



STATE OF WASHINGTON

ENERGY FACILITY SITE EVALUATION COUNCIL

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Memorandum

To: Sonia E. Bumpus, Energy Facility Site Evaluation Council (EFSEC) Manager, (360) 664-1363

From: Amí Kidder, EFSEC Siting and Compliance Manager, (360) 664-1305

Date: November 17, 2020

RE: Environmental Review and Staff Recommendation for State Environmental Policy Act (SEPA) Review for Grays Harbor Energy Center Request to Amend the Site Certification Agreement to Upgrade Units 1 and 2

PROPOSAL: Gray's Harbor Energy LLC (GHE) a subsidiary of Invenergy LLC (the Certificate Holder) proposes to amend the Site Certification Agreement (SCA) for the Grays Harbor Energy Center to accommodate the installation of General Electric's Advanced Gas Path package in Units 1 and 2. The Advanced Gas Path is a GE equipment and software improvement to the combustion turbines, which would increase their efficiency and output. Grays Harbor Energy Center currently consists of two combustion turbine generators, each nominally rated at 175 megawatts (MW) and a steam turbine generator rated at 300 MW, for a total plant rated capacity of 650 MW. The Advanced Gas Path package will increase the maximum output of each combustion turbine generator. Output varies based on ambient conditions, but according to GE engineering data, after the Advanced Gas Path package is installed, the output of each turbine will increase to 181.2 MW at 59 degrees F and 100% load.

CASE NUMBER: EFSEC SCA Amendment No. 06
Docket No: 180302

CERTIFICATE HOLDER: Grays Harbor Energy LLC

LOCATION: 401 Keys Road, Elma, WA 98541

OTHER PERMITS: Approval of this license would require a modified Prevention of Significant Deterioration Air Permit.

REQUIRED
 SUBMITTALS: No other submittals are identified.

A. ENVIRONMENTAL RECORD and EXHIBITS

The environmental review conducted by EFSEC included analysis based on the following documents which are included in the environmental record. The documents listed are available for review on EFSEC’s website at: <https://www.efsec.wa.gov/energy-facilities/grays-harbor-energy-center/grays-harbor-energy-center-sca>

State Environmental Policy Act (SEPA) documents

Acronym	Description	Date	Relevant Sections/Information
NEPA EIS 11/1995	Resource Contingency Program – Washington NEPA Final EIS, issued by Bonneville Power Administration (DOE/EI-0230) for Satsop Combustion Turbine Unit 1, Chehalis Generation Facility	11/1995	Listed for documentation purposes
SEPA Adoption 1/1996	SEPA Determination of Significance/Adoption for the Satsop Combustion Turbine Project, adoption of the NEPA Bonneville Power Administration’s 11/1995 EIS	1/30/1996	SEPA document that is being added
2020 SEPA Checklist	SEPA Environmental Checklist for 1) Installation of General Electric’s Advanced Gas path package in Units 1 and 2; and 2) Extension to 2028 the deadline for commencing construction of Units 3 and 4. ¹	8/17/2020	All

Other Environmental Information

Acronym	Description	Date	Relevant sections/information
GHE Amendment Request	Grays Harbor Energy LLC Request to Amend the Site Certification Agreement	8/17/2020	All
2010 SCA	Site Certification Agreement (up to and including Amendment No.5) for Grays Harbor Energy Center	12/21/2010	All

¹ EFSEC is separating the SEPA review for upgrading Units 1 and 2 from the request to extend the timeline for Units 3 and 4 which is included in the same amendment request. This SEPA review applies to upgrading Units 1 and 2. SEPA review for extending the construction timeline for Units 3 and 4 will occur separately. Please see further discussion in **Part C. Applicable SEPA Rules.**

Acronym	Description	Date	Relevant sections/information
NSR	Application for a Minor Modification at a Major Source as part of an air emission New Source Review per 40 CFR 52.21	8/17/2020	All
DR1	Data Request 1 – GHE Response	10/16/2020	DR 1-3,4,7,8
DR2	Data Request 2 – GHE Response	10/22/2020	DR 2-1,3

The environmental review also consisted of input or recommendations from state agencies as listed below.

Commenter and Acronym	Date of Input	Form of Comment	Resource Subject
Liem Nguyen – ECY	10/20/2020	Email	NPDES
Scott Inloes – ECY	09/14/2020	Letter	PSD
Jon Thompson – AG	09/16/2020	Phone/Email	GHG
Scott Inloes – ECY	10/13/2020	Email	PSD

B. STAFF REVIEW OF THE ENVIRONMENTAL INFORMATION

EFSEC staff visited the site on 6/18/2019.

The following sections correspond with elements of the environment listed in Washington Administrative Code (WAC) 197-11-444 and with the sections in the environmental checklist WAC 197-11-960. They were also used to organize and document EFSEC’s environmental review for the GHE request to amend the SCA to upgrade Units 1 and 2. Additional information (listed in Part A above) was provided by the Certificate Holder, existing SEPA documents, and by Washington regulatory subject matter experts as contracted to EFSEC and used as part of the environmental review.

