

OREGON DEPARTMENT OF ENERGY

REGARDING STATUTES, ADMINISTRATIVE RULES)
AND OTHER REQUIREMENTS APPLICABLE TO THE)
PROPOSED LOWER COLUMBIA CLEAN ENERGY) PROJECT
CENTER (LCCEC) AS DESCRIBED IN THE NOTICE OF) ORDER
INTENT DATED SEPTEMBER 18, 2006)
)

On September 18, 2006, Westward Energy LLC (Summit), an Oregon company, submitted a Notice of Intent (NOI) to the Energy Facility Siting Council (EFSC or “the Council”) to construct a 366 megawatt Integrated Coal Gasification Combined Cycle (IGCC) electric generating plant near Clatskanie, in Columbia County. The proposed facility is known as the "Lower Columbia Clean Energy Center" (LCCEC).

ODOE distributed the NOI to reviewers for comments and recommendations as required by ORS 469.350(2) and OAR 345-20-0040. They included state agencies, the Northwest Power Planning Council, Columbia County, and the cities of Clatskanie and Rainier. ODOE notified adjacent property owners pursuant to OAR 345-0020-0011(1)(f), as well as members of the EFSC’s general mailing list and persons on the mailing list for the previously approved Summit Westward Energy Project.

As required by OAR 345-15-0130, ODOE held a public information meeting concerning the project in Clatskanie on November 15, 2006.

OAR 345-15-0160(1) requires in relevant sections that ODOE issue an order (the "Project Order") which establishes the following:

- (a) All state statutes and administrative rules containing standards or criteria that must be met for the Council to issue a site certificate for the proposed facility, including applicable standards of Divisions 22, 23 and 24 of this chapter;
- (b) All local government ordinances applicable to the Council's decision on the proposed facility;
- (c) All application requirements in OAR 345-021-0010 applicable to the proposed facility;
- (d) All state and local permits necessary to the construction and operation of the proposed facility and the name of each agency with the authority to issue such permits;
- (e) Any other data and information that must be included in the application for a site certificate to allow the Council to determine whether the proposed facility will comply with applicable statutes, administrative rules and local government ordinances;
- (f) The analysis area(s) for the proposed facility;

- (g) Public concerns that address matters within the jurisdiction of the Council that the applicant shall consider and discuss in the application for a site certificate, based on comments from the public and reviewing agencies;
- (h) If the applicant has identified one or more proposed corridors in Exhibit D of the notice of intent as required by OAR 345-020-0011(1)(d), any adjustments to the corridor(s) that the applicant shall evaluate in the corridor selection assessment described in OAR 345-021-0010(1)(b);
- (i) If the applicant chooses to demonstrate need for a proposed electric transmission line, natural gas pipeline, or liquefied natural gas storage facility under the economically reasonable rules, OAR 345-023-0030 and OAR 345-023-0040, the alternatives the applicant must evaluate in the application for a site certificate in lieu of construction and operation of the proposed facility in addition to the alternatives described in OAR 345-021-0010(1)(n)(E) or (F), if any;
- (j) Except in the case of an expedited review granted under OAR 345-015-0300, the expiration date of the notice of intent, according to OAR 345-020-0060(1).

ORS 469.401(4) provides that certain matters are not governed by a Site Certificate issued by the Council. This Project Order does not consider these matters because they are outside the Council's jurisdiction and will not be addressed in the Council's review of the proposed facility. However, the proposed facility must still comply with all applicable requirements.

As provided in ORS 469.330, ODOE or the Council may amend this Project Order at any time.

THEREFORE, the Oregon Department of Energy, pursuant to OAR 345-15-0160(1), orders that:

I. DEFINITIONS (see OAR 345-01-0010)

As used in this Project Order:

"Site" means the land upon which an energy facility is proposed to be located, including any rights-of-way for linear facilities. Therefore the site for this project is the power plant site described in NOI Exhibit C, and the corridor for any associated water lines, power lines or gas supply lines.

All other terms that are defined in OAR Chapter 345 Division 1 have the meaning defined in that rule unless otherwise specified.

II. APPLICABLE STATE STATUTES, ADMINISTRATIVE RULES, RELATED PERMITS OR OTHER APPROVALS, AND SPECIFIC INFORMATION NEEDED (OAR 345-15-0160(1)(a), (d)and (e))

The Oregon statutes and administrative rules which the Application must address, the related state permits and approvals which are required, and the specific information

needed in the Application for a Site Certificate for the Summit Westward Energy Project are listed below.

1. ENERGY FACILITY SITING COUNCIL:

ORS 469.300 et seq.; OAR Chapter 345, Divisions 1, 21, 22 and 24.

Permit: Energy Facility Site Certificate required before construction or operation.

2. OREGON DEPARTMENT OF AGRICULTURE--PLANT CONSERVATION BIOLOGY PROGRAM:

ORS 564; OAR Chapter 603, Division 73.

Permit: None required. Agency provides technical review and recommendations on compliance with Council rule OAR 345-022-0070.

OAR 603-73-0070 contains the state list of endangered and threatened plant species (see “State of Oregon Endangered and Threatened Lists for Plants” by the Oregon Department of Agriculture (ODA)). OAR 603-73-0080 provides the authority to designate candidate plant species (see “A Guide to the State of Oregon Candidate List of Plants” by the ODA).

Information for the Application (see also OAR 345-021-0010(1)(q)):

The application shall include a list of both state and federally-listed endangered, threatened, and candidate plant species that have potential to occur in the analysis area for threatened and endangered plant species described at section VI of this order. The list may be based on a review of literature, consultation with knowledgeable individuals and shall include species listed on the Oregon Natural Heritage Program database, based on at least a five- mile wide database search.¹ ODA records show that *Howellia aquatilis*, a state-listed plant species, may be found in the project area.

