



Washington State Energy Facility Site Evaluation Council

AGENDA

MONTHLY MEETING
Tuesday December 15, 2020
1:30 PM

CONFERENCE CALL ONLY
Conference number: (360) 407-3810 ID: 214817

- 1. Call to Order Kathleen Drew, EFSEC Chair
- 2. Roll Call Tammy Mastro, EFSEC Staff
- 3. Proposed Agenda Kathleen Drew, EFSEC Chair
- 4. Minutes **Meeting Minutes**..... Kathleen Drew, EFSEC Chair
 - November 17, 2020
- 5. Projects
 - a. **Kittitas Valley Wind Project**
 - Operational Updates..... Eric Melbardis, EDP Renewables
 - b. **Wild Horse Wind Power Project**
 - Operational Updates..... Jennifer Diaz, Puget Sound Energy
 - c. **Chehalis Generation Facility**
 - Operational Updates..... Mark Miller, Chehalis Generation
 - d. **Desert Claim**
 - Project Updates..... Amy Moon, EFSEC Staff
 - e. **Columbia Solar Project**
 - Project Updates..... Ami Kidder, EFSEC Staff
 - f. **Columbia Generating Station**
 - Operational Updates..... Mary Ramos, Energy Northwest
 - g. **WNP – 1/4**
 - Non-Operational Updates..... Mary Ramos, Energy Northwest
 - h. **Grays Harbor Energy Center**
 - Operational Updates..... Chris Sherin, Grays Harbor Energy
 - PSD permit..... Ami Kidder, EFSEC Staff
 - SCA Amendment Resolution..... Ami Kidder, EFSEC Staff

The Council may consider and take FINAL ACTION on issuing the SCA Amendment Resolution.
- 6. Adjourn..... Kathleen Drew, EFSEC Chair

Note: "FINAL ACTION" means a collective positive or negative decision, or an actual vote by a majority of the members of a governing body when sitting as a body or entity, upon a motion, proposal, resolution, order, or ordinance. RCW 42.30.020

Verbatim Transcript of Monthly Council Meeting

Washington State Energy Facility Site Evaluation Council

November 17, 2020



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WASHINGTON STATE
ENERGY FACILITY SITE EVALUATION COUNCIL
Lacey, Washington
Tuesday, November 17, 2020
1:30 p.m.

Telephonic Monthly Council Meeting
Verbatim Transcript of Proceedings

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1 A P P E A R A N C E S
2 Councilmembers:
3 KATHLEEN DREW, Chair
4 KATE KELLY, Department of Commerce
5 MIKE LIVINGSTON, Department of Fish and Wildlife
6 ROB DENGEL, Department of Ecology
7 STACEY BREWSTER, Utilities and Transportation Commission
8
9 Assistant Attorney General:
10 JON THOMPSON
11
12 EFSEC Staff:
13 SONIA BUMPUS
14 AMI KIDDER
15 KYLE OVERTON
16 AMY MOON
17 JOAN OWENS
18 TAMMY MASTRO
19 PATTY BETTS
20 STEWART HENDERSON
21
22 Also in Attendance:
23 JENNIFER DIAZ, Puget Sound Energy Wild Horse
24 ERIC MELBARDIS, EDP Renewables
25 TIM MCMAHON, Stoel Rives
KAREN MCGAFFEY, Perkins Coie
CHRIS SHERIN, Grays Harbor Energy
MACKENZIE EVANS, Grays Harbor Energy
SARAH DE GROOT, Grays Harbor Energy
OWEN HURD, Columbia Solar Project
JEREMY SMITH, Chehalis Generation Facility
JOHN STROUD, Timmons Group
DAVE ARBAUGH, Arbaugh & Associates
JONI BOSH, Northwest Energy Coalition

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1 LACEY, WASHINGTON; NOVEMBER 17, 2020
2 1:30 P.M.
3 --o0o--
4 P R O C E E D I N G S
5
6
7 CHAIR DREW: Good afternoon. Welcome to the
8 November meeting of the Washington State Energy Facility
9 Site Evaluation Council. I am calling this meeting --
10 I'm Kathleen Drew, Chair, and I am calling this meeting
11 to order.
12 Ms. Mastro, will you please call the roll?
13 MS. MASTRO: Thank you, Chair Drew. For the
14 record, this is Tammy Mastro.
15 The Department of Commerce?
16 MS. KELLY: Kate Kelly, present.
17 MS. MASTRO: Department of Ecology?
18 MR. DENGEL: Rob Dengel, present.
19 MS. MASTRO: Fish and Wildlife?
20 MR. LIVINGSTON: Hi, Mike Livingston,
21 present.
22 MS. MASTRO: The Department of Natural
23 Resources representative is vacant.
24 Utilities and Transportation Commission?
25 MS. BREWSTER: Stacey Brewster, present.

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1 MS. MASTRO: Chair, I mark you as present
2 and there is a quorum for the EFSEC Council.
3 CHAIR DREW: Thank you.
4 MS. MASTRO: Assistant Attorney General Jon
5 Thompson?
6 MR. THOMPSON: Present.
7 MS. MASTRO: Can the court reporter please
8 identify themselves?
9 THE COURT REPORTER: This is Tayler
10 Garlinghouse, present.
11 MS. MASTRO: Thank you.
12 Sonia Bumpus?
13 MS. BUMPUS: Sonia Bumpus, present.
14 MS. MASTRO: Ami Kidder?
15 MS. KIDDER: Ami Kidder, present.
16 MS. MASTRO: Amy Moon?
17 MS. MOON: Amy Moon, here.
18 MS. MASTRO: Kyle Overton?
19 MR. OVERTON: Kyle Overton's here.
20 MS. MASTRO: Joan Owens?
21 MS. OWENS: Joan Owens is here.
22 MS. MASTRO: Patricia Betts?
23 MS. BETTS: Patricia Betts, present.
24 MS. MASTRO: Stewart Henderson?
25 MR. HENDERSON: I'm here.

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1 MS. MASTRO: Stephen Posner?
 2 Thank you, Chair Drew.
 3 CHAIR DREW: Is there anyone else who would
 4 like to identify themselves for the meeting?
 5 MR. SHERIN: Chris Sherin, Grays Harbor
 6 Energy Center.
 7 MR. SMITH: Jeremy Smith and Mark Miller for
 8 Chehalis Generation Facility.
 9 MR. HURD: Owen Hurd for --
 10 [Multiple speakers.]
 11 MS. DIAZ: Jennifer Diaz for Puget Sound
 12 Energy.
 13 MR. MCMAHON: Tim McMahon, Stoel Rives.
 14 MS. MCGAFFEY: Karen McGaffey, Perkins Coie.
 15 [Multiple speakers.]
 16 MS. EVANS: Mackenzie Evans and Sarah de
 17 Groot from Grays Harbor Energy Center.
 18 MR. STROUD: John Stroud from Timmons Group.
 19 CHAIR DREW: I heard Dave Arbaugh, would you
 20 like to again say your association?
 21 MR. ARBAUGH: Sure. Arbaugh & Associates.
 22 CHAIR DREW: Thank you.
 23 I also heard Owen Hurd?
 24 MR. HURD: That's correct, yeah, for
 25 Columbia Solar Project.

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1 CHAIR DREW: Thank you.
 2 MS. BOSH: And Joni Bosh, Northwest Energy
 3 Coalition.
 4 MR. MELBARDIS: Eric Melbardis, Kittitas
 5 Valley Wind Power Project.
 6 CHAIR DREW: Okay. Thank you. Moving on to
 7 the proposed agenda. This morning we sent out a revised
 8 agenda which only reordered the items on our agenda
 9 since I was concerned about the weather forecast for
 10 this afternoon, and since we have a remote call, with
 11 the high wind warning, I wanted to make sure we took
 12 care of our business action item, potential action item,
 13 up front. So instead of last on the agenda, we have
 14 moved Grays Harbor Energy Center to first on the agenda.
 15 Is there a motion to approve the agenda as
 16 amended?
 17 MS. BREWSTER: This is Stacey Brewster.
 18 I'll make a motion to approve the agenda as amended.
 19 MR. DENGEL: Rob Dengel, second.
 20 CHAIR DREW: Thank you. Are there any
 21 questions or comments?
 22 Hearing none, all those in favor, say "aye."
 23 COUNCILMEMBERS: Aye.
 24 CHAIR DREW: All opposed? Motion carries.
 25 Moving on to the meeting minutes from the

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1 October 20th meeting. Is there a motion to approve the
 2 meeting minutes?
 3 MS. KELLY: This is Kate Kelly. Motion to
 4 approve the meeting minutes from October 20th.
 5 MR. DENGEL: Rob Dengel, second.
 6 CHAIR DREW: Thank you. Are there -- is
 7 there any discussion or any corrections?
 8 Hearing none, all those in favor of
 9 approving the meeting minutes from October 20th, please
 10 say "aye."
 11 COUNCILMEMBERS: Aye.
 12 CHAIR DREW: Opposed? The minutes are
 13 approved.
 14 So moving on, then, to our first item on the
 15 agenda, Grays Harbor Energy Center. We will start with
 16 the operational update. Mr. Sherin?
 17 MR. SHERIN: Good afternoon, Chair Drew,
 18 Councilmembers. For the month of October, I don't
 19 have -- I -- there are no nonroutine items to report
 20 operationally. I will note, though, that we did submit
 21 additional information to EFSEC Staff early in the month
 22 in response to follow-up requests on our site
 23 certification amendment application. And that is all.
 24 CHAIR DREW: Thank you.
 25 Any questions?