1. EARTH

- No new information, or changes to earth expected.

Mitigation: No mitigation measures for earth recommended.

2. AIR

Air Quality

- “Turbines will continue to meet all hourly and annual emission limits. Combustion turbines may have greater emissions with the Advanced Gas Path Package.” (GHE Amendment Request II.C.1.)
- “There will be an increase of NOx and CO but will still comply with the BACT limits already set.” (GHE SEPA Checklist B.2.)
- A PSD minor modification application has been received and will be processed to address any potential air quality impacts from the addition of the Gas Path package.
- No new concerns related to environmental impacts to air quality.

Mitigation: No additional mitigation measures for air quality recommended.

Greenhouse Gas

- At full load, the units can emit up to 9.1% more GHGs than prior to the upgrade: the rate of GHG emissions per megawatt-hour will be ~5% lower.” (GHE SEPA Checklist B.2)
- The facility has an approved Greenhouse Gas Mitigation Plan which adheres to the requirements of 463-80 WAC Carbon Dioxide Mitigation Programs for Thermal Electric Generating Facilities. The standard provides a formula for greenhouse gas mitigation and would apply to any additional greenhouse gas emissions. If the increase in the facility’s carbon dioxide emissions is less than 15%, a new plan would not be required by the WAC.
- EFSEC requested additional calculations and assumptions from GHE regarding future projections on future load and output from the upgrade to Units 1 and 2 (DR1-7,8)
- Revised GHG emissions mitigation payment calculations per the current approved GHG mitigation plan will be implemented at facility startup post construction.
- No new concerns related to environmental impacts to climate and air quality from greenhouse gas emissions.

Mitigation: No additional mitigation measures for greenhouse gas emissions recommended.

3. WATER

Water withdrawals.

- Due to higher firing temperatures from the Advanced Gas Path, water consumption drawn from the Chehalis River could increase by no more than 3%. Several variables determine the actual amount of water consumption resulting in a range that occurs over time (DR1-4).
- The current SCA includes a water withdrawal authorization which would not be changed (2010 SCA Attachment III).
- EFSEC consulted Ecology regarding the potential increase in water withdrawal from the Chehalis River. Ecology confirms GHE is not requesting a change to the amount of water they are approved to withdraw for Units 1 and 2 (Ecology email 10/20/2020).
- No new concerns related to environmental impacts to water withdrawal from the Chehalis River are identified.

Mitigation: No additional mitigation measures related to water use.

Water Quality

- EFSEC consulted Ecology regarding water quality. Ecology indicates the current NPDES permit adequately addresses the proposal (Ecology email 10/20/2020).

Mitigation: No additional mitigation measures related to water quality.

4. PLANTS

- No new information, or changes to plants expected.

Mitigation: No mitigation measures related to plants.

5. ANIMALS

- No new information or changes to animals expected.

Mitigation: No mitigation measures related to animals.

6. ENERGY AND NATURAL RESOURCES

- Installation of the Advanced Gas Path would occur during the annual maintenance outage which will be 45 days in 2021. The installation of the AGP would have no impact on the outage duration. (DR2-1)
- The checklist information and data response are adequate. The duration of the facility shutdown will not be affected. No new concerns related to environmental impacts to energy and natural resources identified.

Mitigation: No mitigation measures related to energy and natural resources.

7. ENVIRONMENTAL HEALTH

- “Equipment replacement will not require the use of more than de minimis amounts of toxic or hazardous chemicals. De minimis amounts of toxic or hazardous chemicals, i.e. solvents, oils, etc., are routine used chemicals and are already covered in the existing site SPCC Plan and Dangerous Waste Management Procedure.” (SEPA Checklist 7.a.3 and DR2-3)
- The checklist information and data response are adequate. No new concerns related to environmental impacts from toxic or hazardous chemicals identified.

Mitigation: No additional mitigation measures related to environmental health.

8. NOISE

- Installation of the Advanced Gas Path would occur during the annual maintenance outage which will be 45 days in 2021. (DR2-1)
- The checklist information and data response are adequate (DR1-3). No new concerns related to noise identified.

Mitigation: No mitigation measures related to noise.

9. LAND AND SHORELINE USE

- No new information or changes to land and shoreline use expected

Mitigation: No mitigation measures related to land and shoreline use.

10. HOUSING

- No new information, or changes to housing expected.

Mitigation: No mitigation measures related to housing.

11. VISUAL AND AESTHETICS

- No new information, or changes to visual and aesthetics expected.

Mitigation: No mitigation measures related to visual and aesthetics.

12. LIGHT AND GLARE

- No new information, or changes to light and glare expected.

Mitigation: No mitigation measures related to environmental health.