If potential habitat for any listed species occurs within the analysis area for listed plant species, then the application shall include a description and the results of a field survey for the listed plant species within the analysis area. Surveys must be conducted by a person with expertise in field botany, plant taxonomy and biological conservation. Survey should be conducted during the time of year when it is possible to identify any listed plants (usually when these plants are in flower and fruit). The field survey report

¹ Council rule OAR 345-022-070 applies only to state-listed plant and animal species. However, Council rule OAR 345-021-0010(1)(q) requires applicants to consider plant and animal species listed as endangered or threatened under both state and federal law. This is because the Council, in making its decision, must be mindful of possible adverse impacts to federally-listed species. Note also that OAR 345-022-070 applies to all lands affected by a proposed facility including state, federal and private lands.

should include written descriptions of the survey methods and areas surveyed, and any photographs taken.

Because the project is taking place, in part, on non-federal public lands (in this case, land owned by the Port of St. Helens) in the state of Oregon, certain aspects of Oregon Senate Bill 533 and its corresponding Oregon Revised Statute (ORS 564) apply. The purpose of this bill is to facilitate the protection and conservation of Oregon's threatened and endangered plants and their habitat. (For more information, please refer to OAR 603-073 at: http://arcweb.sos.state.or.us/rules/OARS_600/OAR_603/603_073.html.)

Submit survey results, along with an assessment of potential impacts to any listed plants identified on the facility site, to ODA within 30 days of the survey. Include all correspondence in the ASC and send all correspondence to:

Native Plant Conservation Program, Oregon Department of Agriculture
Cordley 2082
Oregon State University
Corvallis, Oregon 97331

If it is determined that there will be an impact to listed plants, ODA may require a written evaluation of the land action in relation to the population of the listed species. The written evaluation should include: scientific name of the species, authority, common name, historical/present distribution, estimation of how much of known range of species is likely to be affected by current or proposed land action, description of habitat of listed species at proposed site (include relative abundances of other plant species, soil characteristics, elevation, history of land actions, summary of current land uses, ownership patterns of adjoining properties), qualitative/quantitative assessment of populations of listed species at site (number of individuals, age/stage structure, signs of disease or predation, pollinators, seed production, suspected present or past impacts of land actions past or present), evaluation of predicted effects of proposed land action and reasonable measures to minimize any potential adverse impacts.

Once the written evaluation is submitted, ODA will review the document and return comments within 90 days. At this time ODA may recommend alternatives to proposed actions. A formal consultation and/or a permit may be required.

The ODA contact for the plant conservation program is:

Rebecca Currin
Native Plant Conservation Program, Oregon Department of Agriculture
Department of Botany and Plant Pathology, Oregon State University
Cordley 2082
Corvallis, Oregon 97331
(541) 737-4333
currinr@science.oregonstate.edu

In a letter dated October 5, 2006, ODA commented on the NOI and outlined ODA requirements if survey results show that construction or operation of the facility could affect listed plant species. ODOE transmitted that letter to the applicant and attaches it to this Project Order.

3. DEPARTMENT OF ENVIRONMENTAL QUALITY--WATER QUALITY:

ORS Chapter 468 and 468B; OAR Chapter 340, Divisions 14, 41, 45, 52 and 55.

Permit: NPDES (federally-delegated)

The NOI states that the facility will use waste water discharge facilities provided by the Port of St. Helens, under an NPDES permit held by the Port of St. Helens. The NPDES permit is federally delegated and not under EFSC jurisdiction. However, the ASC should include a copy of the NPDES permit, an itemized list of design basis waste water discharges to the Port discharge facility, and an analysis demonstrating that discharges from the proposed facility will not exceed permit limits, taking into account discharges from other users of this discharge facility.

Exhibit E of the NOI does not list a state WPCF permit for process water discharge among required permits. The requirements for that permit would fall under the federally delegated NPDES permit. However, if a WPCF permit is required, that permit is a state permit and therefore is under EFSC review. WPCF permits are issued in accordance with the procedures set forth in Oregon Administrative Rules (OAR) 340-014-0005 through 340-014-0050. The specific regulations for WPCF permits are in OAR 340-045 "Regulations Pertaining to NPDES and WPCF Permits".

4. OREGON DEPARTMENT OF FISH AND WILDLIFE—WILDLIFE DIVISION:

ORS 496, 506 and 509; OAR Chapter 635, Divisions 100, 415, and 425.

Permit:None

Note: Agency provides technical review and recommendations on compliance with Council rules OAR 345-22-0040, 0060 and 0070.

ODFW will base its review and recommendations for the proposed project on the following applicable statutes and rules.

ORS 496.012 Wildlife Policy

ORS 496.171 through 496.192 Threatened and Endangered Wildlife Species

ORS 498.301 through 498.346 Screening and By-pass Devices for Water Diversions or Obstructions

ORS 506.109 Food Fish Management Policy

ORS 509.140 Placing Explosives in Waters
ORS 509.580 through 509.910 Fish Passage; Fishways; Screening Devices; Hatcheries
Near Dams

OAR Chapter 635, Division 100 provides authority for adoption of the State sensitive species list and the Wildlife Diversity Plan, and contains the State list of threatened and endangered fish and wildlife species.

OAR Chapter 635, Division 415 classifies habitat into six categories and establishes a mitigation goal for each category. The site certificate application (ASC) for this project must identify the appropriate habitat category for all project areas, provide the basis for each category selection, and then propose appropriate mitigation for the project-impacted areas, all subject to ODFW review. ODOE adopted this rule into OAR 345-022-0060 as an energy facility siting standard. ODFW's Fish and Wildlife Habitat Mitigation Policy can be found on the ODFW website at:
http://www.dfw.state.or.us/lands/mitigation_policy.asp.

OAR Chapter 635, Division 425 contains requirements for in-water blasting. In the unlikely event that the project requires in-water blasting, an in-water blasting permit would be required. An application for an in-water blasting permit must include the information necessary to meet the requirements of ORS 509.140 and OAR 635-425-000 through 635-425-0050 and be submitted to ODFW for approval. An application for an in-water blasting permit must be submitted 90 days prior to the date of blasting. An In-water Blasting Permit Application form is available on the ODFW website at:
http://www.dfw.state.or.us/lands/inwater/inwater_app.pdf.