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1 Next we have Mr. Kyle Overton with the SCA,
 2 SEPA, and PSD update.
 3 MR. OVERTON: Yes, thank you. My name is
 4 Kyle Overton. I'm the EFSEC site specialist for the
 5 Grays Harbor facility. First for the PSD update, Staff
 6 continue to work with Ecology and ORCAA contractors to
 7 develop draft PSD permit modification documents. Once
 8 the final draft is completed, the documents will be
 9 provided for the Council for their review prior to
 10 making the decision to release documents for public
 11 comment.
 12 For the SEPA update, there's a little more
 13 substance there. Staff has completed the State -- State
 14 Environmental Policy Act, or SEPA review, which has been
 15 provided to the Council. As SEPA review was separated
 16 for each of the two aspects of facility's request, there
 17 is one SEPA review Staff memo and one addendum for the
 18 inflation of the Advanced Gas Path Package to Units 1
 19 and 2. And there's a second SEPA review Staff memo and
 20 a second addendum for extending the deadline for the
 21 commencing of construction of Units 3 and 4.
 22 No new mitigation was identified as a result
 23 of this review and the proposed change was determined to
 24 be minor in nature. Our SEPA review was based on the
 25 current condition. With the issuances of SEPA addendum,

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<p>1 no additional SEPA review will be done at the time of 2 request to commence construction without the submission 3 of another SCA amendment request. 4 If the Council wants to be able to conduct 5 additional SEPA review at the time of construction 6 without an SCA amendment request, then that would need 7 be included as an addition of the SCA. The 8 recommendation memos and addendums have been completed 9 and have uploaded to the Council SharePoint site to 10 allow the Council to view these documents. This 11 completes EFSEC's responsibility to comply with SEPA. 12 And are there any questions at this time? 13 CHAIR DREW: Are there any questions? 14 MR. DENGEL: This is Rob Dengel. Just to 15 clarify, you're right about to go into Units 3 and 4, 16 correct? 17 MR. OVERTON: Sorry, can you repeat the 18 question again? 19 MR. DENGEL: So this is -- this is Rob 20 Dengel with Ecology. You're right about to discuss 21 Units 3 and 4 immediately after this, correct? 22 MR. OVERTON: I believe Sonia Bumpus is 23 going to be discussing that stuff after my little 24 presentation here. 25 MR. DENGEL: Okay. I'm just going to ask</p>	<p>1 So this was mentioned in the October 2 meeting, but I wanted to just reiterate. I know 3 Councilmembers are familiar with the requirements in WAC 4 463-66-040. In that rule, it talks about what the 5 Council shall consider when it's reviewing an amendment 6 request. It says that the Council -- and I'm 7 paraphrasing, but that the Council will consider whether 8 the amendment request is consistent with one, the 9 intention of the original SCA; two, applicable laws and 10 rules; three, public health, safety, and welfare; and 11 four, EFSEC's requirements related to site restoration 12 and preservation in WAC 463-72. 13 So moving forward into the discussion about 14 the SCA schedule extension request for Units 3 and 4, 15 the -- the request is to extend the two thousand -- 16 extend to 2028 the deadline for commencing construction 17 of Units 3 and 4. 18 Staff conducted SEPA and reviewed the 19 considerations that are in WAC 463-66-040 in order to 20 develop our recommendation. For SEPA, EFSEC reviewed 21 and analyzed new information to determine if there were 22 any likely significant adverse environmental impacts not 23 covered by the impacts and mitigation analyzed in the 24 existing SEPA document. No additional mitigation beyond 25 what was identified for the 2010 mitigation was found.</p>
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<p>1 that when we start, making sure we have time to talk 2 about the -- the two projects respectively. So thank 3 you. 4 CHAIR DREW: Thank you. We will do that. 5 Ms. Bumpus? 6 MS. BUMPUS: Thank you, Chair Drew. Good 7 afternoon, Councilmembers. In light of Councilmember 8 Dengel's question, I'm going to go ahead and start with 9 my discussion on the schedule extension for Units 3 and 10 4. So we'll -- we'll do that first. 11 So under direction of the Council, EFSEC 12 Staff have worked to develop a Staff recommendation for 13 the Grays Harbor SCA amendment request. Staff's 14 recommendation I did want to note and as Kyle Overton 15 indicated in his SEPA summary, the Staff recommendation 16 bifurcates Grays Harbor Energy's SCA amendment request 17 into two separate recommendations from Staff for the 18 Council to consider. 19 One of our recommendations addresses the 20 decision before the Council on the Advanced Gas Path 21 Package, which are the upgrades to Units 1 and 2. The 22 other Staff recommendation we've developed addresses the 23 schedule extension request for SCA Amendment 5, which 24 authorized the construction and operation of Grays 25 Harbor Units 3 and 4.</p>	<p>1 And this is documented in EFSEC's Staff memo for each of 2 the environmental topics. 3 However, EFSEC did note during its SEPA 4 review that the Department of Ecology is currently 5 creating a new rule for Governor Inslee's Directive 6 19-18 to address greenhouse gas impacts and mitigation 7 with an overall goal of no net increase of greenhouse 8 gas emissions. These new rules are due to be in place 9 in September 2021, and we wanted to note these because 10 it remains to be seen how these might impact this 11 facility. 12 Now, as for the other aspects of the 13 provisions and the rule that needs to be considered, 14 there were no other proposed changes to the terms or 15 conditions of the existing SCA, and presumably related 16 conditions and technological upgrades to the facility 17 would be addressed through future SCA amendments and 18 plan approval prior to commencing construction. 19 However, in reviewing the timeframe 20 requirements in the SCA for the start of construction 21 and operation, Staff did conclude in consultation with 22 our assistant attorney general, Jon Thompson, that the 23 extension request beyond a ten-year expiration of the 24 SCA is not consistent with the original SCA. 25 So that being said and, you know, based on</p>

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1 all those considerations, Staff concluded that if the
 2 Council were to approve the extension request, the
 3 Council should include some conditions to ensure it can
 4 update its SEPA analysis before the start of
 5 construction.
 6 We also concluded that with an approval,
 7 there would be a need for approval by the governor and
 8 this is pursuant to what is in WAC 463-66-080. So I
 9 just wanted to put that out there before I discuss
 10 Staff's recommendation.
 11 So for our recommendation, I wanted to note
 12 first that I did consider the concerns expressed by some
 13 of our Councilmembers related to questions about need
 14 and the extent of SEPA analysis for this SCA extension
 15 request. In thinking about those concerns and input
 16 from our assistant attorney general and the consistency
 17 with the four requirements in our rule, I -- I
 18 essentially concluded that the Council should deny the
 19 extension request without prejudice. This would mean
 20 that the current SCA would expire in February next year.
 21 The denial could be -- a denial could be documented by a
 22 resolution for the Council to review and approve if
 23 everything looks okay.
 24 So that concludes my presentation on the
 25 extension request and I can -- I can take questions if

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1 there are any.
 2 CHAIR DREW: Are there questions?
 3 Mr. Dengel, did you want to ask a question
 4 at this point?
 5 MR. DENGEL: Yes. So I did have one -- one
 6 question. So with the updated -- for -- I want to make
 7 sure I'm getting the right project here. For the
 8 turbines 3 and 4 going through an additional SEPA
 9 process at a later time prior to construction, my
 10 question is, what additional information would you think
 11 we would be able to have that would -- that is not
 12 currently addressed in the -- in the current SEPA
 13 analysis that has been completed in addition to taking
 14 into light, you know, new state regulations on power
 15 use?
 16 MS. BUMPUS: That's an excellent question.
 17 And before I answer, I wanted to see if Patty Betts or
 18 Kyle Overton would like to respond first?
 19 MS. BETTS: This is Patty. I can -- I can
 20 make a few comments. So when we reviewed the proposal
 21 of currently, we're -- it's based on what we know today
 22 and also what the current environmental conditions are
 23 today. And we can potentially guess or extrapolate what
 24 they might be, let's just say six to eight years from
 25 now, but we don't know for sure.

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1 We do know that climate conditions, the
 2 effects of greenhouse gases are, you know -- that the
 3 effects are -- and our information about those effects
 4 are -- are -- are changing relatively rapidly. So we
 5 don't really know what the situation for sure is going
 6 to be like six years from now.
 7 We also don't know what technologies are
 8 going to be out there, and we don't even know what the
 9 status of -- of even other forms of energy, et cetera
 10 are going to be. So it's possible that even -- not
 11 only -- not only the environmental -- the significance
 12 of the environmental effects, the -- or new information,
 13 new science about environmental effects and/or even --
 14 we don't even know for sure whether the rule that
 15 they're currently working on will actually be in effect.
 16 So it's possible that there may not be
 17 adequate regulations to deal with greenhouse gas
 18 emissions at that point that are you might say kind of
 19 out of sync with the -- the current situation.
 20 So SEPA -- SEPA is there to address gaps,
 21 and we can tell you what the gaps are today, but we
 22 don't know for -- we can't -- it would be much more
 23 difficult and inaccurate for us to anticipate exactly
 24 what the gaps and existing regulations and environmental
 25 protection are six years from now.

