



## STATE OF WASHINGTON

### ENERGY FACILITY SITE EVALUATION COUNCIL

*PO Box 43172 • Olympia, Washington 98504-3172*

#### **MITIGATED DETERMINATION OF NONSIGNIFICANCE**

Pursuant to Chapter 463-47 WAC and WAC 197-11-350

For the

#### **SATSOP COMBUSTION TURBINE PROJECT (GRAYS HARBOR ENERGY CENTER)**

#### REQUEST TO AMEND THE SITE CERTIFICATION AGREEMENT

##### ***Description of proposal:***

Grays Harbor Energy LLC (GHE), a subsidiary of Invenergy LLC (the Certificate Holder) is proposing to amend the Site Certification Agreement for the Satsop Combustion Turbine Project to add two combustion turbine generators (Units 3 and 4) and a single steam generator, and to change the name of the facility to the Grays Harbor Energy Center. The additional equipment will increase the maximum electrical generation capacity by approximately 650 MW, doubling the project's generating capacity. Certain facilities installed for the existing Satsop Combustion Turbine Project, such as the operations office and control room, warehouse, workshops, natural gas pipeline, and the water treatment building also will serve Units 3 and 4, and new facilities of this type are not required.

Units 3 and 4 would be constructed on the existing Satsop Combustion Turbine Project site. A Site Certification Agreement (SCA) (Application 94-1) was previously approved by the State of Washington. The new facilities would be located entirely within the boundaries of the previously permitted site. As a result, the Certificate Holder is applying to the Energy Facility Site Evaluation Council (EFSEC) for an amendment to the existing SCA to allow construction and operation of an additional two units (Units 3 and 4). This amendment is the fourth amendment to the SCA that was originally issued for the Satsop nuclear power plants.

In its amendment request the Certificate Holder proposed to enlarge the project site boundaries to include an additional 10 acres for construction laydown and access. In response to comments, the Certificate Holder has withdrawn its proposal to expand the site, and as explained below, will obtain a short term lease on other property owned by the Grays Harbor Public Development Authority (PDA) for use as a laydown area during project construction.

***Proponent:***

Grays Harbor Energy LLC, a subsidiary of Invenergy LLC (Invenergy)

***Location of proposal, including street address, if any:***

The site is located south of the Chehalis River near the town of Elma (see Figure 2.1-1 Project Location in the Application for SCA Amendment). The 1600-acre Satsop Development Park surrounds the site on all four sides. The site is located approximately 0.5 mile southwest of the river. Fuller Creek is approximately 0.5 mile to the east, and Workman Creek is located approximately 2 miles to the east.

The permitted site is currently used for operation of the Satsop Combustion Turbine Project (Grays Harbor Energy Center Units 1 and 2), and was cleared prior to the start of construction. To the north and northwest of the site are various field offices, storage buildings, and stockpiled building materials (see Figure 2.1-2 Project Site in the Application for SCA Amendment). Similar items and facilities are located to the west side across Keys Road. To the south is the BPA transmission line right-of-way. East of the site is approximately 5 acres of forest. Farther to the east is grassland that is annually mowed.

The Certificate Holder originally proposed to expand the existing site boundary by approximately 10 acres for construction laydown and access. The additional property consists of approximately 5 acres of forest and approximately 5 acres of pasture land.

The existing transmission line corridor from the plant site to the BPA substation is shown on Figure 2.1-1 (in the Application for SCA Amendment). This corridor contains two high-voltage transmission lines and one distribution line and is maintained with only grass and low vegetation except within the Fuller Creek drainage channel. The creek is approximately 120 feet below the surrounding ground surface, and there is a small concrete and rock dam and drain pipe within the creek in the right-of-way. New transmission lines would be added to the existing structures between the project site and the substation. No new clearing would be required.

The natural gas supply will continue to be provided by the natural gas pipeline already constructed for the Satsop Combustion Turbine Project.

***Address of property involved:***

401 Keys Road, Satsop, Washington.

***Analysis of Impacts***

The proposed addition of Units 3 and 4 is not expected to have more than minor impacts to Earth, Plants, Energy and Natural Resources, Environmental Health, Land and Shoreline Use, Housing, Aesthetics, Recreation, Historic and Cultural Preservation, Public Services, or Utilities. Mitigation measures have been proposed to reduce potential impacts to Air, Water, Animals, Noise, Light and Glare, and Transportation to below the level of significance. A summary of the analysis is as follows:

## 1. Air

### Potential Impacts:

Modeling analysis indicates that maximum ambient concentrations of criteria pollutants will be below "significant impacts level" and concentrations of toxic pollutants will be below acceptable source impact levels. The operation of all four units will not cause ambient air quality standards to be exceeded.