ODFW also provides technical review and recommendations in compliance with Oregon Energy Facility Siting Council (EFSC) rules OAR 345-021-0010(1)(p) and (q) and 345-022-040, 060 and 070.

Impacts to Listed Species- ODFW is concerned about potential impacts to the dusky Canada goose (wintering: no state listing), peregrine falcon (State-endangered), bald eagle (State and Federally-threatened), Columbian white-tailed deer (State-sensitive vulnerable and Federally endangered) and the coastal cutthroat trout (State-critical). ODFW is also concerned about potential impacts to the great blue heron, which is considered sensitive under the Forest Practices Act. This species is not listed under OAR Chapter 635, Division 100 and therefore does not apply for purposes of EFSC's Threatened and Endangered Species Standard. However, it should be taken into account for habitat categorization under the Fish and Wildlife Habitat standard.

Mitigation for Impacts to Fish and Wildlife Habitat - ODFW is concerned about impacts to sensitive wetland habitats and operational impacts such as noise that may impact hunting, fishing or other recreational opportunities within the general area. ODFW is particularly concerned about impacts to sensitive and important habitats such as waterways, riparian areas and wetlands. ODFW will seek avoidance as the primary mitigation measure for wetland impacts under the Fish and Wildlife habitat mitigation

policy. A knowledgeable professional shall perform a detailed noise survey and sphere of influence calculations and analysis. Wetlands within the analysis area shall be delineated. ODFW will recommend mitigation for unavoidable impacts in accordance with the Fish and Wildlife Habitat Mitigation Policy in OAR Chapter 635, Division 415.

Westward must delineate wetlands within the analysis area. Based on the Project Order for the original Summit Westward natural gas fired facility, you should delineate the canals associated with the Beaver Creek Drainage District. The application should indicate when the delineation was performed and should reference the available data. Based on these delineations Summit/Westward should identify and describe the location, nature and extent of potential impacts to wetlands, and propose measures for mitigating these impacts. Mitigation for adverse impacts to wetlands must address the requirements of the Fish and Wildlife Habitat Mitigation Policy in OAR Chapter 635, Division 415, and applicable requirements of the Division of State Lands in OAR Chapter 141, Division 85.

The footprint of the LCECC Project is larger than that of the original Summit/Westward Project due to the coal storage area and proposed coal conveyor or railroad loop. It appears more acres of jurisdictional wetlands will be impacted by the LCECC Project, thus more mitigation will be required. The ASC must address new and revised project plans as well as new natural resource information, e.g. a new Oregon Natural Heritage Information Center data request should be made and updated coordination done with USFWS and NOAA Fisheries as well as ODFW.

ODFW Comments on the NOI

Coal off-loading facility: The NOI does not state whether the coal off loading facility will be constructed expressly for the LCCEC, or if it is part of a general purpose facility constructed by the Port of St. Helens for use by others. If the off-loading dock is part of a general purpose docking facility constructed for use by others, then the application must clarify this and provide evidence that the dock will be used by others and that the Port of St. Helens will obtain all needed permits. Otherwise, the ASC must address the impacts from construction and operation of the dock and propose mitigation for the impacts.

Related and Supporting facilities: Any new transmission lines, pipelines, rail lines, coal conveyor lines, dock(s) and roads associated with this project should be included in the biological evaluation and proposed mitigation for this project.

Federal Permits, Standards, and Criteria: Consideration of Federal threatened and endangered species and review by U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries is not included in the list and should be.

ODFW has the following recommendations for surveys in support of the Application for Site Certificate

- Conduct new habitat evaluations to reflect current habitat conditions, categories, and values to fish and wildlife. Habitat conditions have likely changed.
- Conduct more than one wildlife survey and conduct surveys at different time periods throughout the year to get a more accurate reflection of wildlife use of the site. The list of wildlife observed for the Summit/Westward Project was based on only one day in the field (February 22, 2001).
- Identify potential wildlife species use based on existing habitat characteristics. The Summit/Westward Project did not do this.
- Consider updating the wetland delineation - the 1987 David Evans and Associates wetland delineation may be outdated.
- Apply ODFW's current Fish and Wildlife Habitat Mitigation Policy or OAR 345-022-0060 (EFSC's siting standard for fish and wildlife habitat).
- Obtain updated species occurrence information from the Oregon Natural Heritage Information Center (ORNHIC) and other available data sources.
- No fish species are mentioned in the State and Federal threatened and endangered species list of occurrences within the project area. If the proposed dock extension is part of the LCECC Project, there should be fish in this list. The document was not clear as to the use of "project area" and "analysis area". These should be clearly defined.
- Columbian white-tailed deer – medium (at least) since there is potential for it to occur within the analysis area. The applicant needs to update information on recovery efforts by USFWS of Columbian white-tailed deer since more releases of deer have occurred in the vicinity of the Project. The applicant should update information on recovery efforts. Also, the applicant should take another look at the effects of loss of habitat and address the effects of the project (e.g., coal conveyor/railroad, road) on deer movements
- Bald eagle nest sites occur in the vicinity of the project (the nest site on Crims Island has changed and the Lacoda nest site is new). The applicant should consider the possibility that new bald eagle sites could be discovered in the future. The applicant should update information on nest sites in the area. Nest sites have changed. It is quite possible that the project could have impacts on eagles due to noise during construction (including pile driving for dock construction). These impacts will need to be addressed in the ASC. Impacts can likely be avoided through seasonal restrictions of potentially disturbing activities (if any).
- Peregrine falcon – the applicant should address this species since it is listed under the State Endangered Species Act.