13. RECREATION

- No new information, or changes to recreation expected.

Mitigation: No mitigation measures related to recreation.

14. HISTORIC AND CULTURAL PRESERVATION

- No new information, or changes to historic and cultural preservation expected.

Mitigation: No mitigation measures related to historic and cultural preservation

15. TRANSPORTATION

- Installation of the Advanced Gas Path would occur during the annual maintenance outage which will be 45 days in 2021. (DR2-1)
- The checklist information and data response are adequate. No new concerns related to transportation identified.

Mitigation: No mitigation measures related to transportation.

16. PUBLIC SERVICES

- No new information, or changes to public services expected.

Mitigation: No mitigation measures related to public services.

17. UTILITIES

- No new information, or changes to utilities expected.

Mitigation: No mitigation measures related to utilities.

Cumulative Effects of adding a Gas Path Package to Units 1 and 2 and commencing construction Units 3 and 4 by 2028. EFSEC considered the potential cumulative adverse environmental effects from the Certificate Holder's request to extend the deadline to 2028 to commence construction of Units 3 and 4 in combination with this request. Construction of the two activities occur at different times. Both upgrades to Units 1 and 2 and construction of Units 3 and 4 have an effect on water use out of the Chehalis River, and air emissions during operation. However, the operational water and air effects of the upgrade to Units 1 and 2 are very small, both proposals' air and water effects are mitigated, and/or are within existing permit requirements. Additionally, Units 3 and 4 will have to adhere to existing regulations at the time of construction (2010 SCA).

C. APPLICABLE SEPA RULES

Separating SEPA review for the upgrade to Units 1 and 2

Per WAC 197-11-060 Content of environmental review, part (3)

(b) Proposals or parts of proposals that are related to each other closely enough to be, in effect, a single course of action shall be evaluated in the same environmental document. (Phased review is allowed under subsection (5).) Proposals or parts of proposals are closely related, and they shall be discussed in the same environmental document, if they:

- (i) Cannot or will not proceed unless the other proposals (or parts of proposals) are implemented simultaneously with them; or
- (ii) Are interdependent parts of a larger proposal and depend on the larger proposal as their justification or for their implementation.

EFSEC reviewed the two proposed changes to the Site Certification Agreement: 1) upgrading Units 1 and 2; and 2) extending the timeline for constructing Units 3 and 4.

EFSEC determined that the two changes/activities do not meet subsections (i) and (ii) above and therefore are not closely related.

- They are not interdependent parts of a larger proposal.
- The facility is already operating, it is not a larger “proposal” as mentioned in WAC 197-11-060
- The two activities can, and are proposed to, proceed independently of each other.

Splitting the two proposed activities does not conflict with the requirements of 197-11-060 (3)(b). Therefore, they are not required to be discussed in the same environmental document.

One of the main reasons for the existence of WAC 197-11-060 (3)(b) is to ensure cumulative effects are considered. Because the upgrade to units 1 & 2 could be considered very minor, there is not a real risk of avoiding a consideration of cumulative impacts from both proposals. However, to avoid that risk, the two separate SEPA documents can still acknowledge the existence of both proposed activities.

There is value in splitting the two proposed activities. One is an energy efficiency upgrade to an existing facility that can happen under a different timeline and is proposed to receive a SEPA Addendum for minor new information. The other is a different decision related to extending the timeline for approximately doubling the size and output of the facility which may require more time to review. It would be beneficial for the decision makers to be able to consider each one separately.

Addendum


Per WAC 197-11-600(3), for DNSs and EISs, preparation of a new threshold determination or supplemental EIS is required if there are:

- (i) Substantial changes to a proposal so that the proposal is likely to have significant adverse environmental impacts (or lack of significant adverse impacts, if a Determination of Significance (DS) is being withdrawn); or
- (ii) New information indicating a proposal’s probable significant adverse environmental impacts (this includes discovery of misrepresentation or lack of material disclosure). A new threshold determination or Supplemental EIS (SEIS) is not required if probably significant adverse environmental impacts are covered by the range of alternatives and impacts analysis in the existing environmental documents.

If EFSEC determines the new information and analysis does not substantially change the analysis of significant impacts and alternatives in the existing environmental document (WAC 197-11-600 (4)(c), an addendum is appropriate for documenting this review under SEPA.

Nothing in this environmental review or the associated SEPA Addendum shall preclude further review or conditioning of future development proposals for the subject property.

I have reviewed and considered the referenced material in Part A for the proposal to install the Gas Path package in Units 1 and 2. I have identified no substantial changes to the proposal or new information indicating the proposal's probable significant adverse impacts to the environment. I hereby recommend an Addendum to the SEPA EIS prepared by the Washington State Thermal Power Plant Site Evaluation Council.



Amí Kidder,
EFSEC Siting and Compliance Manager

Date _____ 11/17/2020 _____