1.0 GENERAL

SECTION 1.1 DESCRIPTION OF APPLICANT (WAC 463-60-015)

1.1.1 PURPOSE OF AMENDMENT

This is an application for an amendment to the existing Satsop Combustion Turbine Project Site Certification Agreement (SCA). The amendment, if approved, would change the name of the project from the Satsop Combustion Turbine Project to Grays Harbor Energy Center, and would allow the addition of two combustion turbine units to the Grays Harbor Energy Center to increase capacity by approximately 650 megawatts (MW), doubling its maximum annual capacity to approximately 1,300 MW.

1.1.2 APPLICANT

The applicant for this SCA amendment is the current Certificate Holder, Grays Harbor Energy LLC, a subsidiary of Invenergy LLC (Invenergy).

This application was professionally prepared by URS Corporation and ENVIRON under the direction of Grays Harbor Energy LLC. These parties believe that the application is substantially complete and meets the requirements established in Chapter 80.50 of the Revised Code of Washington (RCW) and Title 463 of the Washington Administrative Code (WAC).

1.1.3 GRAYS HARBOR ENERGY LLC

Grays Harbor Energy LLC will continue to own the Grays Harbor Energy Center.

1.1.4 INVENERGY LLC

Invenergy is a developer, owner and operator of power generation facilities with the organizational, financial, managerial, and technical capability to comply with the terms of the SCA. Invenergy currently owns, operates or has under development energy facilities (i.e., natural gas, wind and solar) with a combined capacity of more than 5,000 MW, and is actively evaluating other projects for acquisition and development.

Invenergy has an experienced management team with a track record of success in developing, owning and operating more than 12,000 MW of power generation projects. The members of the management team have an average experience of approximately 20 years in diverse areas of the energy market including development, engineering, construction, finance, operations, asset management, and energy trading and contracting.
**SECTION 1.2 DESIGNATION OF AGENT (WAC 463-60-025)**

All official communications concerning this application during the application review process should be directed to Mr. Brett Oakleaf, for Grays Harbor Energy LLC. He is the designated agent for the project and may be contacted as cited below:

Mr. Brett Oakleaf  
Director, Business Development  
Invenergy LLC  
2580 W. Main Street, #200  
Littleton, CO 80120  
Tel: 303-730-3285  
Cel: 303-888-3605  
Fax: 303-797-5491  
Email: boakleaf@invenergyllc.com

Mr. Steven Bonsma, Invenergy, will serve as a secondary contact. Mr. Bonsma’s contact information is as follows:

Mr. Steven Bonsma, Asset Manager  
Invenergy LLC  
One South Wacker Drive, Suite 1900  
Chicago, IL 60606  
Tel: 312-582-1538  
Fax: 312-224-1444  
Email: sbonsma@invenergyllc.com

Local contact is Mr. Todd Gatewood, Plant Manager for Grays Harbor Energy. Mr. Gatewood’s contact information is as follows:

Mr. Todd Gatewood, Plant Manager, Grays Harbor Energy  
401 Keys Road  
Elma, Washington 98541  
Tel: 360-482-4353

Mailing Address:  
P. O. Box 26  
Elma, Washington 98583
SECTION 1.3 ASSURANCES (WAC 463-60-075)

Grays Harbor Energy LLC, the Certificate Holder, is proposing to expand the Grays Harbor Energy Center at the site already approved through an SCA. As with the existing Grays Harbor Energy Center, the Certificate Holder will establish and maintain several forms of insurance during construction and operation of the expanded facility as are required by law, customary business practice, or third-party participants such as lenders. The following coverages will be included:

- **Comprehensive General Public Liability** – The Certificate Holder will carry Comprehensive General Public Liability insurance including coverage for bodily injury (including death), property damage, independent contractors, products, and completed operations with a limit of liability of $1 million per occurrence and a $2 million aggregate limit

- **Employer's Liability** – The Certificate Holder will carry Employer's Liability insurance with a limit of liability of $1 million per occurrence