Operation of Units 3 and 4 will result in the emission of CO<sub>2</sub>. Whether or not it results in a net increase in CO<sub>2</sub> emissions will depend upon whether its operation displaces other higher CO<sub>2</sub>-emitting facilities.

### Mitigation Measures:

- Units 3 and 4 will include best available emission control technology (BACT).
- The PSD permit will establish operational conditions and emission limitations.
- The Certificate Holder will comply with RCW 80.80 emission performance standards.
- The Certificate Holder proposes to mitigate CO<sub>2</sub> emissions in accordance with RCW 80.70's monetary path.

## 2. Water

### Potential Impacts:

Units 3 and 4 would use up to 6.5 cfs in addition to the water use already authorized by the SCA.

The flow in the Chehalis River near the Project site occasionally falls below the base flow levels established in WAC 173-522-020. In the five years from 2005 through 2009, the river at Station 12.0350.02 has experienced flows below regulatory base flow levels from 13 to 44 days per year. However, many of those days occur during times of the year when the regulatory base flow is relatively high. The flows on these "below base flow" days range from a high of 3,770 cfs to a low of 594 cfs. The average flow on these days was 2,118 cfs. URS aquatic biologists have reviewed this data and other information about the Chehalis River and its fish population, and they have concluded that the withdrawal of an additional 6.5 cfs of water would not have a measurable impact on aquatic habitat, fish, or other aquatic species.

Operation of Units 3 and 4 will result in the discharge of waste water to the Chehalis River that is similar in quality to the water discharged by the existing Units 1 and 2. Discharge of this waste water will not result in the exceedance of water quality standards in the Chehalis River.

### Mitigation Measures:

- On days in which the flow in the Chehalis River at station 12.0350.02 is below regulatory base flows, the Project will use water withdrawn pursuant to water rights that are not subject to base flow limitations.
- Discharges will be subject to the requirements of the NPDES permit, which are designed to protect water quality and aquatic habitat.

- Sampling and reporting requirements in the permit will be used to monitor compliance.

### **3. Animals**

#### Potential Impacts:

The Certificate Holder originally proposed to expand the site by ten acres, with the additional area to be used for construction laydown and access. Approximately half of the ten acre area is conifer forest and the other half is grassland that until recently was mowed annually. Dames & Moore biologists conducted vegetative studies and wildlife investigations in 1994. URS performed field reconnaissance studies in 2008 to verify and update the 1994 results. The ten acres does not contain any wetlands.

This additional ten acres is part of the area designated for industrial development under the Satsop Development Park Master Plan. Grays Harbor County developed the Master Plan in collaboration with the Washington Department of Fish & Wildlife (WDFW) in 2008. The Master Plan covers approximately 1,660 acres, identifying 510 acres for development, and leaving 1,150 acres for infrastructure, utility corridors, recreation, public access, forest management and wildlife habitat. The Master Plan, in effect, provides mitigation land to compensate for the impacts associated with the areas proposed for development.

WDFW has expressed concerns about clearing the forested area and indicated that the forested area is somewhat fragmented from other forested areas within the Satsop Development Park, but still may provide some wildlife habitat and cover for large game animals. The PDA property on the north side of the access road (lots W-9, W-10, and W-11) was suggested to be a more suitable area for laydown and construction parking from a wildlife habitat perspective as that land is already cleared. If there is not adequate space on that property, a grassy area previously cleared for the meteorological tower for old nuclear plant located to the east of the stand of trees may be used.

#### Mitigation Measures:

- In response to WDFW concerns, the Certificate Holder has withdrawn its proposal to expand the site and will not clear the forested acreage as originally proposed. Instead, the Certificate Holder will enter into a short-term lease to utilize other PDA property for construction laydown. For construction laydown, the Certificate Holder will use some or all of three lots north and east of the project site, W-9, W-10, and W-11, which have already been cleared for future development, and if necessary, portions of the grass covered acreage originally proposed as part of the expansion area.
- WDFW supports the Certificate Holder's use of these areas for laydown as an alternative to the original proposal to clear and use the forested area east of the project site. WDFW has agreed that some trees may be removed in order to improve the road to County standards to be used as a two-way access road.

The amount of tree removal would be the minimum required for roadway widening and drainage. WDFW has also suggested that, if needed for construction access, a new roadway may be constructed in the grassland east of the forested area to connect the access road on the north side of the site to the south property line.

#### **4. Noise**

##### Potential Impacts:

Computer modeling predicts that the total noise produced with all four units operating will be less than 50 dBA at nearby residential properties and less than 70 dBA at adjacent industrial properties to the north, south, and west. See Application Section 4.1.

In order to mitigate for potential impacts to wildlife, GHE is withdrawing its proposal to expand the site (see discussion above under 3 Animals). The result is that noise levels may exceed 70 dBA beyond the revised eastern property line. If so, GHE proposes to obtain a noise easement from the Grays Harbor Public Development Authority (PDA) waiving the 70 dBA limit.