- Include State and Federal Species of Concern or Sensitive species (e.g., purple martin, pond turtle, red-legged frog, etc.) in table J-3 of the NOI.
- The NOI states that the analysis area does not provide suitable fish habitat. If the Project includes the dock extension then this statement would not be true.
- The applicant should add a section on impacts to other wildlife species of concern. For example, osprey nesting on pilings/poles/channel markers, purple martin nesting on pilings, great blue heron rookeries, wintering and migrating waterfowl, and red-legged frogs to name a few.
- The applicant should address the Migratory Bird Treaty Act (MBTA) and potential project impacts to nesting migratory birds. The applicant should avoid impacts to nesting birds by implementing seasonal restrictions on vegetation removal and other potential disturbance.
- The applicant should address impacts to wildlife movements from proposed gas/water pipelines, railroad lines, the coal conveyance system, and facility roads. The applicant will need to provide habitat to allow wildlife to move safely to/from Bradbury Slough and east/west to adjacent habitat areas. The applicant should coordinate provision of wildlife habitat movement corridors with adjacent landowners, including the PGE Port Westward Energy Project.
- The applicant should address potential impacts from transmission lines, including tree/shrub removal, and via direct mortality to avian species (electrocution).
- If the dock extension is part of the Project, the applicant should add a section to address potential impacts to fish. Fish of all life stages likely occur in Bradbury Slough. Potential impacts to fish/fish habitat could occur from dock construction, stormwater discharge, and effluent/pollution discharge. The applicant should also incorporate groundwater and surface water protection measures to protect fish in the event of a spill. Dock construction could result in direct “take” of fish (some listed under the Federal Endangered Species Act) and in habitat loss/modification. In the event of dock construction, the applicant should adhere to the in-water work period of November 1-February 28 and should use bubble curtains during steel pile driving to minimize fish mortality.
- Would the project’s use of deep water vessels involve ballast water exchange? If so, the ASC should address possible impacts to fish and wildlife, including the spread of non-native invasive species during release of ballast water and the entrainment and impingement of fish during intake.

Water Requirements: The project will use the Port of St. Helens' existing municipal water right (12 cubic feet per second (cfs) of 30 cfs total) mostly for cooling water. A below-streambed

(~50 feet deep) water diversion system called a collector well will gather the water needed through horizontal well screens. In this manner, a low rate of flow will be diverted from the Columbia River and should have no effect on aquatic life. Based on this information, ODFW should have no issues related to water use on fish or wildlife resources or impacts on aquatic life. This information should be explained further in the ASC. Is the LCCEC Project going to recirculate and air cool the water?

For the applicant's information and consideration, the project area lies within the Coast Range Ecoregion Conservation Opportunity Area (COA) CR-02 - Columbia-Clatskanie area (taken from ODFW's Oregon Conservation Strategy). Key habitats in this area are: freshwater wetlands, oak woodlands and savannahs, and riparian. Key species in this area are: olive-sided flycatcher, coho salmon, fall Chinook salmon, winter steelhead, and Columbian white-tailed deer. The Oregon Conservation Strategy's Recommended Conservation Actions for this area are: restore floodplain wetlands, tidal wetlands, and bottomland forests. This information should be considered during project planning and mitigation planning.

Habitat Mitigation at "Pereria" property

The previous Summit Westward site certificate included provisions to use the adjacent Pereria property as habitat mitigation. In particular, the property was scheduled to be set aside as a migration corridor for the Columbia White Tailed Deer. The ASC for LCCEC should take into account changes since 2002 in the surrounding area, especially the construction of the Cascade Grain Ethanol facility, and assess the continued effectiveness of this corridor in view of the new construction and in view of the railroad that crosses the property.

Analysis Area for Habitat and Endangered Species

In section VI of this project order the Department of Energy, in consultation with ODFW, has listed nominal analysis areas for the Council's Habitat and Endangered Species standards. Those analysis areas should be considered as base case only, with field studies over a wider area if preliminary "scoping" investigations identify certain more sensitive habitats. The habitats of concern are: riparian areas, wetlands, forested wetlands, streams, and open water.

For these habitats, we recommend that Summit analyze impacts over an area 300 feet from the proposed energy facility site and either side of any proposed transmission corridor, pipeline corridor or coal transportation corridor. The site, for purposes of this analysis, includes temporary construction zones and proposed water intake/discharge facilities. ODOE recognizes that parts of the site (e.g. the "Pereria" property) are included as habitat mitigation areas and not as part of the coal gasification or power plant. For this area, studies may be conducted to the property boundary and need not extend the additional 300 feet.

Regarding the great blue heron, peregrine falcon and the bald eagle, ODFW uses the guidance in the Oregon Forest Practices Act (as implemented at OAR 629-0665), which requires 0.25-mile between forest operations and nesting sites during the critical periods, and 0.5-mile for bald eagle nests within direct line of sight.

ODFW provided detailed comments on the NOI by letter from Rose Owens to Adam Bless on November 1, 2006. That letter was transmitted to the applicant and is incorporated into this Project Order.

5. DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES:

Permit: None required. Agency provides technical review and recommendations on compliance with Council rule OAR 345-22-0020.

Additional Information for the Application:

In view of the alluvial nature of the site and its proximity to the coast, the application should describe the potential for liquefaction, particularly for the Cascadia subduction zone event. The application must be based on adequate site specific geotechnical work and shall provide the results of any site-specific geotechnical work done to date, demonstrating site suitability for the proposed facility. The geotechnical report must be submitted to the Oregon Department of Geology and Mineral Industries for independent review.