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1 So that's why we do -- when we have -- when
 2 we have an action to take, that's why we have to kind of
 3 recheck and relook and see if there's new information
 4 that -- that changes our analysis of environmental
 5 impacts and/or whether the changes that are being
 6 proposed by the proposal itself are creating a change in
 7 the environmental impacts.
 8 Was that helpful?
 9 MR. DENGEL: Yes. Thank you very much.
 10 MS. MCGAFFEY: Excuse me, Chair Drew, this
 11 is Karen McGaffey. May I address the Council?
 12 CHAIR DREW: At this point, we're having a
 13 Council discussion, so I think that we will continue
 14 with that. Thank you.
 15 So, Councilmembers, are there other
 16 questions about either the SEPA review or the
 17 recommendation?
 18 MR. LIVINGSTON: Chair Drew, this is
 19 Councilmember Livingston. I have a question.
 20 CHAIR DREW: Go ahead.
 21 MR. LIVINGSTON: I just -- so I understand
 22 the procedural differences between Council approving an
 23 extension in the near-term, before February 21, and --
 24 versus allowing the expiration of that current SCA for
 25 the sites 3 and 4 and for a later date for the Grays

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1 Harbor to come back for an amendment, and can we kind
 2 of -- I just want to understand what procedures they'll
 3 have to follow to ask for that amendment later on.
 4 CHAIR DREW: Okay. Thank you.
 5 Either Ms. Bumpus or Mr. Thompson?
 6 MS. BUMPUS: This is Sonia Bumpus. So Jon
 7 Thompson may want to weigh in, but I'll just go ahead.
 8 So if the -- if the SCA expires as it's -- as it's
 9 scheduled to do next year in twenty -- February 2021,
 10 I -- my understanding is that Grays Harbor could come
 11 back with another amendment request to the Council
 12 similar to how the original amendment request was -- was
 13 pursued when Units 3 and 4 were sited by the Council in
 14 2010. So I -- I think that that's one way that they may
 15 proceed.
 16 Jon, did you want to add anything to that?
 17 MR. THOMPSON: No, I think that captures it.
 18 I mean, there -- the -- there is a provision in the
 19 existing SCA Amendment No. 5 that describes what the --
 20 the certificate holder has to do if they have not
 21 commenced construction within five years of execution of
 22 the -- of the SCA, which -- so I guess that would have
 23 been, well, about five years ago now.
 24 Anyway, it provides that the applicant has
 25 to provide additional information about changed

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1 regulatory conditions, you know, other -- other changes
 2 and to -- to propose any amendments to the SCA that are
 3 needed to address those.
 4 So it's -- but it seems to envision a
 5 presumption of, you know, that siting is allowed and is
 6 just a matter of updating with new information and
 7 potentially new regulatory information. But so that's
 8 if -- if the extension is granted. Presumably it would
 9 still be under that -- under that framework.
 10 But if a -- if the SCA is allowed to expire
 11 under its own terms, then presumably there would be
 12 something that looks more like an original application
 13 for site certification. And in that case, it would be
 14 much clearer that -- that the Council has the authority
 15 to evaluate the request anew and to balance the
 16 considerations of need for the facility against the --
 17 its environmental impacts at the site where it's
 18 proposed to be constructed and the full SEPA review
 19 could be conducted anew at that time.
 20 So that's really the difference in a
 21 nutshell about -- of -- of allowing an extension to the
 22 current SCA versus allowing it to expire and then -- and
 23 then if the need -- if need for the facility were to
 24 arise, you know, in the next few years, then Grays
 25 Harbor Energy could come back and -- and basically

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1 start -- start from scratch as it were with a new
 2 request for amendment or application for certification.
 3 CHAIR DREW: Mr. Livingston, does that
 4 answer your question?
 5 MR. LIVINGSTON: Yes, it does. Thank you.
 6 CHAIR DREW: So following up on that,
 7 Mr. Thompson, as we review the SEPA documents, the SEPA
 8 is one part of the Council's decision, and actually the
 9 SEPA decision is made by the EFSEC manager and provided
 10 as information to the Council. But the other -- there
 11 are other parts of a decision that the Council has to
 12 weigh in either a new application or an amendment; is
 13 that correct?
 14 MR. THOMPSON: Yeah, correct. The SEPA, you
 15 know, is to inform the decision-makers, you know, in
 16 addition to the -- the considerations that the -- that
 17 the Council already take into account in -- in reviewing
 18 an application, yeah.
 19 CHAIR DREW: And as you reviewed the
 20 decision by the Council in 2009, was there -- I think in
 21 the memo you may have -- have shared about -- or perhaps
 22 Ms. Bumpus did if I'm -- I'm trying to find the
 23 discussion that the Council had at the time about a
 24 construction window.
 25 MR. THOMPSON: Right. So in the -- it was

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1 actually 2011 that the -- that the Council finally -- or
 2 the Council recommended approval and the governor
 3 executed the SCA Amendment No. 5. But yeah, in the --
 4 in the Council's recommendation to the governor in
 5 explaining the ten-year expiration date and the -- and
 6 the sort of five-year provisions, I'll just read the
 7 quote. It said, (as read) They acknowledged that there
 8 is a benefit to the public to have permitted facilities
 9 ready to be constructed whenever it becomes known that
 10 more generation capacity is needed. However, the
 11 Council recognized that -- quoting now -- that an
 12 unlimited build window for a proposed project is not
 13 appropriate as over time technology or mitigation
 14 measures presented in an application may no longer be
 15 protective of environmental standards and conditions at
 16 the time the facility is constructed. And that was in
 17 Council Order No. 860, which was the recommendation to
 18 the governor for approval of construction of Units 3 and
 19 4.
 20 So that was one consideration going to the
 21 question of consistency with the original site
 22 certification agreement. And then another issue is --
 23 another kind of general issue is that at the time the
 24 Council recommended approval of construction of Units 3
 25 and 4, it considered need for the facilities as it had

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1 done previously for Units 1 and 2 when those were
 2 approved. And so in other words, the -- the Council
 3 didn't just rely on the statutory statement that there's
 4 a need for abundant energy, but instead found -- found
 5 it necessary to determine that there was a need for
 6 the -- for the project, for the specific project in
 7 order to be able to balance that need against the -- the
 8 impacts from it.
 9 So I think another -- there's another
 10 question of whether it's appropriate to -- to authorize
 11 an extension when there's not evidence of immediate --
 12 immediate need since that was part of the consideration
 13 for the Council to have recommended approval in the
 14 first instance back in 2011.
 15 So those are the couple of considerations
 16 that seemed to me were relevant to the question of
 17 whether the extension request was consistent with the
 18 intention of the original SCA.
 19 CHAIR DREW: Thank you.
 20 Are there other questions from
 21 Councilmembers?
 22 Okay. Hearing none, why don't we proceed
 23 and hear the discussion about the gas path for Units 1
 24 and 2, and -- and then we'll have a conversation about
 25 if we might want to propose any actions today.

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1 MS. BUMPUS: Thank you, Chair Drew. So the
 2 installation of the Advanced Gas Path Package, or AGP,
 3 is an equipment and software improvement to combustion
 4 turbines 1 and 2, and it is expected to increase
 5 facility efficiency output.
 6 So EFSEC Staff have looked at the four
 7 considerations under WAC 463-66-040, as I discussed in
 8 the presentation on Units 3 and 4, and what we've noted
 9 is that the facility would continue to operate with
 10 Units 1 and 2 to produce energy under its current SCA
 11 pursuant to the existing SCA terms and conditions.
 12 The AGP involves minor changes to the
 13 operating facility, and none of these changes
 14 substantially alter the analysis of the significant
 15 impacts and alternatives in existing environmental
 16 documents that we have reviewed.
 17 So we -- we did not identify any -- any new
 18 impacts or -- or new mitigation. The facility has an
 19 approved greenhouse gas mitigation plan that addresses
 20 mitigation of potential carbon dioxide emissions from
 21 the facility. And the facility's Prevention of
 22 Significant Deterioration, or PSD permit, is actually in
 23 the process of being updated to reflect the upgrades.
 24 So for the Advanced Gas Path Package,
 25 Staff's recommendation to the Council is to approve the

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1 request for the AGP package upgrade by resolution under
 2 WAC 463-66-070. Staff -- if the Council agrees with
 3 that recommendation, Staff could prepare a draft
 4 resolution for the Council's review and approval at a
 5 subsequent meeting.
 6 CHAIR DREW: Are there any questions about
 7 that?
 8 Okay. Hearing none, Councilmembers, I'd
 9 like to have a discussion about the recommendation to
 10 bifurcate the decision into two pieces. What are your
 11 thoughts about that?
 12 MS. BREWSTER: This is Stacey Brewster, I am
 13 in favor of bifurcating the -- the two parts to this
 14 amendment. They seem different and I believe
 15 considering them separately would work for us.
 16 CHAIR DREW: Mr. Thompson, do you think we
 17 need to have a motion on the floor for this?
 18 MR. THOMPSON: I -- I don't -- I don't see
 19 it as a separate issue. I mean, I think you can just
 20 take separate actions with -- with respect to the
 21 different -- two different aspects of the request.
 22 CHAIR DREW: Okay. Thank you.
 23 Other thoughts?
 24 MR. DENGEL: Just to kind of jump onto the
 25 last comment there, I would note that it also seems, you

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1 know, in addition to their nature, both of the
 2 timeframes and the certainty of the different projects
 3 going forward are -- are very different too. Just kind
 4 of seems to lead me to the point of agreeing that the
 5 projects would benefit from being bifurcated.
 6 CHAIR DREW: Thank you.
 7 So at this point, why don't we start with
 8 the Advanced Gas Path. Is there a motion on that part
 9 of the SCA to perhaps, let's see, direct the Staff to
 10 draft a resolution for our next meeting approving that
 11 part of the SCA, that part of the amendment?
 12 MS. KELLY: Chair -- Chair Drew, this is
 13 Kate Kelly. So I move that the Council request Staff to
 14 prepare a resolution that would support amending the SCA
 15 to allow for the Advanced Gas Path Package to become
 16 part of the operations for the Units 1 and 2. I don't
 17 know if I said that right, but...
 18 CHAIR DREW: I think that works. Thank you.
 19 MS. KELLY: Okay.
 20 MS. BREWSTER: Stacey Brewster, I'll second
 21 the motion.
 22 CHAIR DREW: Thank you.
 23 Discussion?
 24 Okay. All those in favor, please say "aye."
 25 COUNCILMEMBERS: Aye.