- **Comprehensive Automobile Liability** – The Certificate Holder will carry Comprehensive Automobile Liability insurance including coverage for all owned, hired, or non-owned automobiles with a limit of liability of $1 million per occurrence

- **Workers Compensation** – The Certificate Holder will carry Worker's Compensation and other insurance as required by law for all employees of the Grays Harbor Energy Center

- **Pollution Liability** – The Certificate Holder will carry pollution liability insurance with a limit of $5 million

- **Umbrella and Excess Liability** – The Certificate Holder will carry umbrella and excess liability over and above comprehensive general public, employer’s, and comprehensive automobile liabilities with occurrence and aggregate limits of $50 million

SECTION 1.4 MITIGATION MEASURES (WAC 463-60-085)

Units 3 and 4 will be located within the previously permitted site, on land that has already been disturbed and developed for industrial use. The project will continue to be fueled by natural gas, and no backup fuel source is proposed. The Grays Harbor Energy Center will continue to utilize the natural gas pipeline installed for the existing facility.

Power produced by the Grays Harbor Energy Center will continue to be routed through transmission lines that were installed as part of the original project construction and continue to connect to the Bonneville Power Administration (BPA) system at BPA's Satsop substation. The power will be exported on lines to be installed for Units 3 and 4 on the existing tower structures constructed for Units 1 and 2, from the project site to the BPA Satsop substation, which is located approximately 4,000 feet east of the project site.

EFSEC has already issued an SCA that permitted development of the entire site, and the Council has already considered the impacts associated with site development in connection with permitting the existing facility. As a result, the additional impacts associated with construction
and operation of the two additional units are principally limited to: (1) air emissions, (2) water use and discharge, and (3) sound emissions.

By locating Units 3 and 4 within the area already developed for Units 1 and 2, most impacts have been eliminated. The following is a summary of the additional mitigation measures that are proposed to either eliminate or minimize environmental impacts.

1.4.1 SECTION 3.2, AIR

To control dust during construction, water would be applied as necessary, access roads would be graveled or paved.

BACT would be incorporated into the Units 3 and 4 design to reduce air pollution emissions.

Greenhouse gas emissions would be mitigated pursuant to RCW chapter 80.70. Grays Harbor Energy LLC has chosen the “monetary path” outlined in RCW 80.70.020(5) for mitigation. At the current rate of $1.60 per metric ton of carbon dioxide, the required payment is approximately $11.75 million. Grays Harbor Energy LLC currently plans to provide EFSEC with proof of payment to a qualifying organization of the total sum, no later than one hundred twenty days after the start of commercial operation.

1.4.2 SECTION 3.3, WATER

Surface Water

To minimize impacts on surface water, contractors will use Best Management Practices (BMPs) for erosion and sediment control during construction of Units 3 and 4 and will implement a plan that complies with the requirements of the existing Erosion and Sedimentation Control Plan. BMPs will include limiting certain construction activities and installing temporary control structures such as sediment traps, silt fences, and diversion ditches.

To meet the temperature requirements of the discharge, heat exchangers will be used to control the temperature of the cooling water discharge.

Groundwater

Process water is discharged via a diffuser to the Chehalis River, and stormwater is directed to the C-1 pond for treatment and discharged via surface drainage to the Chehalis River. Sanitary waste is discharged to a septic system. The placement and design of the system allows infiltration of effluent but inhibits its direct release to surface and/or groundwater bodies.

Additionally, the project is situated on terrace deposits with smaller, discontinuous perched aquifers and the site is built on gravel fill, which is underlain by a liner that restricts water infiltration. As a result, plant construction will not have an impact on groundwater quality. Therefore, no significant impacts to groundwater quantity or quality are likely to occur.