ODOE, in consultation with DOGAMI, will propose up to date revisions to the Council's Structural Standard and accompanying information requirements at OAR 345 Division 21 (exhibit H). The new standard is based on the International Building Code rather than the previously used Uniform Building Code. The new code requires more precise definition of ground movement, rather than using the "seismic zone" approach". The geological reports at Exhibit H should now meet the guidance in DOGAMI Open File Report 00-04, which is more detailed and instructive than the guidance in EFSC's previous rule. The revised standard and information requirement are as follows:

**OAR 345-022-0020
Structural Standard**

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that:

(a) The applicant, through appropriate site-specific study, has adequately characterized the site as to Maximum Considered Earthquake Ground Motion identified at International Building Code Section 1615, and maximum probable ground motion, taking into account ground failure and amplification for the site specific soil profile under maximum credible and maximum probable events;

(b) The applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from maximum probable ground motion events. As used in this rule "seismic hazard" includes ground shaking ground failure, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence;

(c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and

(d) The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in subsection (c).

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

OAR 345-021-0010(1)(h)

(h) **Exhibit H.** Information from reasonably available sources regarding the geological and soil stability of the site and vicinity, providing evidence to support findings by the Council as required by OAR 345-022-0020, including:

(A) A geologic report meeting the guidance in Oregon Department of Geology and Mineral Industries open file report 00-04 “Guidelines for Engineering Geologic reports and Site-Specific Seismic Hazard Reports”;

(B) For all transmission lines, a description of locations along the proposed route where the applicant proposes to perform site specific geotechnical work, including but not limited to railroad crossings, major road crossings, river crossings, dead ends, corners, and portions of the proposed route where geologic reconnaissance and other site specific studies provide evidence of existing landslides or marginally stable slopes that could be made unstable by the planned construction;

(C) For all pipelines that would carry explosive, flammable or hazardous materials, a description of locations along the proposed route where the applicant proposes to perform site specific geotechnical work, including but not limited to railroad crossings, major road crossings, river crossings and portions of the proposed alignment where geologic reconnaissance and other site specific studies provide evidence of existing landslides or marginally stable slopes that could be made unstable by the planned construction;

(D) An assessment of seismic hazards. For the purposes of this assessment, the maximum probable earthquake (MPE) is the maximum earthquake that could occur under the known tectonic framework with a 10 percent chance of being exceeded in a 50 year period. If seismic sources are not mapped sufficiently to identify the ground motions above, the applicant shall provide a probabilistic seismic hazard analysis to identify the peak ground accelerations expected at the site for a 500 year recurrence interval and a 5000 year recurrence interval. In the assessment, the applicant shall include:

(i) Identification of the Maximum Considered Earthquake Ground Motion shown at International Building Code Section 1615 for the site;

(ii) Identification and characterization of all earthquake sources capable of generating median peak ground accelerations greater than 0.05g on rock at the site. For each earthquake source, the applicant shall assess the magnitude and minimum epicentral distance of the maximum credible earthquake (MCE);

(iii) A description of any recorded earthquakes within 50 miles of the site and of recorded earthquakes greater than 50 miles from the site that caused ground shaking at the site more intense than the Modified Mercalli III intensity. The applicant shall include the date of occurrence and a description of the earthquake that includes its magnitude and highest intensity and its epicenter location or region of highest intensity;

(iv) Assessment of the median ground response spectrum from the MCE and the MPE and identification of the spectral accelerations greater than the design spectrum provided in the Oregon Structural Specialty Code. The applicant shall include a description of the probable behavior of the subsurface materials and amplification by subsurface materials and any topographic or subsurface conditions that could result in expected ground motions greater than those characteristic of the Maximum Considered Earthquake Ground Motion identified above; and

(v) An assessment of seismic hazards expected to result from reasonably probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, lateral spreading, liquefaction, tsunami inundation, fault displacement, and subsidence;

(E) An assessment of soil-related hazards such as landslides, flooding and erosion which could, in the absence of a seismic event, adversely affect or be aggravated by the construction or operation of the facility;

(F) An explanation of how the applicant will design, engineer and construct the facility to avoid dangers to human safety from the seismic hazards identified in paragraph (D). The applicant shall include proposed design and engineering features, applicable construction codes, and any monitoring for seismic hazards; and

(G) An explanation of how the applicant will design, engineer and construct the facility to adequately avoid dangers to human safety presented by the hazards identified in paragraph (E);

6. DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT:

ORS 197; OAR Chapter 660.

Permit: None required from DLCDD. The NOI states that Summit will request a Council determination of compliance with statewide planning goals pursuant to ORS 469.504(1)(b).

7. OREGON PARKS AND RECREATION DEPARTMENT-HISTORIC PRESERVATION SECTION:

ORS 97, 358 and 390; OAR Chapter 736, Division 51.

Permit: An archaeological permit may be required to conduct archaeological investigations of the site.

Note: Agency and Tribes provide technical review and recommendations on compliance with Council rule OAR 345-22-0090.

Information for the Application:

The application shall include a description and results of an archaeological/cultural survey of the analysis area (see Section VI), conducted by a qualified archaeologist.

The State Historic Preservation Office and the Confederated Tribes of the Grande Ronde commented in writing on November 6th 2006. Their comments were transmitted to Westward Energy on December 1, 2006 and are incorporated by reference in this Project Order.

--OTHER PARKS PROGRAMS:

ORS 390; OAR Chapter 736.

Permit: None required. Agency provides technical review and recommendations on compliance with Council rules OAR 345-22-0080 and 0090.

On November 1, 2006, the department of Parks and Recreation (OPRD) commented on the NOI and named specific parks that should be analyzed in the ASC. Figure G-3 depicts the analysis areas for Recreation, Protected Resources and Visual Resources. There are several Oregon State Parks and Recreation Department (OPRD) properties within these boundaries not identified nor analyzed within the NOI. OPRD requests an impact analysis for the following properties:

Recreation Analysis Area (5-mile radius):

--Beaver Boat Ramp (OPRD property leased to Columbia County)

Protected Resources Analysis Area (20-mile radius):

--Beaver Boat Ramp (OPRD property leased to Columbia County)

--Bradley State Scenic Viewpoint

Visual Resources Analysis Area (30-mile radius)

--Beaver Boat Ramp (OPRD property leased to Columbia County)

--Bradley State Scenic Viewpoint

--Scappoose Bay Landing

--L.L. Stub Stewart State Park

--Banks Vernonia State Trail

The OPRD contact for facility impact on state park impacts is:

Jan E. Houck
Water Recreation Program Coordinator
Oregon Parks & Recreation Department
725 Summer Street NE, Suite C
Salem, OR 97301
Phone: 503.986.0742
Fax: 503.986.0792

8. OREGON DIVISION OF STATE LANDS--WETLANDS:

ORS 196; OAR Chapter 141, Division 85.

