicles (trucks, bulldozers, etc.) and equipment (pumps, generators, etc.) will be fueled and serviced in designated areas at least 300 feet from flowing streams wetlands and other water bodies (e.g., lakes ponds, reservoirs).
   Refueling locations should be flat to minimize the chance of a spilled substance reaching a stream. Fuel/service vehicles will carry a suitable absorbent material to collect approximately 20 gallons of spilled materials.

• Training and Education: All site personnel will be informed of the various hazardous chemicals stored on site. Training and education will include information on the proper handling, use, storage and clean-up of hazardous chemicals found on site.

## **Clean-up Procedures**

- In the event of a leak or spill of a hazardous substance, the Chemical Safety Supervisor is to be immediately notified. He/she will be notified immediately following emergency mitigation / containment activities.
- All spills exceeding established EPA reportable quantities will be reported to both the
  Oregon State Emergency Spill Hotline and to the National Response Center. EPA reportable
  quantities can be found in 40 CFR 302.2, Designation, Reportable Quantities and
  Notification. Links to the reporting requirements can be found at
  <a href="https://www.epa.gov/ceppo/pubs/title3.pdf">www.epa.gov/ceppo/pubs/title3.pdf</a>.
- Sorbent pads will be stocked on site to mitigate spills and leaks. In the event that a piece of
  equipment cannot be moved or immediately taken out of service, sorbent pads will be used
  to collect fluids and prevent the pollution of surrounding soil. This operation, should it
  arise, will be personally monitored by the project Superintendent and project Safety
  Coordinator.
- Soil clean up will occur using designated and appropriately labeled barrels to contain any
  excavated contaminated soil. Clean up will include a significant margin to ensure that all
  contaminants have been removed from the area.
- Equipment that is found to be the source of any leak or spill will be repaired immediately if
  possible. If immediate repair is not possible, the spill or leak will be contained and
  controlled using any approved and necessary means. Leaking equipment once removed
  from service will not be allowed to return to service until repairs have been made and
  demonstrated.

### **Storage Procedures**

- Storage and containment of all chemicals and combustibles on site will be accomplished in compliance with all local, federal and state regulations. All chemicals and combustibles will be stored in properly labeled and approved containers.
- Flammable storage cabinets will be obtained as necessary. Flammable and combustible liquids will be stored 25 feet from other construction operations. Material Safety Data Sheets for all materials on site will be available in the project Superintendent's office.
- Paint used on site will be stored per local, state, federal and manufacturer requirements.
- Fuel tanks will be designed with double containment system protection.
- Portable gas cans shall be stored in designated areas that are protected with a secondary containment to avoid leakage or spillage onto the soil. A standard cattle trough is a good example of a secondary containment protection that can be easily installed.
- Compressed gas cylinders will be secured when in use and when stored will require a minimum 20 foot separation between oxygen and acetylene cylinders.

#### **Spill Reporting Procedures**

In the event of a spill involving a hazardous material the following procedure shall be implemented:

- 1. Notify the site Project Manager
- 2. Notify the site Safety Engineer
- 3. In the event the spill exceeds 10 gallons, notify the Operating Group Vice President and Safety Director
- 4. Consult the reporting limits for the specific material spilled by reviewing the EPA Office of Chemical Emergency Preparedness Document 550-B-01-003, available online at: <a href="https://www.epa.gov/ceppo/pubs/title3.pdf">www.epa.gov/ceppo/pubs/title3.pdf</a>. In the event the spill meets the reporting limits as established by EPA Document 550-B-01-003, follow the prescribed reporting procedure by calling the National Response Center at 1.800.424.8802.
- 5. Consult the reporting requirements for Oregon, and follow the prescribed reporting procedure.

#### 4.2 Operational Materials

There would be no substantial quantities of fuels, lubricating oils, hydraulic fluid for construction equipment, or other hazardous materials maintained on-site during operations. During operation of the Project, small quantities of a few hazardous materials may be utilized; such materials may include cleaners, insecticides or herbicides, paint, or solvents. None would be present in substantial reportable quantities; the amounts present (if any) would be no greater than household quantities of no more than a few gallons each. When not in use these would be stored in a secure location within the O&M Buildings.