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1 CHAIR DREW: Opposed? Motion carries.
 2 So now is there -- let's -- let's discuss
 3 the extension of the construction window.
 4 Councilmembers, is -- are there -- is there more
 5 information that you would like to have? Would you like
 6 to -- would you like to have a motion to accept -- to
 7 follow the recommendation of this -- not to follow
 8 the -- take the recommendation of the Staff and not
 9 allow the extension of the construction period, what --
 10 what direction would you like to go on this?
 11 MS. KELLY: So, Madame Chair, this is Kate
 12 Kelly. And first of all, I can -- I would like to just
 13 extend my appreciation to Staff and to Jon for providing
 14 us all the support during this process. I really
 15 appreciate the amount of information we've gotten in
 16 response to our questions just to help inform our
 17 decision on this.
 18 The question I have at this point is not for
 19 more information, just what -- what does this look like?
 20 Are we asking for -- are we needing to do a resolution
 21 if we were going to accept Staff's recommendation? Is
 22 that -- is that a resolution to deny the request for --
 23 how does that work? Or do we just not take action on it
 24 and it expires by its own terms?
 25 CHAIR DREW: Mr. Thompson, can you help with

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1 that?
 2 MR. THOMPSON: Yeah, certainly. My
 3 recommendation is that what you would do if you want to
 4 take Staff's recommendation is to -- and -- and
 5 Ms. Bumpus can -- can correct me if she sees this
 6 differently. But I think the way it goes to direct
 7 Staff to -- to prepare a resolution denying the request
 8 for an extension of the construction deadline. So yeah,
 9 I think you need to -- again, this goes back to the
 10 bifurcation and the need to memorialize, I think, in --
 11 in different decisions, your decision with respect to
 12 the Advanced Gas Path for Units 1 and 2 and then -- and
 13 then another -- another decision memorialized in a
 14 different resolution that denies the request from Grays
 15 Harbor Energy for an extension of the SCA. That would
 16 be my recommendation.
 17 CHAIR DREW: Thank you.
 18 MS. BUMPUS: And this is Sonia Bumpus. I
 19 agree with Jon's recommendation.
 20 MR. DENGEL: This is Rob Dengel. I'd like
 21 to make a motion. See if I get this right. So make a
 22 motion for Staff to prepare a resolution to the -- deny
 23 the Grays Harbor extension of -- of gen- -- construction
 24 on 3 and 4 without prejudice.
 25 CHAIR DREW: Thank you.

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1 MS. KELLY: Kate Kelly, I would second.
 2 CHAIR DREW: Okay. Discussion?
 3 I think the information that we have been
 4 provided, particularly in the context of the Council
 5 resolution and recommendation to the governor from --
 6 from 2011 regarding unlimited construction windows, the
 7 fact that with a new SCA meet -- should be taken into
 8 consideration. It doesn't deny the ability for Grays
 9 Harbor Energy to come back when there is actually a
 10 project in the offing to bring that and -- with a site
 11 certification agreement amendment to the Council. But
 12 at that point in time, the Council would consider the
 13 need as well as any revised environmental regulations
 14 that would be enforced at the time.
 15 So that is my comment on the subject. Are
 16 there other comments?
 17 MS. BREWSTER: This is Stacey Brewster. I
 18 would like to agree with your comment. My concern is
 19 mostly with new rules that are being developed at this
 20 time, and I think the ability to consider it when a
 21 project is imminent is more important.
 22 CHAIR DREW: Thank you.
 23 Okay. At this point, all those in favor of
 24 the motion to direct Staff to draft a resolution denying
 25 the extension of the construction period for Units 3 and

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1 4, please say "aye."
 2 COUNCILMEMBERS: Aye.
 3 CHAIR DREW: Opposed? Motion carries.
 4 Thank you all. And thank you, yes, to Staff
 5 and to our certificate holder for all the work done on
 6 this -- this project on this amendment.
 7 Okay. Moving on in our facility updates.
 8 Kittitas Valley Wind Power Project?
 9 MR. MELBARDIS: Good afternoon, Chair Drew,
 10 EFSEC Council, and Staff. This is Eric Melbardis with
 11 EDP Renewables for the Kittitas Valley Wind Power
 12 Project. We have nothing nonroutine to report for the
 13 period.
 14 CHAIR DREW: Thank you.
 15 Ms. Diaz, Wild Horse Wind Power Project?
 16 MS. DIAZ: Yes, thank you, Chair Drew,
 17 Councilmembers, and Staff. This is Jennifer Diaz
 18 representing Puget Sound Energy for the Wild Horse Wind
 19 Facility. I have no nonroutine updates for the month of
 20 October.
 21 CHAIR DREW: Thank you.
 22 Moving on to Chehalis Generation Facility,
 23 Mr. Smith?
 24 MR. SMITH: Good afternoon, Chair Drew,
 25 Council, and Staff. This is Jeremy Smith, the

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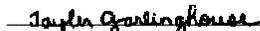
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1 environmental analyst for the Chehalis Generation
 2 Facility. The Chehalis Facility does not have any
 3 nonroutine items to report for the month of October at
 4 this time.
 5 CHAIR DREW: Thank you.
 6 Desert Claim Wind Power Project, Ms. Moon?
 7 MS. MOON: Good afternoon, Council Chair
 8 Drew and Councilmembers. As Chair Drew said, this is
 9 Amy Moon providing an update for the Desert Claim
 10 Project. EFSEC Staff continue to coordinate with Desert
 11 Claim; however, there are no project updates at this
 12 time.
 13 CHAIR DREW: Thank you.
 14 Columbia Solar Project project update,
 15 Ms. Kidder?
 16 MS. KIDDER: Thank you, Chair Drew. Good
 17 afternoon, Chair and Councilmembers. For the record, my
 18 name is Ami Kidder. The certificate holder continues to
 19 update EFSEC Staff on their preconstruction activity.
 20 We have no further project updates at this time.
 21 CHAIR DREW: Thank you.
 22 WNP-1/4 and also Columbia Generating
 23 Station, Mr. Whitehead? Or Ms. Moon?
 24 MS. MOON: Okay. I believe that there was
 25 nothing nonroutine to report and they -- Columbia

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1 Generating Station continues to address the COVID
 2 response by having nonessential employees work away from
 3 the office. That's about it. Thank you.
 4 CHAIR DREW: Thank you.
 5 With no other business to come before us at
 6 this point in time, the meeting's adjourned. Thank you
 7 very much.
 8 MS. MOON: Oh, Council Chair Drew. So for
 9 WNP-1/4.
 10 CHAIR DREW: Yes.
 11 MS. MOON: That also gets reported by Kip
 12 Whitehead, there's also no nonroutine items to report
 13 for that.
 14 CHAIR DREW: Thank you for that.
 15 MS. MOON: You're welcome.
 16 CHAIR DREW: Now our meeting is adjourned.
 17 Thank you all.
 18 (Adjourned at 2:16 p.m.)
 19
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1 CERTIFICATE
 2
 3 STATE OF WASHINGTON
 4 COUNTY OF THURSTON
 5
 6 I, Tayler Garlinghouse, a Certified Shorthand
 7 Reporter in and for the State of Washington, do hereby
 8 certify that the foregoing transcript is true and
 9 accurate to the best of my knowledge, skill and ability.
 10
 11
 12
 13 
 14 Tayler Garlinghouse, CCR 3358
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EFSEC Monthly Council Meeting – Facility Update Format

Facility Name: Kittitas Valley Wind Power Project

Operator: EDP Renewables

Report Date: December 3, 2020

Reporting Period: November 2020

Site Contact: Eric Melbardis

Facility SCA Status: Operational

Operations & Maintenance (only applicable for operating facilities)

- Power generated: 12,477 MWh
 - Wind speed: 5.2 m/s
 - Capacity Factor: 17.19%
-

Environmental Compliance

- No incidents

Safety Compliance

- Nothing to report

Current or Upcoming Projects

- Nothing to report

Other

- No sound complaints
- No shadow flicker complaints

EDP Renewables has amicably terminated its service and maintenance agreement with Suzlon. We have taken service and maintenance in house by hiring all 6 of the former Suzlon technicians. During this process, we have lost access to a few of the proprietary Suzlon reporting systems that we relied upon to provide these updates to EFSEFC. Please bear with me as we work to recreate internal systems that can query this data the way EFSEC wants it displayed.

EFSEC Monthly Council Meeting – Facility Update

Facility Name: Wild Horse Wind Facility
Operator: Puget Sound Energy
Report Date: December 4, 2020
Report Period: November 2020
Site Contact: Jennifer Diaz
SCA Status: Operational

Operations & Maintenance

November generation totaled 66,005 MWh for an average capacity factor of 33.63%.

Environmental Compliance

Nothing to report.

Safety Compliance

No lost-time accidents or safety injuries/illnesses.

Current or Upcoming Projects

Nothing to report.

Other

Nothing to report.

EFSEC Monthly Council Meeting – Facility Update

Facility Name: Chehalis Generation Facility
Operator: PacifiCorp
Report Date: December 4, 2020
Reporting Period: November 2020
Site Contact: Mark A. Miller
Facility SCA Status: Operational

Operations & Maintenance

-Relevant energy generation information, such as wind speed, number of windy or sunny days, gas line supply updates, etc.

- 155, 787 MW-hrs generated in November for a year-to-date 2,219,987 MW-hrs and a capacity factor of 56.2%.

The following information must be reported to the Council if applicable to the facility:

Environmental Compliance

-Permit status if any changes.

- No changes.

-Update on progress or completion of any mitigation measures identified.

- No issues or updates.

-Any EFSEC-related inspections that occurred.

- State Fire Marshal Office Annual Inspection completed November 3rd.

-Any EFSEC-related complaints or violations that occurred.

- None.

-Brief list of reports submitted to EFSEC during the monthly reporting period.

- None

Safety Compliance

-Safety training or improvements that relate to SCA conditions.

- Zero injuries this reporting period and a total of 1950 days without a Lost Time Accident.

Current or Upcoming Projects

-Planned site improvements.

- No planned changes.

-Upcoming permit renewals.

- No upcoming renewals.

-Additional mitigation improvements or milestones.

- No issues or updates.

Other

-Current events of note (e.g., Covid response updates, seasonal concerns due to inclement weather, etc.).

- Nothing to report.

-Personnel changes as they may relate to EFSEC facility contacts (e.g., introducing a new staff member who may provide facility updates to the Council).

- Nothing to report.

-Public outreach of interest (e.g., schools, public, facility outreach).