Permit: A removal-fill permit is required if 50 cubic yards or more of material is removed, filled or altered within natural wetlands and waterways.

Information for the Application:

The project will require removal-fill permit from the Department of State Lands. The applicant must submit a Joint Permit Application to DSL and the U.S. Army Corps of Engineers, and should submit a copy to ODOE as well. The wetland delineation will require DSL concurrence before ODOE will deem the application for site certificate complete. The JPA will include mitigation in accordance with DSL requirements. In addition, the ASC must include an itemized demonstration of compliance with each applicable provision of ORS 196.825 and OAR 141-085-0050.

--LAND OWNERSHIP:

ORS Chapters 273, 274 and 758; OAR Chapter 141, Divisions 82 and 83.

Note: Pipelines, intakes, outfalls or other structures extending onto or over state-owned submerged or submergible lands require a lease, easement or other approval granted by the Division of State Lands.²

9. WATER RESOURCES DEPARTMENT--WATER RIGHTS DIVISION:

ORS 537 and 540; OAR Chapter 690.

Permit: No new permit. Summit proposes to obtain water from the Port of St. Helens.

Additional Information for the Application:

The application must identify the sources of water to be used by the facility, the quantity of water needed, and the means of disposal and/or reuse of all discharges from the facility. The application must include the information described under OAR 345-021-0010(e)(C), including an assessment of the project's impact on the Port of St. Helens' water permit and its ability to comply with the terms of its water permit.

III. APPLICABLE LOCAL GOVERNMENT ORDINANCES, PERMITS OR OTHER APPROVALS (OAR 345-15-0160(1)(b))

² Proprietary interests in state-owned lands are not within the Council's jurisdiction and Council approval of a site certificate does not bind the Division of State Lands, or any other state agency, to grant a lease, easement or other approval related to land ownership.

Summit indicates that it will request Council determination of compliance with statewide planning goals under ORS 469.504(1)(b).

In email correspondence on December 21, 2006, Columbia County's chief land use planner stated that the applicable substantive requirements from the county zoning ordinance and acknowledged comprehensive plan are still those in effect in October 2004, when Summit Westward renewed its site certificate.

Exhibit K of the application for LCCEC should take into account the applicable substantive criteria from the original Final Order of October 2002 and supplemental land use analyses from amendments 2 through 5 of the Summit Westward site certificate.

The NOI states that Westward Energy is pursuing a zone change for the additional acreage to the west of the original Summit Westward site. ODOE recommends that the zone change be completed directly through the County prior to submitting the ASC.

IV. APPLICABLE REQUIREMENTS OF OAR 345 DIVISION 21 (OAR 345-15-0160(1)(c))

The application shall include the information described in OAR 345-021-0010(1), (2) and (4). Summit must also submit the information required by OAR 345-021-0000, particularly the information in section (5)(b) regarding the status of federally delegated permits issued by DEQ.

The NOI describes provisions from the original Summit Westward Project to contract with Portland General Electric for transmission services. The transmission line serving the Port Westward Generating Plant is now complete and operational. PGE has informed ODOE, and we have confirmed by site inspection, that the new line is built for single circuit. The Port Westward power line goes to Trojan and does not connect with BPA's Allston substation.

The NOI states that Summit may contract with Clatskanie PUD (CPUD) for transmission service. A power line between Summit and Driscoll substation would be a related and supporting facility subject to the EFSC third party permit rule OAR 345-022-0010(3), unless the ASC contains sufficient evidence to support a finding that the CPUD line is constructed for other purposes and would be constructed in the absence of the LCCEC.

The facility will purchase water from the Port of St. Helens. This is considered a third party permit. Information regarding the facility's impact on that water right should appear in support of a showing of compliance with OAR 345-022-0010(3).

Information in support of findings of compliance with the Council's Organizational Expertise Standard should explain explicitly how the certificate holder will assure compliance with the terms, impact reduction and impact mitigation commitment in the site certificate. The description of qualifications to build the facility must not be limited to construction of the gasification plant and power plant. If the certificate uses an EPC contractor, the application must

explain how the certificate holder will provide real time oversight for compliance with commitments and site certificate conditions.

The NOI does not address a docking facility for coal. If the application will be based on the premise that the Port of St. Helens will build a general purpose docking facility for use by other tenants, then the application must contain, in support of the Organizational Expertise standard, sufficient evidence that the Port of St. Helens will obtain all necessary environmental reviews from state and federal agencies, particularly for impact on endangered fish species in the Columbia River. The applicant must also include sufficient evidence that the docking facility is for general use by others and would be constructed even if the IGCC plant is not (the “but for” requirement).

The NOI states that the project will be designed for CO2 sequestration, but does not describe the location or physical layout of any CO2 pipelines or injection wells. Any such pipelines or wells are related and supporting facilities. Exhibit B should include a detailed description and location of such facilities, and the other exhibits must take CO2 pipeline or injection into account as well.

The NOI includes a map showing planned improvements and extension of Hermo road, but gives little detail on plans for the road or Summit’s plans for access from it. The ASC should include, in Exhibit B, the County’s plans for the road, including schedule for obtaining the necessary US Army Corp 404 permit. The ASC should also include a description of any access roads that Summit will use to connect the site to the improved Hermo Road. The facility’s access to Hermo Road is a related and supporting facility. It appears that the alignment of the access road could reduce wetland impact by shifting slightly to the south. In demonstrating compliance with DSL wetlands permitting requirements, the ASC should show that the alignment selected minimizes impacts to wetlands to the extent practical.