Lubricating and dielectric oils would primarily be contained in qualified oil-filled equipment, while smaller quantities may be stored in the O&M Buildings. Non-reportable quantities of up to 110 gallon (two 55-gallon drums) each of hydraulic oil and gear oil, up to 55 gallons of general lubricating oil (e.g., WD-40), and up to 55 gallons of ethylene glycol coolant may be kept on-site for minor maintenance activities. More intensive maintenance activities may include periodically draining and filling turbine gearboxes; this would be done by a licensed maintenance contractor using specialized equipment, and oils would be brought on-site and removed on an as-needed basis to avoid storage of substantial quantities on-site. Fuels for heavy equipment, if necessary, would be similarly delivered on an as-needed basis.

Hazardous materials will be used in a manner that is protective of human health and the environment, and will comply with all applicable local, state, and federal environmental laws and regulations. Due to the limited amounts of hazardous materials likely to be present during operations, an SPCC Plan does not appear to be necessary at this time; neither an SPCC Plan nor secondary containment is required for oils in qualified oil-filled equipment.

## 5.0 Non-Hazardous Waste Management

Wheatridge will fully comply with all applicable waste handling and disposal regulations on all lands associated with the Project, during both construction and operation. Solid waste will be stored in a manner that does not constitute a fire, health, or safety hazard until such time as it can be hauled off for recycling or disposal, as appropriate. Exhibit V provides details on the types and amounts of waste, and procedures and systems for the handling and disposal of waste materials.

Solid waste materials, such as excess construction materials or scrap steel, will be generated during construction. When feasible, the waste generated during construction will be recycled. Steel scraps from turbine foundations will be separated and recycled to the extent feasible. Wood from concrete forms will be reused when possible and then recycled. Excess excavated material will be used to restore ground contours after construction.

The only material that has the potential to be disposed of on-site will be waste concrete generated during construction. Waste concrete would consist of concrete solids contained in the concrete chute washout water. Concrete solids and washout water will be contained within a confined area of the foundation excavation. The washout water and any solids will be buried as part of backfilling the turbine foundation. Batches of concrete that do not meet specification will be sent back to the concrete plant. Any excess concrete will be incorporated into the foundation, rather than disposed. There will be no disposal of hardened waste concrete on-site other than as described here.

Packaging waste (such as paper and cardboard) and refuse will be separated, accumulated in dumpsters, and periodically removed for recycling or disposal at the Finley Butte Landfill by a licensed waste hauler and reported to the Morrow County Wasteshed at the request of the Morrow County Planning Department. Portable toilets will be provided for on-site sewage handling during construction and will be pumped and cleaned regularly by the construction contractor.

During operations, little solid waste will be generated by the Project. Office waste generated at the O&M Buildings will be separated and periodically removed for recycling or disposal at the Finley Butte Landfill. Sewage from the O&M Buildings will be disposed of on-site with a septic system.

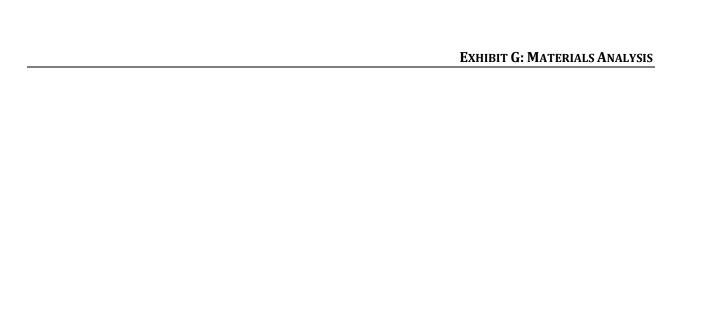
# **6.0** Submittal Requirements and Approval Standards