- Nothing to report.

Respectfully,



Mark A. Miller--P75451
Manager, Gas Plant
Chehalis Generation Facility

Desert Claim Wind Power Project

December project update

[Place holder]

Columbia Solar Project

December project update

[Place holder]

EFSEC Monthly Council Meeting – November 2020

Facility Name: **Columbia Generating Station and Washington Nuclear Project 1 and 4 (WNP-1/4)**

Operator: **Energy Northwest**

Report Date: **December 7, 2020**

Reporting Period: **November 2020**

Site Contact: **Mary Ramos**

Facility SCA Status: (Pre-construction/Construction/Operational/Decommission): **Operational**

CGS Net Electrical Generation for November 2020: 795,088 MW-Hrs

-Relevant energy generation information, such as wind speed, number of windy or sunny days, gas line supply updates, etc.

The following information must be reported to the Council if applicable to the facility:

Environmental Compliance

-Brief list of reports submitted to EFSEC during the monthly reporting period.

In addition to routine monthly reports, Energy Northwest (EN) submitted the following:

- **On November 17, 2020, EN submitted Columbia Generating Station (CGS) groundwater monitoring results for 3rd quarter of 2020.**
- **On December 1, 2020, EN submitted an updated State Waste Discharge Permit (SWDP) application signed by an EN vice president, the Operation and Maintenance (O&M) Manual for the Columbia Generating Station Sanitary Waste Treatment Facility (SWTF), and EN's response to EFSEC and Ecology's comments. The SWDP application requests approval for the SWTF to receive wastewater from a new surface water filtration system to be located at EN's Industrial Development Complex (IDC).**

Current or Upcoming Projects

-Planned site improvements potentially related to SCA conditions, EFSEC-issued permits, or future permitting needs.

- **No change to previous summary: Energy Northwest signed a new lease agreement with the Department of Energy. The new lease agreement requires the Industrial Development Complex (IDC) located at WNP 1/4 to no longer use groundwater as its water source by July 2022. The IDC is planning to use surface water from the Columbia River as its water source and will be installing a new water filtration system at the site.**

Other

-Current events of note (e.g., Covid response updates, seasonal concerns due to inclement weather, etc.).

- **Pandemic Response: Benton and Franklin Counties remain in phase 2. In mid-November due to recent COVID-19 trends in Benton and Franklin Counties, EN departments assessed the potential for additional telecommuting opportunities for non-essential employees. Increased telecommuting is encouraged through at least January 4, 2021.**
- **Due to recent COVID-19 trends in Benton and Franklin Counties, the Washington State Fire Marshal Inspection of the IDC and non-power block buildings at CGS is postponed until Spring 2021.**

EFSEC Monthly Council Meeting

Facility Name: Grays Harbor Energy Center
Operator: Grays Harbor Energy LLC
Report Date: December 15, 2020
Reporting Period: November 2020
Site Contact: Chris Sherin
Facility SCA Status: Operational

Operations & Maintenance

- GHEC generated 99,853MWh during the month and 2,175,765MWh YTD.

The following information must be reported to the Council if applicable to the facility:

Environmental Compliance

-There was no outfall, or storm water deviations, during the month.

-Grays Harbor Energy Center notified EFSEC Staff on November 28th of a potential emissions event on the initial startup of the units on November 27th. EFSEC Staff was provided a detailed follow up December 1st. During the startup, Williams Northwest Pipeline failed to deliver adequate pressure to the plant due to a failed valve actuator solenoid. Shortly after starting the 2nd gas turbine, GHEC Operators aborted the start of the second gas turbine startup due to the loss of pressure in the Williams NWP and notified Williams NWP Operations Center. The issue was not immediately correctable and required a technician to travel to a substation and manually operate the valve. Aborting the startup of the 2nd gas turbine increased supply pressure to a normal operating pressure and Operations continued with the startup of the initially fired gas turbine. This gas turbine completed startup and was emissions compliant. Gas pressure began to fall again. Based on the estimated repair time Williams NWP Operations Center had provided GHEC, Operations dropped load anticipating the repair to be made within minutes. Dropping load made the operating gas turbine no longer emissions compliant and began the shutdown window for the gas turbine. When the repair was not made per the timeline Williams NWP had provided the Operator commenced a shutdown of the gas turbine with the intent to quickly restart the gas turbine prior to a full shutdown to minimize emissions. The Williams NWP Technician arrive and manually operated the affected block valve. The rapid increase in gas flow caused a large spike in pressure, more than the plant's high gas pressure limit, tripping the gas turbine offline 39 minutes in shutdown. In accordance with R5. of the AOP, Grays Harbor Energy Center is promptly to notify EFSEC of potential deviation from Condition 11.3 of PSD Amendment 4 and AR 2.15.e.ii. of the AOP that limits planned shutdowns to 30min. Although the 30min limitation was exceeded, none of the air emission permit limitations were exceeded during the shutdown of CGT2, or during the shutdown of GCT1, that occurred initially.

-Wastewater Treatment O&M Manual Annual Review was submitted to staff.

-Standard monthly reporting - Outfall Discharge Monitor Report (DMR), Fuel Gas sample, submitted to EFSEC & WA DOE. State Quarterly EDR submitted to EFSEC, ORCAA & EPA.

Safety Compliance

-None.

Current or Upcoming Projects

-Gray Harbor Energy LLC submitted additional information to EFSEC staff in response to follow up requests on the PSD amendment application and proposed changes to the PSD draft.

Other

-Ongoing COVID-19 mitigation efforts at the site.

-

Grays Harbor Energy Center Fact Sheet
Grays Harbor Energy, LLC
No. EFSEC/2001-01, Amendment 5

1. Background

A. Facility Description

Grays Harbor Energy, LLC (GHE) owns and operates an electricity generation facility located at 401 Keys Road in Elma, Grays Harbor County, Washington. The facility is referred to as the Grays Harbor Energy Center (GHEC). GHEC is currently capable of generating up to 650 megawatts(MW) of electricity from a combined-cycle power plant comprised of two combustion turbines, each equipped with a duct burner and heat recovery steam generator and a single steam turbine and bank of cooling towers shared in common. GHEC also operates an auxiliary boiler, a diesel emergency generator, and an emergency fire water pump.

B. Project Description

The Energy Facility Site Evaluation Council (EFSEC) has the authority to issue both Prevention of Significant Deterioration (PSD) and minor air permits. On August 18, 2020, EFSEC received an application to install General Electric (GE) combustion turbine (CGT) upgrades, which include the Advanced Gas Path (AGP) upgrade. This is an upgrade package for components of the CGT that will allow for more efficient combustion of natural gas within the turbines and increased turbine capacity. Since the modification only involves the CGT units (CGT01 & CGT02), this application does not include discussion of the other emission units at the site.

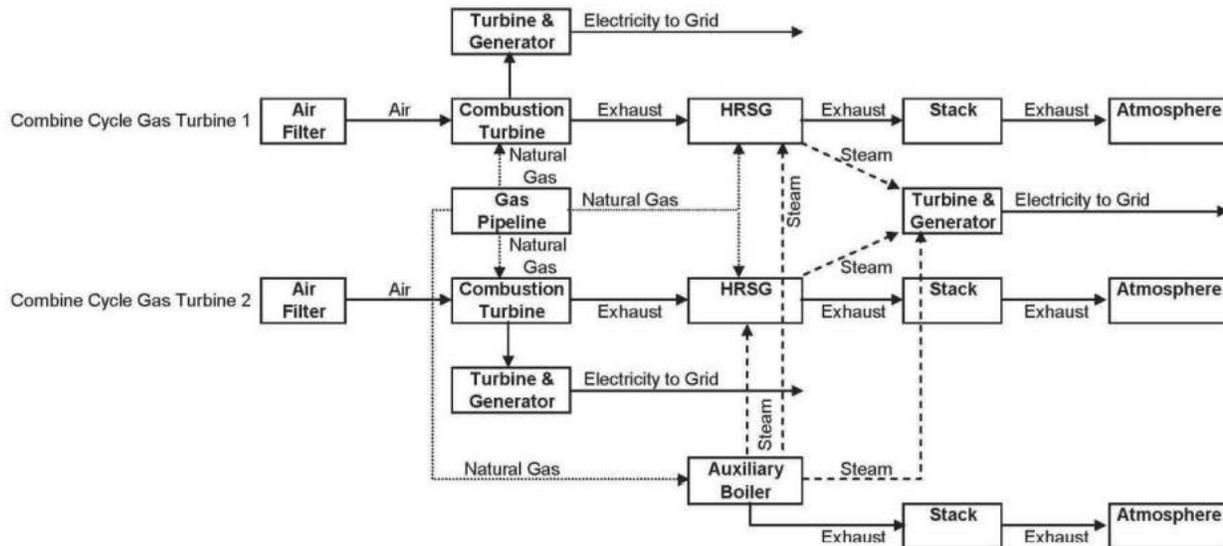
The AGP package is an upgrade over the standard equipment in the Frame 7FA.03 turbine. According to GE's technical documents, the 7FA AGP program utilizes 7FA.04 Hot Gas Path (HGP) technology, incorporating cooling and sealing enhancements and advanced materials to allow efficient operation at increased firing temperatures.

Together with the low D/P DLN 2.6 combustor and model-based controls architecture, the AGP upgrade delivers improved output and heat rate while maintaining base load emissions levels. AGP includes a complete set of 7FA.04 design HGP components, to include first, second, and third stage nozzles, buckets, and shrouds. A new support ring for the first stage nozzle (S1N) is also included. Technological enhancements included in the AGP upgrade revolve around application of advanced materials used in Aviation engines as well as optimization of secondary cooling and sealing flows. Additionally, 3D aerodynamic design methodology has been applied to the first stage nozzle and bucket to further enhance efficiency. Finally, design enhancements have been incorporated to address known FA HGP distress modes.