Exhibit I should demonstrate that the project will have minimal impact on soil productivity in farm zones adjacent to the site. The county land use code may also require demonstrations of compatibility with adjacent farm zones. The analysis for Exhibit Z of the application should take into account cooling tower deposition from the now completed Port Westward Generating plant..

Exhibit N does not apply since the project is a generating facility. The information described in Exhibit O should still be provided even if LCCEC purchases water from the Port of St. Helens.

Exhibits in support of the EFSC Habitat and Endangered species standards should address the ODFW comments listed in section II of this project order. The project will require water withdrawal from the Columbia river. ODOE realizes that the water right will belong to the Port of St. Helens. However, the ASC should address the incremental impacts of water withdrawal on endangered fish species in the river, taking into account the extent to which the Port’s water right has been developed. Information from the 2002 Summit Westward ASC may be used again, but Summit should take into account new developments such as the startup of the Port Westward plant and the ongoing construction of Cascade Grain.

In addition to the ODFW comments summarized at section II of this order, the ASC must include acceptable plans for post-construction monitoring for raptors and migratory birds.

For habitat that is wetlands, mitigation plans proposed in support of compliance with a DSL removal fill permit may also serve to meet the ODFW habitat mitigation goal, but only to the extent that the wetland being regulated by DSL and the habitat being reviewed by ODFW is the same physical piece of land.

The NOI does not describe the survey protocols for plant, habitat and wildlife surveys. ODOE recommends that Summit provide the survey protocols to ODFW for consultation prior to submitting the ASC.

Information in support of the Scenic and Aesthetic standard should take into account impacts on the Washington side of the river, to the extent that the local county government there has identified scenic resources in its comprehensive plan. The ASC may take into account the site's current zoning under the Columbia county plan.

Exhibit U must address the services listed in OAR 345-022-0110, and should provide sufficient detail regarding storm water drainage and traffic safety. The project requires a 1200-C stormwater discharge permit from DEQ, which is a federally delegated permit and not part of the EFSC site certificate. However, any Erosion and Sediment Control Plan submitted to DEQ must be provided to ODOE to the extent that the plan will be used to demonstrate compliance with the Council's Soil Standard OAR 345-022-0022.

Information regarding traffic safety should take into account the fact that construction on the Port Westward Generating plant is now complete, and construction on Cascade Grain is ongoing. The traffic studies performed for Summit Westward should be updated to reflect the status of these two facilities.

Information that may be appropriate to several Exhibits need not be duplicated. The information may appear once with appropriate cross references.

V. Compliance with EFSC Carbon Dioxide Standard at OAR 345 Division 24.

Base Standard

The LCCEC is considered a base load gas plant for purposes of compliance with the standards at OAR 345 Division 24. The applicable standard is OAR 345-024-0550, and requires a finding that the net carbon dioxide emissions rate of the facility does not exceed 0.675 pounds of carbon dioxide per kilowatt-hour (kwh) of power generated.

Based on the NOI, the LCCEC will be "carbon capture ready" but might not incorporate immediate carbon capture and sequestration. The basic application requirements of OAR 345-021-0010(1)(y) apply, with the following clarifications:

For purposes of the Carbon Dioxide standard, ODOE considers the energy facility boundary to be the coal intake to the gasification process. The ASC should include information on

- i Total coal throughput, and breakdown of coal versus pet coke
- ii Heat content of coal, taking into account the likely coal sources and including pet coke
- iii Total Carbon Dioxide emissions during the gasification and power production stages, including any intermediate steps such as methanation or shift conversion. The emissions should be stated on an annual basis, assuming plant operations at 100% capacity factor.
- iv Information on how the emissions figures were derived, sufficient for ODOE to review the calculations based on readily available chemical engineering data.

ODOE will consider the plant output to be electricity in kwh, net of in house loads associated with gasification, electricity production and intermediate steps. ODOE will apply the standard in units of tons/net kwh and will use the 0.675 value in the current standard for base load plants. ODOE does not recommend that CO₂ emissions from the use of synthetic natural gas delivered to the pipeline system be included in the total emissions required to be offset.

Sequestration

The NOI does not commit to sequestration immediately but states that the facility will be “sequestration ready”. The application should commit to a date by which geological sequestration will be implemented and include an analysis of sequestration alternatives and their feasibility. It should include a plan for implementing sequestration, and evidence that the implementation plan can and will be met. The date should be one that LCCEC can consider a commitment and a site certificate condition.

Sequestration is considered an “offset project” as described at OAR 345-024-0560(2). The application must include the information at OAR 345-021-0010(y)(J) regarding estimates of the amount of carbon dioxide to be sequestered over the life of the project, a monitoring and evaluation program for the success of geologic sequestration, and how the estimate of carbon dioxide sequestration accounts for certainty, quantifiability, and verifiability.

The application should address the situation where sequestration is not achieved by the conditioned date. The application should also address the case where sequestration is implemented but the monitoring and evaluation plan described above does not demonstrate that sequestration is successful and permanent.

At the NOI public meeting of November 15, 2006 and the Council’s meeting of January 5, 2007, the applicant described ongoing efforts to demonstrate the feasibility of geologic sequestration by the Big Sky Carbon Sequestration Partnership and others. Based on the discussion at these meetings, ODOE understands that geologic sequestration is important but uncertain. We also understand that a demonstration plant will eventually be needed to prove the concept on a large scale. However, in view of the experimental nature and uncertainty of large scale sequestration, the Council will require sufficient evidence that the CO₂ can and will be sequestered.

For that reason, if post implementation monitoring indicates that sequestration is not successful, the application should commit to provisions in the form of site certificate conditions, requiring offsets through the monetary path for full power operations over the full life of the plant.