# **6.1 Submittal Requirements**

Table G-3. Submittal Requirements Matrix		
Requirement	Location	
OAR 345-021-0010(1)(g) A materials analysis including:		
OAR 345-021-0010(1)(g)(A) An inventory of substantial quantities of industrial materials flowing into and out of the proposed facility during construction and operation.	Section 2.0, 3.0	
OAR $345-021-0010(1)(g)(B)$ The applicant's plans to manage hazardous substances during construction and operation, including measures to prevent and contain spills.	Section 4.0	
OAR 345-021-0010(1)(g)(C) The applicant's plans to manage non-hazardous waste materials during construction and operation.	Section 5.0	
Project Order Comments	Location	
None	NA	

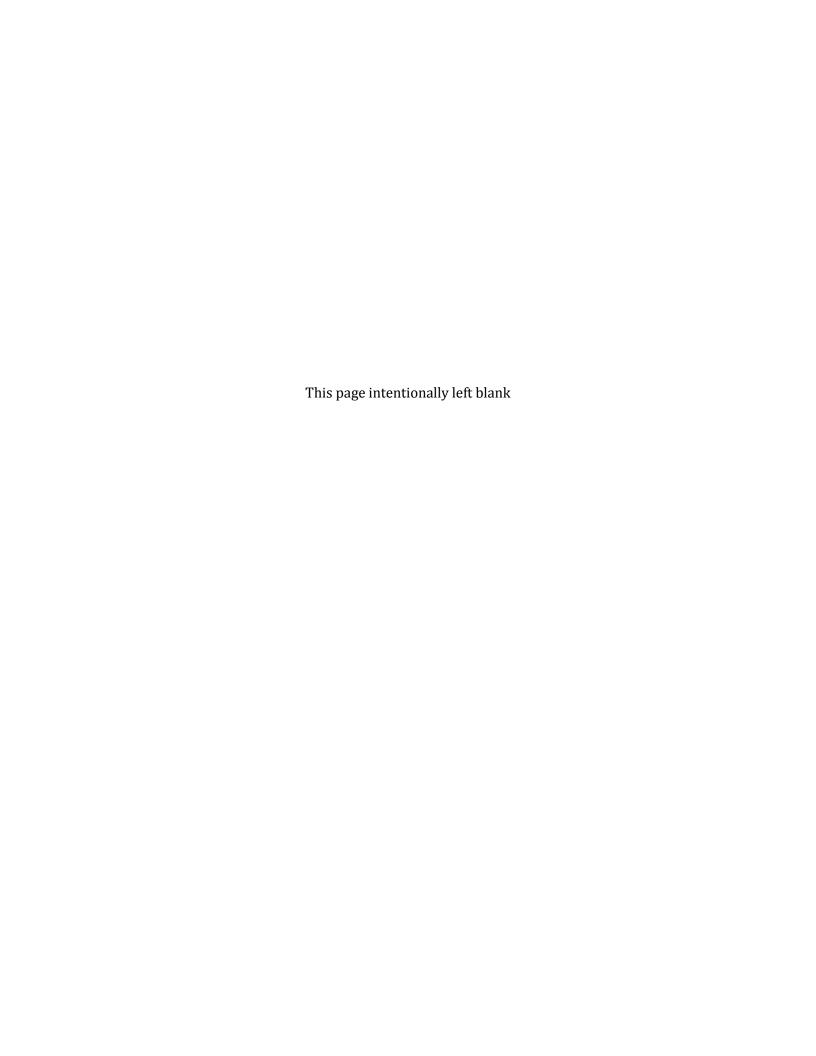
## **6.2** Approval Standard

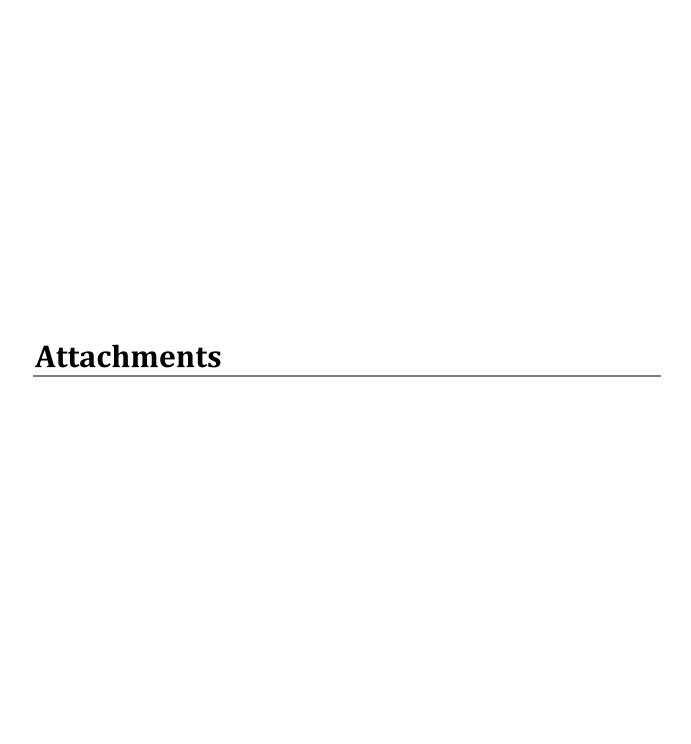
OAR 345 Division 22 does not provide an approval standard specific to Exhibit G.