The Low Pressure Drop (dP/P) Combustor provides increased power output and decreased heat rate by reducing the overall pressure drop across the combustor through the use of newly designed combustion liners and flow sleeves. By reducing the overall combustion system pressure drop, the advanced liners and flow sleeves effectively improve combustion efficiency. The new design incorporates axial flow sleeve air injection for improved dynamic pressure recovery and new liner physical features for more uniform and low-loss heat transfer. The newly designed aerodynamic flow sleeve design enhances cooling efficiency across the liner and

increases combustor inlet air pressure recovery. Hence, pressure losses through each combustor chamber are reduced.

The process flow diagram of the CGT/HRSG provided in the application is shown below.



GHE is not requesting any change in emission limits because the minor increase in heat input to the two turbines can be accommodated within the current criteria pollutant emission limits. The original emissions concentration and lb/hr emission limits were established based on turbine levels 1,671 MMBtu/hr at 59°F temperature conditions. The modification and low temperature operations will result in over 2,011 MMBtu/hr (14°F) to the combustion turbine. Therefore, short-term lb/hr limit emissions limit will control the operations. EFSEC does not expect the units to operate at 1,671 mmBtu/hr or lower in the future, therefore it is unlikely the concentration limits will be exceeded before the lb/hr limits.

C. Emission Units Capacity Discussion

The project will increase the nominal capacity of each individual CGT increases to 181.2 MW at 100 percent load and 59°F, from the currently capacity of 175 MW at 100 percent load and 59°F. There is no change in the rated capacity of the duct burner or the steam turbine. Based on GE performance data at 100 percent load and 59°F, the heat rate will improve (decrease) by approximately 2.3 percent. The applicant anticipates that the units will run more hours and have less start-up and shutdowns. Steam rate to the turbine will increase by approximately seven percent while the output in megawatt will increase by approximately one percent.

Table 1. Turbine Data

	CGT01		CGT02	
	mmBtu/hr	MW	mmBtu/hr	MW
Permitted (prior to upgrade) @ 59°F	1,671	175	1,671	175
Design	NA	175	NA	175
Historical maximum (unadjusted for temperature)	1,835	187	1,835	188
Post project @ 59°F	1,823	181.2	1,823	181.2
Post project/historical max	0.994	0.969	0.994	0.964

Table 2. GE Performance Design Data for each CGT+HRSG/ Duct Burner

	Pre Project	Post Project	
	At 59°F	At 59°F	At 14°F
Max Heat Input Rate, mmBtu/hr @ HHV			
Turbine	1735	1823	2,011
Duct Burner	505	505	505
Total	2240	2328	2,516
Max Output Rate, MW			
Combustion Turbine	175	181.2	206
Steam Turbine	300	300	300
Total	650	662.4	718
Lb CO ₂ /MW	820	822	822

Table 3. Heat Recovery Steam Generation Units (HSGUs) /Duct Burners Data

	Permitted	Design	Historical Maximum	Future	Change over Historical
#1 Duct Burner MMBtu/hr	505	494	504.9	---	---
#1 Steam rate, klb/hr	---	835	781	835	1.069
#2 Duct Burner MMBtu/hr	505	494	497.3	---	---
#2 Steam rate	---	835	790	835	1.057
Steam Turbine MW	300	300	296	300	1.014

Table 4. Electrical Generation Unit

	Permitted	Design	Historical Maximum	Future	Change over historical
mmBtu/hr	4352	NA	4695.4	4,656	0.992
MW	650	650	671	662.4	0.987

D. Permitting History:

On August 7, 2009, Grays Harbor Energy, LLC requested a fourth amendment to the approval. Amendment 4 established emissions limits during start-up and shutdown and rectifies issues with the approval identified in both the development of the Air Operating Permit for the facility and because of the first year of operation of the facility.

1. The total project consisted of the following major components which is consistent with the original permit and Amendments 1 through 3 unless noted:
 - Two General Electric combustion gas turbines (GE 7FA); each turbine having a maximum rating of 1,671 million British thermal units per hour (MMBtu/hr), and each turbine will have a supplementary duct burner with a maximum rating of 505 MMBtu/hr.
 - Two heat recovery steam generators (HRSG).
 - One steam turbine generator (STG) rated at 300 MW.
 - One auxiliary boiler rated at 29.3 MMBtu/hr.
 - One cooling tower system.
 - One emergency backup diesel generator (Manufactured in 2002, 400 KW).
 - One diesel engine-driven fire water pump (Manufactured on 10/25/2001, 300 BHP)
2. Below are from prior determinations.
3. BACT as required under WAC 173-400-113(2), and toxic best available control technology (T-BACT) as required under WAC 173-460-040(4), will be used for the control of all air pollutants which will be emitted by the proposed project. The following table lists the plant-wide allowable emissions and BACT based on Amendment 4 requirements.

Pollutant	Plant-Wide Potential to Emit, tpy	Best Available Control Technology			
		CGTs	Auxiliary Boiler	Diesel-Fired Emergency Equipment	Cooling Tower
NO _x	246.5	Selective Catalytic Reduction plus low NO _x burners (Turbine & HSRG)	Flue gas recirculation and low NO _x burners	Limited to emergency uses as defined by 40 CFR 63 Subpart ZZZZ	Not applicable
CO	146.1	Good combustion practice	Good combustion practice		Not applicable
SO ₂	29.2*	Natural gas fuel		Use only on-road specification diesel oil	Not applicable
H ₂ SO ₄	19.0	Natural gas fuel			Not applicable
VOCs	74.6	Natural gas fuel and good combustion practice		Limited to emergency uses as defined by 40 CFR 63 Subpart ZZZZ	Not applicable
PM and PM ₁₀	203	Natural gas fuel and good combustion practice			Drift eliminator with less than 0.001% loss of the recirculating water
NH ₃	141	5 ppm ammonia slip limitation	Not applicable		

* Based on an annual average natural gas total sulfur content of 0.5 grains/100 scf.

4. Allowable emissions, from the emissions units, will not cause or contribute to air pollution in violation of:
 - 4.1. Any state or national ambient air quality standard.
 - 4.2. Any applicable PSD increment.

The following table indicates the maximum Class I and Class II increment consumed by this project (Amendment 4 and earlier determinations):

Pollutant		Maximum Ambient Class II Area Impact Concentration ($\mu\text{g}/\text{m}^3$)	Class II Area Allowable Increment ($\mu\text{g}/\text{m}^3$)	Maximum Ambient Class I Area Impact Concentration ($\mu\text{g}/\text{m}^3$)	Class I Area Allowable Increment ($\mu\text{g}/\text{m}^3$)
PM ₁₀ *	24-hr	4.86	17	0.23	8
	Annual	0.91	30	0.01	4
Nitrogen dioxide (NO ₂)*	Annual	0.898	25	0.008	2.5
SO ₂	3-hr	13.54	20	0.26	25
	24-hr	3.5	91	0.032	5
	Annual	0.29	512	0.001	2
* Evaluated at a higher emission rate than proposed to be permitted. See attached Fact Sheet for the Nov. 2001 approval and application materials for details.					

5. Ambient Impact Analysis indicates that there will be no significant impacts resulting from pollutant deposition on soils and vegetation in either of the closest Class I areas, Olympic and Mt. Rainier National Parks. The permitted turbine project will have deposition levels significantly below the National Park Service's level of concern.
6. Ambient air quality analysis indicates that there will be no adverse impacts resulting from pollutant deposition in the Class II areas surrounding the project site.
7. Ambient Impact Analysis indicates that degradation of regional visibility or vistas from Olympic National Park due to the GHEC project is acceptable to the National Park Service based on an emission limitation of 2.0 ppm NO_x, 24-hr average on the CGTs (17.4 lb/hr, 24-hr rolling average).
8. No significant effect on industrial, commercial, or residential growth in the Elma area is anticipated due to the project.
9. As reflected in the Third Amendment Order, for the third amendment, EFSEC concluded that:
 - 9.1. The request for the third amendment was timely and complete (September 30, 2005).
 - 9.2. BACT:
 - 9.2.1. Based on comparable permit actions since 2002, EFSEC concluded that BACT for VOC emissions from the auxiliary boiler using good combustion practice was

0.0055 lb carbon/MMBtu (one-hour average). This determination is not changed in Amendment 5.

9.2.2. For all other anticipated pollutants from the gas combustion turbines, heat recovery steam generators, auxiliary boiler, and cooling tower system BACT was the same as determined in Amendment 2. This determination is not changed in Amendment 5.

2. Project Emission

The applicant indicated that all increases in emissions were below the significant emission rate therefore this was a minor modification of the PSD permit. Based on projected versus baseline emissions, the applicability shows that the project could trigger major modification for PM, PM₁₀, PM_{2.5}, and greenhouse gas (GHG). However, the applicant excludes the emissions that could have been accommodated during the baseline period and also unrelated to the upgrade under 40 CFR 52.21(4)(ii)(c) to demonstrate that all increases in emissions were below the significant emission rate therefore this was a minor modification of the PSD permit.

A. PSD Applicability (Major Modification)

Tpy	PM	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	CO _{2e}
Baseline	55.53	55.53	55.53	91.05	11.84	5.17	3.04	1,292,285
Projected	83.76	83.76	83.76	128.08	16.41	7.69	5.85	1,885,289
Delta – projected	28.23	28.23	28.23	37.03	4.57	2.52	2.81	593,004
CA	93.60	93.60	93.6	130.68	19.80	13.92	4.92	2,177,478
Delta – CA	-9.84	-9.84	-9.84	-2.6	-3.39	-6.23	0.93	-292,189
SER	25	15	10	40	100	40	40	75,000
CA = Could have accommodated SER = Significant Emission Rate								

Baseline emission:

Table 5. Baseline Emission and Period

Pollutant	BAE (ton/yr)	Baseline Period
PM	55.53	5/18 - 4/20
PM ₁₀	55.53	5/18 - 4/20
PM _{2.5}	55.53	5/18 - 4/20
NO _x	91.05	5/17 - 4/19
CO	11.84	5/16 - 4/18

Pollutant	BAE (ton/yr)	Baseline Period
SO ₂	5.17	5/18 - 4/20
VOC	3.04	5/18 - 4/20
CO ₂ e	1,292,285	2/18 - 1/20

PM emission testing has been conducted 2009, 2014, and 2019. The main differences in the emission test were the length of the test, which were 240, 180, and 60 minutes, respectively. The overall emission rate per million BTU heat input were, 0.0053, 0.0024, and 0.0076, respectively. GHEC recalculated the PM emissions based on an average of the three years 0.0053 lb PM/MMBtu/hr for Unit 1.