Monetary Path

ODOE anticipates that LCCEC will use the monetary path for compliance in the years before sequestration is implemented. The ASC should include a projection of total CO2 emissions without sequestration for all years prior to the implementation of geologic sequestration. ODOE will recommend that LCCEC fund offsets for all CO2 emissions during those years. Because of the uncertainty surrounding the implementation and success of geological sequestration, ODOE does not, at this time, anticipate giving credit in the pre-sequestration years for CO2 that would be sequestered later in the project's life.

VI. PUBLIC COMMENTS THAT THE APPLICATION SHOULD ADDRESS (OAR 345-15-0160(1)(g) and (h))

ODOE received comments on the NOI from agencies including the Departments of Parks and Recreation (OPRD), Fish and Wildlife (ODFW) and Agriculture (ODA). Those comments are repeated at section II of this order and are incorporated into the recommendations for the application.

ODOE received written statements of support from Columbia County and Teevin Brothers. ODOE acknowledges the support and will consider it in its Proposed Order.

ODOE received letters of concern from Friends of Living Oregon Waters (FLOW) and Brett VandenHeuvel representing Columbia Riverkeepers and Northwest Environmental Defense Center (NEDC). These letters were transmitted to the applicant in their entirety and all points raised should be address in the ASC.

VII. ANALYSIS AREAS FOR THE PROPOSED FACILITY (OAR 345-15-0160(1)(f))

The analysis areas are the minimum areas in which the applicant should study the project's potential impacts. Most of the standards in OAR 345 Division 22 do not refer to an area. The analysis areas below do not limit the applicant's responsibility, but are the distances beyond which ODOE considers adverse impacts unlikely. If it appears the project's impacts could reasonably extend beyond the analysis areas below, then the applicant must comply with the standard where the impacts are likely. The analysis areas are as follows:

For geological conditions and soil stability, OAR 345-21-0010(1)(h), predicted ground motions should be characterized for the site and related and supporting facility locations, based on potential seismic events from all sources including the subduction zone event.

For soil types OAR 345-21-0010(1)(i), the area within the site and on adjacent farm properties, noting that cooling tower drift impacts may need to be considered over a larger area based on

wind and weather patterns in the area. The Council's only other experience with a coal fired generating plant is with the Boardman plant in Morrow County. Based on that experience, the applicant should identify DEQ criteria pollutants that could affect farm productivity. Note that a statement of compliance with DEQ air permitting regulations will not by itself meet the Council's Soil Standard, because DEQ air emission standards are intended to protect human health and safety but not necessarily impacts on farm land or forest land.

For land use, OAR 345-21-0010(1)(k), the analysis of compliance with statewide planning goals, applicable criteria from the County's zoning ordinance and DLCD regulations directly applicable under ORS 196.646 should take into account the site, all related and supporting facilities, all properties to be used for habitat mitigation, and all temporary laydown and construction areas.

For protected areas, OAR 345-21-0010(1)(l), the application should consider potential impacts on all listed protected areas within a 10 mile radius from impacts other than air emissions. For air emissions, the application should model impacts to all Class I areas within 50 miles, including the Columbia Gorge.

For fish and wildlife habitat, OAR 345-021-0010(1)(p) and threatened and endangered species:

- a) For raptor nesting sites and great blue heron rookeries, at a minimum, the area within one quarter mile of the site;
- b) For evaluating fish and wildlife habitat as set forth in OAR Chapter 635, Division 415, at a minimum, a "base case" analysis area within three hundred feet on either side of any proposed linear facilities such as pipelines or transmission lines, and a similar distance from the proposed power plant site and water intake/discharge facilities. If it appears that the base case analysis area includes the specific habitat types listed by ODFW in Section II.4 of this proposed order, then the analysis area may be widened as discussed in Section II.4.
- c) For threatened and endangered animal species (OAR 635-100-0125), the same analysis areas as described in (b) above.
- d) In this context, "raptor nesting sites" means nesting sites for birds of prey, such as bald and golden eagles, osprey, hawks, falcons and large owls; "threatened and endangered animal species" means species listed as threatened or endangered by the state under ORS 496.172 and by the federal government at 16 USC section 1533. (see section II, footnote 1).

For threatened and endangered plant species (OAR 603-73-0070), OAR 345-021-0010(1)(q), at a minimum, an analysis area within one hundred fifty feet on either side of any proposed corridor for transmission, water supply or discharge, and rail, and a similar distance surrounding the proposed power plant site and water intake/discharge facilities. A narrower area may be used if agreed to by ODOE. In this context, "threatened and endangered plant species" means species listed as threatened or endangered by the state under ORS 564.105 and by the federal

government at 16 USC section 1533. (see section II, footnote 1)

For scenic and aesthetic impacts, OAR 345-21-0010(r), the area within five miles of the site.

For historic and cultural resources, OAR 345-21-0010(s), the site and immediate vicinity, including the corridor for any pipelines, transmission lines, or coal transport corridor.

For recreation, OAR 345-21-0010(t), the area within five miles of the site, including recreational opportunities on the Columbia River.

For socio-economic impacts, OAR 345-21-0010(u), the area within 20 miles of the site, particularly communities along the Columbia River and highway 30.

VII. DATE APPLICATION MAY BE SUBMITTED (OAR 345-21-0000(2))

An Application for Site Certificate may be submitted to the Oregon Department of Energy any time after this Project Order is issued.

VIII. EXPIRATION DATE (OAR 345-15-0160(1)(j))

Pursuant to OAR 345-20-0060(1) this Project Order shall expire 18 months following the date this Project Order is issued. The date of expiration is August 6, 2008. You may petition the Council to extend the duration of the NOI as provided in OAR 345-20-0060.

If an application for the facility for which this Project Order is issued has not been submitted prior to August 6, 2008, or the date of any extension granted by the Council, a new NOI must be submitted for the facility in order to satisfy ORS 469.330.

Failure to include an applicable statute, rule, ordinance, permit or other requirement in this Project Order shall not render that statute, rule, ordinance, permit or other requirement inapplicable, nor in any way relieve applicant from the duty to comply with the same.