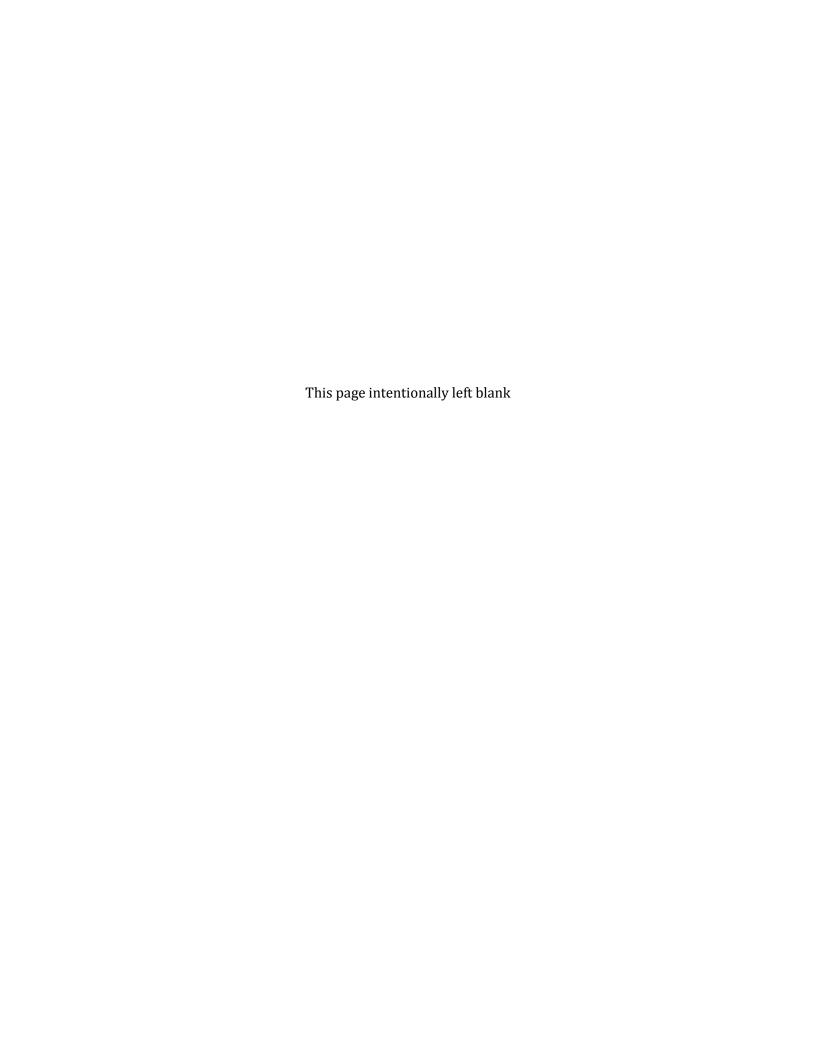


This page intentionally left blank

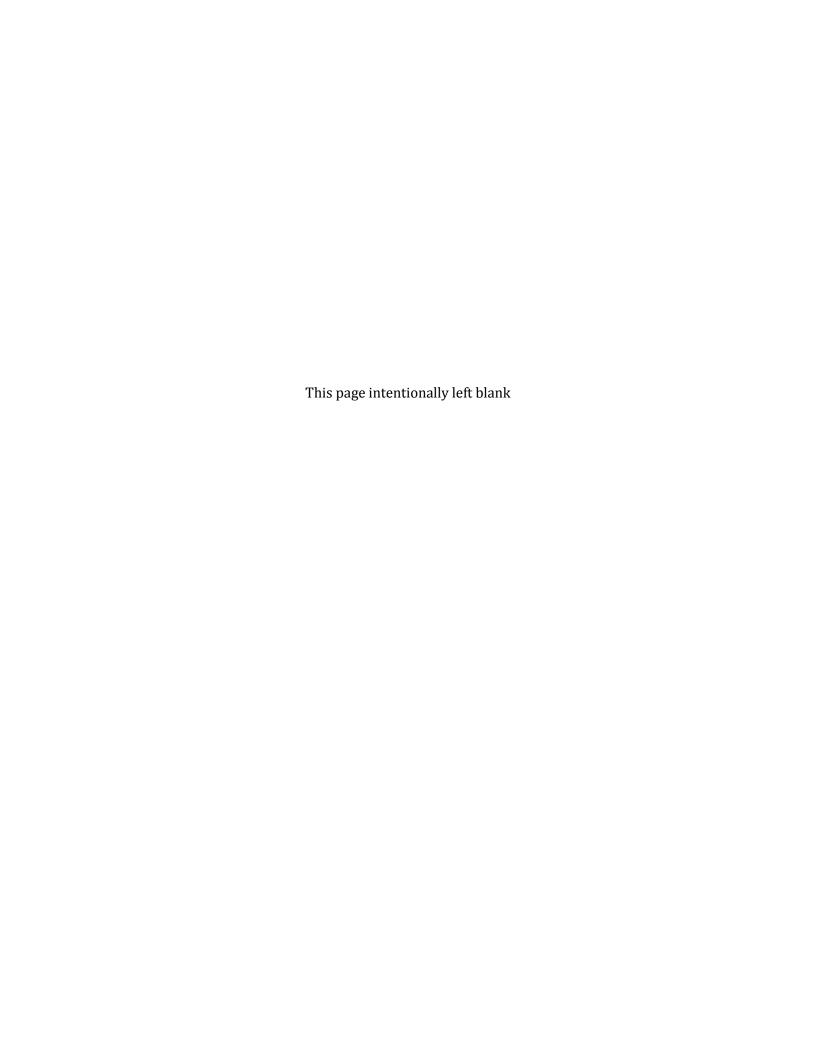














18122 Hulden rd. Arlington Oregon 97812 Phone 541 454 2244 Fax 541 454 2344

December 9th, 2014

Andrew O'Connell Wheatridge Wind Energy, LLC. Ione Oregon

Projects; Wheatridge Wind Energy, LLC. Facility Ione Oregon

Dear Andrew,

W.I. Construction Inc. has been involved in the construction of numerous wind projects. The total number of megawatts that we have been involved in exceeds 1500. W.I. Construction Inc. has furnished in excess of several million tons of rock for the construction needs of each individual project, as well as 400,000-450,000 cubic yards of concrete for the tower foundations, and sub stations alike.

I Jack Ingram (owner/pres. of W.I. Const. Inc.) have worked very diligently with the property owners on all of the projects that W.I. Construction Inc. has been involved in. In most cases we have harvested the raw materials from the local property owners. We also work very hard at utilizing the local businesses to try and keep the money earned in the local area. Also 85% of W.I. Construction Inc. employees are from the Morrow County area, as that is where we are set up with one of our concrete plants which is located at the Port of Morrow in Boardman Oregon.

Please take note that W.I. Construction Inc. has the means and equipment to supply all of your aggregate and concrete needs for the Wheatridge Wind Energy, LLC. Facility. If you have any questions or concerns please feel free to give me a call.

Sincerely,

Jack Ingram,
Owner/President,
W.I. Construction Inc.