Table 6. Baseline Emission Factors

Pollutant	CGT1		CGT2	
	Baseline EF (lb/mmBtu)		Baseline EF (lb/mmBtu)	
	Normal	SUSD	Normal	SUSD
PM	0.0053	0.0053	0.0049	0.0049
PM ₁₀	0.0053	0.0053	0.0049	0.0049
PM _{2.5}	0.0053	0.0053	0.0049	0.0049
NO _x	0.0069	0.1272	0.0073	0.1229
CO	0.0007	0.0445	0.0004	0.0353
SO ₂	0.0005	0.0004	0.0005	0.0004
VOC	0.0004	0.0004	0.0002	0.0002
CO ₂ e	118.98	118.98	118.98	118.98

Table 7. Start-up and Shutdown Baseline Heat Input

Pollutant	CGT1		CGT2	
	Baseline Heat Input (mmBtu)		Baseline Heat Input (mmBtu)	
	SUSD		SUSD	
PM	266,691		189,748	
PM ₁₀	266,691		189,748	
PM _{2.5}	266,691		189,748	
NO _x	348,570		280,860	
CO	334,303		258,388	

	CGT1	CGT2
Pollutant	Baseline Heat Input (mmBtu)	Baseline Heat Input (mmBtu)
	SUSD	SUSD
SO ₂	266,691	189,748
VOC	266,691	189,748
CO _{2e}	279,836	232,180

Table 8. Projected Emission Factors (lb/mmBtu)

	Normal	SUSD
PM	0.0053	0.0053
PM ₁₀	0.0053	0.0053
PM _{2.5}	0.0053	0.0053
NO _x	0.0073	0.1272
CO	0.0007	0.0445
SO ₂	0.0005	0.0004
VOC	0.0004	0.0004
CO _{2e}	118.98	118.98

Table 9. Scenario 2 – Projected Operations with AGP Upgrade

Year	Projected Heat Input (mmBtu/yr)		
	Total	Normal	SUSD
2022	30,530,288	30,305,888	224,400
2023	31,691,290	31,477,090	214,200
2024	31,691,290	31,477,090	214,200
2025	31,691,290	31,477,090	214,200
2026	31,691,290	31,477,090	214,200
2027	31,691,290	31,477,090	214,200
2028	31,691,290	31,477,090	214,200
2029	31,691,290	31,477,090	214,200

Based on the application, EFSEC has determined that this change will require changes to the permit to accommodate the new equipment but will not trigger major modification per the PSD regulations. Therefore this review will not update the best available control technology review or modeling for PSD. Because this action does not trigger major PSD permitting, GHG review is not required. The original permit was issued prior to the greenhouse gas regulations therefore no current (GHG) requirements. Therefore, this permit will not add any GHG requirements. The applicant has submitted regulatory review for GHG requirements, which will be reviewed in this document, but will be incorporated into the air operating permit. This change does trigger minor permitting under state law for air toxics.

B. Minor NSR Criteria Pollutant Emission Increase

While the fuel to the combustion turbine will increase, GHEC has requested that all the permit limits remain the same. Therefore, state minor source permitting is not triggered for criteria pollutant.

C. Toxic Air Pollutants (TAPs) Emission Increase

The TAPs emission increase per Table 22 of the application is shown below.

Pollutant	CAS	De minimis Standard		Emission Increase (CT1 + CT2)		Exempt From 173-460 Analysis?
		Threshold	Unit	lb/hr	lb/standard unit	
Acetaldehyde	75-07-0	3.00E+00	lb/year	1.22E-02	1.07E+02	NO
Acrolein	107-02-8	1.30E-03	lb/24-hr	1.95E-03	4.67E-02	NO
Ammonia	7664-41-7	1.90E+00	lb/24-hr	0.00E+00	0.00E+00	YES
Arsenic & Compounds NOS	7440-38-2	2.50E-03	lb/year	0.00E+00	0.00E+00	YES
Benz(a)anthracene	56-55-3	4.50E-02	lb/year	0.00E+00	0.00E+00	YES
Benzene	71-43-2	1.00E+00	lb/year	3.65E-03	3.20E+01	NO
Benzo(a)pyrene	50-32-8	8.20E-03	lb/year	0.00E+00	0.00E+00	YES
Benzo(b)fluoranthene	205-99-2	4.50E-02	lb/year	0.00E+00	0.00E+00	YES
Benzo(k)fluoranthene	207-08-9	4.50E-02	lb/year	0.00E+00	0.00E+00	YES
Beryllium & Compounds NOS	N/A	3.40E-03	lb/year	0.00E+00	0.00E+00	YES
1,3-Butadiene	106-99-0	2.70E-01	lb/year	1.31E-04	1.15E+00	NO
Cadmium & Compounds NOS	7440-43-9	1.90E-03	lb/year	0.00E+00	0.00E+00	YES
Chromium(VI) & Compounds NOS	7440-43-9	3.30E-05	lb/year	0.00E+00	0.00E+00	YES
Chrysene	218-01-9	4.50E-01	lb/year	0.00E+00	0.00E+00	YES
Cobalt & Compounds NOS	7440-48-4	3.70E-04	lb/24-hr	0.00E+00	0.00E+00	YES
Copper & Compounds NOS	7440-50-8	9.30E-03	lb/1-hr	0.00E+00	0.00E+00	YES
Dibenzo(a,h)anthracene	53-70-3	4.10E-03	lb/year	0.00E+00	0.00E+00	YES
7,12-Dimethylbenz(a)anthracene	57-97-6	6.90E-05	lb/year	0.00E+00	0.00E+00	YES
Ethylbenzene	100-41-4	3.20E+00	lb/year	9.73E-03	8.52E+01	NO
Formaldehyde	50-00-0	1.40E+00	lb/year	3.24E-02	2.84E+02	NO
Hexane	110-54-3	2.60E+00	lb/24-hr	0.00E+00	0.00E+00	YES
Indeno(1,2,3-cd)pyrene	193-39-5	4.50E-02	lb/year	0.00E+00	0.00E+00	YES
Lead & Compounds NOS	N/A	1.00E+01	lb/year	0.00E+00	0.00E+00	YES
Manganese & Compounds NOS	7439-96-5	1.10E-03	lb/24-hr	0.00E+00	0.00E+00	YES
Mercury	7439-97-6	1.10E-04	lb/24-hr	0.00E+00	0.00E+00	YES
3-Methylcholanthrene	56-49-5	7.80E-04	lb/year	0.00E+00	0.00E+00	YES
Naphthalene	91-20-3	2.40E-01	lb/year	3.95E-04	3.46E+00	NO
Nickel & Compounds NOS	7440-02-0	3.10E-02	lb/year	0.00E+00	0.00E+00	YES
Propylene Oxide	75-56-9	2.20E+00	lb/year	8.82E-03	7.72E+01	NO
Selenium & Compounds NOS	7782-49-2	7.40E-02	lb/24-hr	0.00E+00	0.00E+00	YES
Toluene	108-88-3	1.90E+01	lb/24-hr	3.95E-02	9.00E-01	YES
Vanadium	7440-62-2	3.70E-04	lb/24-hr	0.00E+00	0.00E+00	YES
Xylenes	1330-20-7	8.20E-01	lb/24-hr	1.95E-02	4.67E-01	YES

3. BACT Review

A. BACT for Criteria Pollutants

GHEC requested that all emission limits for the existing two turbines stay the same and this change is not a major modification. Therefore, this permit change does not trigger criteria pollutants BACT review.

B. BACT for Toxic Air Pollutants (tBACT)

The current PSD permit does not establish any TAP emissions limit pursuant to Chapter 173-460 WAC other than ammonia. Therefore, GHEC calculated hourly TAP increases by subtracting the current PTE from the new PTE after AGP upgrades are made. The same emissions factor was used for each TAP for both pre and post upgrade emissions. Therefore, the TAP increases accounted for are the increases due to the increase in the maximum design heat rate of the turbines. Hourly TAP increases were then adjusted for the proper TAP averaging period. For a 24-hour standard, the hourly increase was multiplied by 24. For an annual standard, the hourly increase was multiplied by 8,760. EFSEC estimated the change from maximum hourly rate to actual annual emissions to be a factor of six. If all calculations were adjusted, no additional review would be triggered.

EFSEC reviewed GHEC's TAP emissions calculations and concluded that adjustments to the calculations are needed to be consistent with Chapter 173-460 WAC. Specifically, for TAPs with annual average ASILs, current PTE for each TAP must be replaced with past actual annual emissions to calculate annual TAP increases. However, making this adjustment to the calculations does not change the outcome.

Also, EFSEC determined that a formaldehyde emission limit of 91 parts per billion (ppb) at 15-percent O₂ is required, except during turbine start-up to assure TAP emissions are controlled to levels reviewed and approved through this minor modification. This is the emission limit in National Emissions Standard for Hazardous Air Pollutants (NESHAP), Subpart YYYYY for stationary combustion turbine.

This determination is based on the following reasons:

- GHE's combustion turbines belong to the same affected unit category covered by NESHAP, Subpart YYYYY.
- In developing the emission limit, CAA requires NESHAP to reflect the maximum degree of reduction in emissions of Hazardous Air Pollutant (HAP) that is achievable.
- Formaldehyde is one of the major TAPs emitted from combustion turbine exhaust, can be considered a surrogate of how well TAPs are being controlled.