1.4.3 SECTION 4.1, ENVIRONMENTAL HEALTH
**Noise**

The proposed acoustical design of Units 3 and 4 will include silencers placed within the air intake ductwork of the combustion turbines to reduce high-frequency compressor and turbine blade noise levels. In addition, acoustical enclosures will reduce casing radiated noise from the combustion turbines, steam turbines and other auxiliary support equipment. Turbine exhaust noise will be attenuated via the heat recovery steam generators (HRSGs) as well as by absorptive silencers placed either in the HRSG ductwork leading to the stacks or hung within the stacks themselves.

Moreover, the proposed expansion will take advantage of the existing acoustical barriers along the northern and western property boundaries. If necessary, additional acoustical barriers may be erected along the northern and southern property boundary to control property line noise levels (see conceptual barrier layout in Figure 4.1-4). Specifically, noise level measurements would be collected during performance testing (prior to commercial operation) and used to determine whether acoustical barriers are necessary, and if so, the optimal height, length and placement of any barriers.

Acoustical modeling indicates that based on this design, noise levels from the Grays Harbor Energy Center are expected to fully comply with applicable limits at residential receivers and adjacent industrial properties. The precise details and extent of any noise control measures needed for the plant will be refined, if necessary, during the detailed engineering phase of Units 3 and 4, at a time when additional noise level data can be obtained from vendors, and when additional design details have been completed.

**Risk of Fire or Explosion**

The risk of an explosion in the Grays Harbor Energy Center will be mitigated by designing, constructing, and operating the facility as required in the latest versions of the applicable codes, regulations, and consensus standards.

As with the existing Grays Harbor Energy Center, the facility will continue to be operated by qualified personnel using written procedures. Procedures provide clear instructions for safely conducting activities involved in the initial startup, normal operations, temporary operations, normal shutdowns, emergency shutdowns, and subsequent startups. The procedures for emergency shutdowns include the conditions under which emergency shutdowns are required, and the assignment of shutdown responsibilities to qualified operators to ensure that shutdowns are done in a safe and timely manner. Also covered in the procedures are the consequences of operational deviations and the steps required to correct or avoid the deviations.

Before being involved in operating the facility, employees will be presented with a facility plan, including a Health and Safety Plan, and will receive training regarding the operating procedures and other requirements of safe operation of the plant. In addition, employees will receive annual refresher training, which will include testing of their understanding of the procedures. Training and testing records will be maintained.
The existing hazardous materials emergency response program will continue to be used. Grays Harbor Energy emergency responders trained and equipped to the technician level will be available at all times when the facility is in operation. The emergency responders will use a written emergency response plan developed for the Grays Harbor Energy Center and revised, if needed, to include the addition of Units 3 and 4.

1.4.4 SECTION 4.2, LAND AND SHORELINE USE

Light and Glare

In specific locations where glare or light spillover could impact Keys Road or be obtrusive to nearby residences, lighting angles could be adjusted to minimize glare impacts, or supplemental light shields/vegetation could be used for extra screening.

Aesthetics

Equipment enclosure buildings and exterior tanks would be painted earth-tone beige and gray to reduce contrasts. The emission stacks would be painted to blend with the sky as seen from distant viewpoints.

1.4.5 SECTION 4.3, TRANSPORTATION

Vehicular traffic during construction of the Units 3 and 4 will cause a degradation in the level of service (LOS) at the intersection of SR 12 and Keys Road during the afternoon/pm peak hour.

Prior to construction of the Grays Harbor Energy Center, a traffic management plan was submitted to EFSEC for review and was approved. This EFSEC-approved plan will also apply to construction of Units 3 and 4. The main component of the traffic management plan included a recommendation to encourage the use of the Wakefield/Lambert corridor for site access and egress. It is recommended that vehicles traveling to/from the facility site during construction of Units 3 and 4, and operation of the Grays Harbor Energy Center, use the Wakefield/Lambert corridor primarily, and avoid the intersection of SR 12 and Keys Road.

SECTION 1.5 SOURCES OF INFORMATION (WAC 463-60-095)


CTED – see Washington State Department of Community, Trade and Economic Development


Ecology – see Washington State Department of Ecology


