

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [\[HELP\]](#)

1. Name of proposed project, if applicable: Grays Harbor Energy Center - Advanced Gas Path Installation
2. Name of applicant: Grays Harbor Energy LLC

3. Address and phone number of applicant and contact person:

401 Keys Road, Elma, WA 98541

Chris Sherin (360) 482-4349

4. Date checklist prepared: August 17, 2020

5. Agency requesting checklist: EFSEC

6. Proposed timing or schedule (including phasing, if applicable): Grays Harbor Energy proposes to install the Advanced Gas Path package in 2021 during the spring outage period.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

EFSEC has extensive environmental information, including discharge and emission monitoring data, concerning the operation of the Grays Harbor Energy Center. Additional information concerning the proposed Advanced Gas Path installation is provided in this Checklist.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

No.

10. List any government approvals or permits that will be needed for your proposal, if known.

The project requires an amendment to the Site Certification Agreement and revision to the PSD permit, although no changes are being proposed to the emission limits in the permit.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The requested amendment to the Site Certification Agreement would authorize installation of the GE Advanced Gas Path package to the combustion turbines of Units 1&2 at the Grays Harbor Energy Center, and would extend the date for starting construction of Units 3&4 to 2028.

The Advanced Gas Path package makes both hardware and software changes to the combustion turbines. The existing hot gas path components are replaced with more robust parts, made from advanced materials and coatings able to withstand higher firing temperatures. The existing combustor will also be replaced with a low D/P DLN2.6 combustor which features newly designed liners and flow sleeves that reduce the pressure drop and improve combustion

efficiency. Together with an upgraded model-based controls architecture, these changes allow the turbines to be fired at higher temperatures, which improves the overall efficiency and increases power production.

The hardware replacement and software upgrade will allow for more efficient combustion while lowering the heat rate of the turbines. This will increase the capacity of each combustion turbine to 181.2 MW, based on GE engineering data at 59 degrees F and 100% load.

The upgrade will also allow the turbines to operate longer periods between scheduled maintenance because the parts are more durable than the stock equipment.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The 22-acre site is located approximately 0.5 miles southwest of the Chehalis River near the town of Elma. The 1600-acre Satsop Development Park surrounds the site on all four sides. Fuller Creek is approximately 0.5 mile to the east, and Workman Creek is located approximately 2 miles to the east.

B. Environmental Elements [\[HELP\]](#)

1. Earth [\[help\]](#)

a. General description of the site: The site is already developed. Accordingly, most of the questions in this section are not relevant to determining the potential environmental effects of the proposed equipment and software replacement.

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

Not applicable - the proposed project does not involve additional development at the site.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Not applicable - the site is already developed and the proposed project will not involve any disturbance of soil.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Not applicable - the site is already developed.

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The project does not involve any filling, excavation or grading.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

No soil disturbance is required during the installation of this equipment.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Not applicable. No new structures or additional construction are required.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Not applicable. The project will not result in erosion or other impacts to earth.

2. Air [\[help\]](#)

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

The only emissions during construction would come from mobile equipment used to aid in the installation of the new turbine components. Cranes, trucks, mobile equipment, and power tools fueled by diesel and gasoline will be used to power this machinery. Installation will occur during the approximately six week outage period when other repairs and equipment replacement occurs in the ordinary course and this mobile equipment is already on site. Air emissions from this equipment will be minor.

The AGP package, once installed, will allow for more efficient combustion of natural gas in the turbines; however, the method of operation will not change. Emission rates of all pollutants on a lb/mmBtu basis are shown by General Electric to remain the same or decrease. Although an increase in gas combustion would result in a slight increase of NOx and CO exiting the turbines, those emissions will be controlled by the selective catalytic reduction (SCR) and the oxidation catalyst, respectively, so that they comply with the the BACT limits already set in the Operating Permit. GHEC is not requesting an increase to the established limits; therefore, the air quality modeling done previously remains applicable.

The Advanced Gas Path package will not change the rate of greenhouse gas (GHG) emissions on a lb/mmBtu basis. If more gas is combusted, the total volume of GHG emissions will increase accordingly. If operated at full load, the combustion turbines at the Grays Harbor Energy Center could emit up to 9.1% more GHGs than prior to its installation. However, improved efficiency means that the rate of GHG emissions per megawatt-hour of electricity generated will be approximately 5% lower at 59 degrees F and 100% load.

The potential mass increase in GHG emissions falls below the applicability threshold for regulation under the EPA Clean Power Plan as outlined in 40 CFR 60 Subpart TTTT. The increase also falls below the EFSEC threshold for GHG mitigation in WAC 463-80.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

No change. The turbine emissions will continue to be controlled by selective catalytic reduction, oxidation catalyst, and good combustion practices with no effect on current permit limits.

3. **Water** [\[help\]](#)

a. Surface Water: [\[help\]](#)

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Not applicable. The project will not affect any surface waters.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

No.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None. The project does not involve fill or dredging.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No. The Advanced Gas Path package is not expected to result in an increase in water used by the facility. Grays Harbor Energy is not requesting any change in the SCA's water use conditions and will continue to comply with those conditions.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Not applicable - the project does not involve any new construction; it merely replaces equipment and software.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No. The Advanced Gas Path package is not expected to result in any changes to the wastewater discharged from the facility, which is governed by the facility's NPDES permit. Grays Harbor Energy has not requested any changes to the NPDES permit.

b. Ground Water: [\[help\]](#)

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

Not applicable. The project does not involve groundwater withdrawals.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Not applicable. The project does not involve waste discharge.

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Not applicable. This project will not affect stormwater drainage. Stormwater at the facility is controlled through the methods outlined in the SWPPP.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: No change.