##### Mitigation Measures:

- The project will be required to comply with maximum noise limits established as EFSEC standard for energy facilities in WAC 463-62-030. Following the commencement of the commercial operation of Units 3 and 4, the Certificate Holder will retain a qualified acoustical engineer to perform a noise monitoring study to confirm compliance with maximum noise limits when all four units are operating.
- Project design features include absorptive silencers within air intake ductwork, acoustical enclosures, and maintaining the existing noise wall.
- The Certificate Holder will improve its system of responding to noise-related complaints from neighbors, and will maintain a log of complaints received and the Certificate Holder's responses.
- Predicted noise levels at nearby residences are not expected to exceed EFSEC's standards for maximum noise limits. To ensure that these standards are not exceeded, the Certificate Holder will retain an acoustical engineer to take noise level measurements during performance testing of Units 3 and 4 (prior to commercial operation). The results of these measures will be used to determine whether additional acoustical barriers are necessary to be erected along the northern and southern property boundaries, or if a noise easement with the PDA is needed for property to the east, to control property line noise levels, and if deemed necessary, the optimal height, length and placement of barriers.
- The Certificate Holder will retain a qualified acoustical engineer to conduct a field study of Units 1 and 2 to identify reasonable, cost-effective additional mitigation measures that could be implemented with the construction of Units 3 and 4 to further reduce project noise below the maximum noise limits.

#### **5. Light and Glare**

##### Potential Impacts:

The existing Grays Harbor Energy Center is lighted for the purposes of general operator access and safety. Some additional lighting will be installed for Units 3 and 4. Light poles will likely be standard street light height light height, in the range of 20 to 50 feet. Outside lighting around the exterior of buildings and ancillary equipment would likely be attached to walls. This lighting may be seen from nearby residences, and has the potential to affect viewing of the night sky.

During construction, there would be some lighting associated with construction machinery. During operation, the most visible points of illumination would be small, lights on the emission stacks. These lights are intermittent and would be similar to warning lights present on the nearby WNP-3 and WNP-5 cooling towers and on the existing cooling towers for the Satsop Combustion Turbine Project.

Mitigation Measures:

- The existing 25-foot-high wall and vegetated berm located along Keys Road will reduce the light from Units 3 and 4. Additional screening is provided by high trees located along the residential road since the residences are set back an estimated 50 to 75 feet.
- With the exception of minimal lighting on the top of each boiler and stairway lighting for night-time access, existing lighting on high elevation access platforms has been turned off, and will only be turned on in the event that night-time access to towers or stacks is required. In those cases, the lighting will remain on only as long as necessary for repair or investigation work.
- Lighting that is needed for night-time security or safe access will be directed downward and shielded to prevent light from spilling over the property line.

## 6. Transportation

Potential Impacts:

Without mitigation, construction traffic could cause delays at the Highway 12 – Keys Road intersection.

Mitigation Measures:

- As with the previous construction of Units 1 and 2, GHE would develop and implement a Traffic Management Plan in consultation with the Grays Harbor County Department of Public Works. The plan would encourage construction traffic to use the on and off-ramps and the Wakefield/Lakefield corridor to avoid the Hwy 12 – Keys Road intersection.

### ***Reference Documents***

- **Grays Harbor Energy Center SCA Amendment to Add Units 3 and 4 SEPA Environmental Checklist**, October 30, 2009
- **Application for Amendment 5 to the Site Certification Agreement**, Grays Harbor Energy Center, October 30, 2009
- **Satsop Combustion Turbine Project Site Certification Agreement, Amendment No. 3**, March 24, 2005

These documents are available at <http://efsec.wa.gov/Satsop>

**Lead agency:**

The Washington Energy Facility Site Evaluation Council (EFSEC) is the lead agency of this proposal and EFSEC has determined that with the proposed mitigation measures, the proposal does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2) (c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

- There is no comment period for this DNS
- This MDNS is issued under WAC 197-11-340 (2) and WAC 463-47-080; the lead agency will not act on this proposal for at least 14 days from the date below. **Comments must be submitted by March 8, 2010.**

Submit comments to:

Jim La Spina, Energy Facility Site Specialist  
EFSEC  
PO Box 43172  
Olympia, WA 98504-3172

[EFSEC@commerce.wa.gov](mailto:EFSEC@commerce.wa.gov)  
Please put "**Satsop**" or "**Grays Harbor**" in  
the subject line

Responsible official: Allen J. Fiksdal

Position/Title: EFSEC Manager

Phone: 360-956-2152

Address: PO Box 43172, Olympia, WA 98504-03172

Signature: \_\_\_\_\_ Date: February 12, 2010