4. **Plants** [\[help\]](#)

- a. Check the types of vegetation found on the site: Not applicable. The site is a fully developed industrial site.

___ deciduous tree: alder, maple, aspen, other

___ evergreen tree: fir, cedar, pine, other

___ shrubs

___ grass

___ pasture

___ crop or grain

___ Orchards, vineyards or other permanent crops.

___ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other

___ water plants: water lily, eelgrass, milfoil, other

____ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

No alteration of the site is required.

c. List threatened and endangered species known to be on or near the site.

Not applicable. The equipment and software replacement will not have any effect on wildlife, whether listed or not.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Not applicable. The project does not involve landscaping or vegetation.

e. List all noxious weeds and invasive species known to be on or near the site.

Not applicable. The site is already developed; the project will not involve any clearing, earthwork or impacts to vegetation.

5. **Animals** [\[help\]](#)

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other _____

Not applicable. The project involves equipment and software replacement inside an already constructed and operating facility. It will not affect animals.

b. List any threatened and endangered species known to be on or near the site.

Not applicable.

c. Is the site part of a migration route? If so, explain.

Not applicable.

d. Proposed measures to preserve or enhance wildlife, if any:

Not applicable.

e. List any invasive animal species known to be on or near the site.

Not applicable.

6. *Energy and Natural Resources* [\[help\]](#)

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

During equipment replacement, cranes, trucks, mobile equipment, and power tools will be fueled by minor amounts of diesel and gasoline . These cranes, trucks and other equipment will already be on-site and in-use for maintenance and repair work done during the spring outage.

- b. Would your project affect the potential use of solar energy by adjacent properties?
If so, generally describe.

No.

- c. What kinds of energy conservation features are included in the plans of this proposal?
List other proposed measures to reduce or control energy impacts, if any:

The project will improve the heat rate of the combustion turbines by approximately 2.3% when comparing GE engineering data at 59 degrees F and 100% load from before and after the modification.

7. *Environmental Health* [\[help\]](#)

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal?
If so, describe.

The proposed equipment replacement will not create significant risks. The existing SPCC Plan describes the oil, fuel, and hazardous material storage facilities; reporting systems; prevention requirements; and spill response procedure. The Hazardous Waste Management Procedure establishes a program for the handling, storage, and disposal of wastes from the Grays Harbor Energy Center site. No changes will be required to any of these plans.

- 1) Describe any known or possible contamination at the site from present or past uses.

Not applicable. The site is already developed.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

Not applicable. Equipment replacement will be inside the existing combustion turbines.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Equipment replacement will not require the use of more than de minimis amounts of

toxic or hazardous chemicals.

- 4) Describe special emergency services that might be required.

Not applicable.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

None required.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None. No change.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short-term effects during installation of the AGP will be minimal, and comparable to the noise associated with maintenance work that takes place during annual outage periods.

The Grays Harbor Energy Center is already required to comply with state regulatory limits for noise, and the facility will continue to comply with those limits. The proposed equipment replacement and software upgrade is not expected to change the noise produced by the facility.

- 3) Proposed measures to reduce or control noise impacts, if any:

None required.

8. Land and Shoreline Use [\[help\]](#)

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The Grays Harbor Energy Center currently operates at the site, and will continue to do so. The proposed equipment and software replacement will not affect nearby land uses.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

No. The site is developed.

- 1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides,

tilling, and harvesting? If so, how:

No

c. Describe any structures on the site.

The Grays Harbor Energy Center.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

Not applicable.

f. What is the current comprehensive plan designation of the site?

Not applicable.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Not applicable.

i. Approximately how many people would reside or work in the completed project?

Not applicable.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Not applicable.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

None. The proposal will not change the land use or impact other land uses. It is merely an equipment replacement and software upgrade.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

None. There are no such impacts.

9. Housing [\[help\]](#)

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

None. There will be no impacts.

10. Aesthetics [\[help\]](#)

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

Not applicable. There will be no change in the height of any structure.

- b. What views in the immediate vicinity would be altered or obstructed?

None.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

None. There will be no impact.

11. Light and Glare [\[help\]](#)

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

- c. What existing off-site sources of light or glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

None. There will be no impacts.

12. Recreation [\[help\]](#)

a. What designated and informal recreational opportunities are in the immediate vicinity?

None that would be impacted by the project.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None. There will be no impacts.

13. Historic and cultural preservation [\[help\]](#)

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers ? If so, specifically describe.

Not applicable. The site is already developed and the project will not involve any demolition, excavation or other such construction.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

None that would be affected by the project.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

None. The project will not involve any impact to cultural or historic resources.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Not applicable.

14. Transportation [\[help\]](#)

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The site is accessed from Keys Road. The facility is already in operation, and the proposed equipment and software replacement will not affect transportation in the area.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Not applicable.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

None.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

None.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

The proposed equipment replacement will occur during the Spring 2021 outage period when other equipment maintenance occurs. Trucks and cranes used for the proposed equipment replacement would already be transiting to and from the site for scheduled maintenance.

15. **Public Services** [\[help\]](#)

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Not applicable.

16. Utilities [\[help\]](#)

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,
other _____

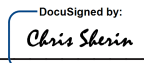
The site already has necessary utilities; no change in service is contemplated by the project.

b. Describe the utilities that are proposed for the project, the utility providing the service,
and the general construction activities on the site or in the immediate vicinity which might
be needed.

None

C. Signature [\[HELP\]](#)

The above answers are true and complete to the best of my knowledge. I understand that the
lead agency is relying on them to make its decision.

Signature:  _____

Name of signee Chris Sherin

Position and Agency/Organization Plant Manager, Grays Harbor Energy Center

Date Submitted: 8/17/20