To demonstrate compliance with the formaldehyde emission limit, initial compliance testing will be required followed by compliance testing every two years thereafter. If GHE conducted test at the inlet of CO catalyst and showed that the unit is not relying on the control to meet the formaldehyde emission limit, then the subsequent testing frequency is every 5 years. The compliance testing is not require to fire the duct burner at representative maximum heat input rate. If GHEC chooses not to test at representative maximum heater input rate for the duct burners they will need to determine what the combine emissions from the turbine and duct burner for emission inventory purposes.

In addition to maintaining proper combustion in the turbines and duct burners, GHE's units rely on an oxidation catalyst for after combustion control of CO and TAPs emission. Oxidation catalyst performance degrades over time and must be monitored through testing to determine when it should be replaced or regenerated. Historical data from GHEC shows a 75 percent increase in CO emission rate in the last 10 years indicating the oxidation catalyst performance has significantly degraded over time. Catalyst degradation due to PM blinding (catalyst coated by PM) over time could explain the significant increase in CO emissions.

Annual formaldehyde emissions will be calculated based on the 0.25 lb/hr rate (prior to source test) when each turbine is operating with the carbon monoxide catalyst temperature is over 500F and uncontrolled 12 lb/hr rate when the turbine is operating with the carbon monoxide catalyst temperature is 500°F or less. This is based on VOC start-up emissions of 730 pounds per two hours and normal operation VOC emissions of 7.7 lb/hr compared to formaldehyde emissions of 0.25 lb/hr. This results in approximately 12 lb/hr of formaldehyde emissions during start-up. GHEC estimated future startup at 264 hour combined based on 210,800 mmBtu/yr fuel. The resulting emissions would be 1.6 tpy of formaldehyde emissions from startup. Historical combine startup have been 592,691 mmBtu/yr of fuel. The resulting emissions would be 4.5 tpy of formaldehyde emissions from startup.

4. Tier I Impact Review for Toxic Air Pollutant

The increase in TAP emissions due to additional natural gas consumption triggers review per Chapter 173-460 WAC. Based on TAP emissions increases and modeling results provided by GHEC in their application, TAP emissions increases pass a Tier 1 analysis as required per WAC 173-460-080. All TAP increases calculated by GHEC and provided in their application were based on 59°F operating temperature. The following table shows estimated worst-case ambient impacts of those TAPs requiring modeling lower than their respective acceptable source impact level (ASILs). EFSEC estimated the change from maximum hourly rate to actual annual emissions to be a factor of six. If all calculations were adjusted, no additional review would be triggered. This result demonstrates TAP emissions increases are sufficiently low to protect human health and safety and satisfies the ambient impact review requirements of the Air Toxics Rule.

Table 10. Toxic Air Pollutants – Dispersion Modeling Analysis

		ASIL ug/M3	ASIL ug/M3	(CGT1+CGT2)	(CGT1+CGT2)	
Pollutant	CAS	Threshold	Avg. Time	ug/m3	Lb/hr	<ASIL
Acetaldehyde	75-07-0	3.70E-01	Year	2.25E-04	1.22E-02	Yes
Acrolein	107-02-8	3.50E-01	24-hr	2.16E-04	1.95E-03	Yes
Benzene	71-43-2	1.30E-01	Year	6.76E-05	3.65E-03	Yes
Ethylbenzene	100-41-4	4.00E-01	Year	1.80E-04	9.73E-03	Yes
Formaldehyde	50-00-0	1.70E-01	Year	6.00E-04	3.24E-02	Yes
Propylene Oxide	75-56-9	2.70E-01	Year	1.63E-04	8.82E-03	Yes

5. NSPS, NESHAP, and WAC Rule Applicability

A. NSPS, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines

Both CGT01 and CGT02 are existing stationary combustion turbines. This subpart applies if the owner or operator commenced construction, modification, or reconstruction after February 18, 2005.

According to the applicant, this upgrade is not a “reconstruction” because the cost of the upgrade is below 50 percent of the fixed capital cost to construct a new turbine.

GHEC stated this does not apply based on NO_x emissions will decrease based on additional ammonia injection and sulfur dioxide emissions will not change based on one significant figure. EFSEC determine that there will be an increase in fuel used and therefore an increase in emissions of SO₂ from 0.836 lb/hr to 0.912 lb/hr. Modifications are defined as physical changes or changes in the method of operation of an emissions unit that results in an emissions increase. Therefore, EFSEC finds the AGP project triggers applicability of NSPS Subpart KKKK as a “modification.” This finding is based on 40 CFR 60.4305 which states, “If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. **Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine.** Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.”

Therefore, the requirements of Subpart KKKK will be added to the Title V permit conditions and superseded NSPS Subparts will be removed.

“Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part.” Therefore, GHEC’s AOP will need to be revised to excise these standards and their associated monitoring requirements.

“For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the NOX emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in §75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix E or in §75.19(c)(1)(iv)(H).”

EFSEC concludes that the facility is subject to NSPS KKKK but is not including it in the requirements for the PSD permit. The current emission limits are more stringent than the standard. Therefore, the facility should document this during the start-up notification. EFSEC will incorporate this requirement into the Title V permit.

B. NSPS, Subpart TTTT – Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units

GHE estimates that the upgrade will increase the CO₂ emissions by approximately 9.1 percent. Based on 40 CFR 60.5509(b)(7), this project could avoid being subject to NSPS, Subpart TTTT if the modification resulted in an hourly increase in CO₂ emissions (lb/hr) of 10 percent or less (rounded to two significant figures). Based on data from the last five years, the maximum heat input recorded for CT1 was 1,835.4 mmBtu/hr, and for CT2 it was 1,857.8 mmBtu/hr.

To assure the 10 percent increase in CO₂ threshold is not crossed, EFSEC will monitoring to confirm that the project will not trigger NSPS Subpart TTTT.

C. NESHAP, Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

This Subpart applies if the sites have the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

Based on emissions rates provided by GHEC in their application, HAP emissions from the HRSG stack at PTE are less than the thresholds distinguishing a major source of HAP emissions. However, there are some uncertainties with the accuracy of formaldehyde emission rate estimation. GHEC used an emission factor from AP-42 to estimate the formaldehyde and assumed that the oxidation catalyst provides additional 85 percent reduction. However, GHEC has not measured the control efficiency of the carbon monoxide catalyst in the past.

Without assuming the 85 percent reduction from the oxidation catalyst, EFSEC estimates that the formaldehyde is emitted at greater than 10 tpy. Mint Farms power plant has reported over 7.5 tpy of formaldehyde for one turbine similar to the GHEC two turbine plant in the past.

The CTs are equipped with selective catalytic reduction control and the CO oxidation catalysts. Neither of these catalyst systems has been replaced since the original operation. Based on 2009 and 2019 emission test, ammonia addition rate compared to natural gas combustion has increased by approximately 10 percent. During the same period, carbon monoxide hourly emissions have gone up 75 percent. Therefore, it is unlikely the carbon monoxide catalyst is controlling formaldehyde emissions by 85 percent. Also, using CO as a surrogate indicator for formaldehyde emissions, the 75 percent increase in CO emission rate in the last 10 years would indicate that oxidation catalyst performance has degraded significantly. Also, because the catalyst is not up to temperature during start-up, it is unlikely that the 85 percent reduction could be achieved during start-up even with a well performing catalyst until optimal catalyst operating temperatures are achieved.

Therefore, EFSEC will add the following limits and requirements to the permit to assure tBACT control of formaldehyde and other HAPs is maintained and GHEC remains a minor source of HAP emissions: Formaldehyde emissions limits at MACT YYYY levels, 91 ppb, every 2 years formaldehyde emission testing, and continuous monitor temperature prior to the catalyst to insure that the site is maintain the stated emission reductions.

D. WAC 463-80-030 – Greenhouse Gas Mitigation

The rule applies to new fossil-fueled thermal electric generation facilities with station generating capability of 350 MW or more after July 1, 2004. GHEC site is an existing facility per WAC 463-80-030.

The upgrade, which is a modification, could trigger mitigation of the increase of CO₂ emission when:

- a. Increase by CO₂ emission by 15 percent or more.

The CO₂ emission will increase by 9.1 percent at 59°F and 100 percent load after the project. Therefore, the upgrade could avoid the mitigation as required by the rule.

However, the facility has a mitigation plan, which was required by EFSEC as a part of an amendment of the site certification agreement and EFSEC Resolution 298. In the 2003 Mitigation Plan, the facility capacity was 630 MW in 2001. Annual GHG emissions were estimated at 2,200,000 tpy. The plan required that 337,405 tons of greenhouse gases emissions be mitigated. A 2008 Mitigation Plan summary letter indicated that the facility capacity was 635 MW. Annual GHG emissions were estimated at 2,391,480 tpy and identified 514,103 tons of GHG emissions to be mitigated. GHEC requested the opportunity of a lump sum payment to represent seven years of yearly payment at a discounted rate.

GHEC's mitigation plan only addresses 635 MW of capacity while the permitted capacity is 650 MW. The project will increase megawatts capacity to 662.4 MW, even though the future expected megawatts generation from the combustion turbine is less than the historical maximum. Excess CO₂ emissions and the increased generating capacity of 662.4 MW resulting from this project will be incorporated in the mitigation calculations per the 2003 mitigation plan upon start-up.

E. WAC 463-85 – Greenhouse Gas Emissions Performance Standard and Sequestration Plans and Programs for Baseload Electric Generating Facilities

WAC 463-85-110 defines “upgrade” as any modification made for the primary purpose of increasing the electric generation capacity of a baseload electric generation facility or unit. However, an upgrade does not include “installation, replacement, or modification of equipment that improves the heat rate of the facility.” GHEC believes that this exemption applies.

“Upgrade” means any modification made for the primary purpose of increasing the electric generation capacity of a baseload electric generation facility or unit. Upgrade does not include:

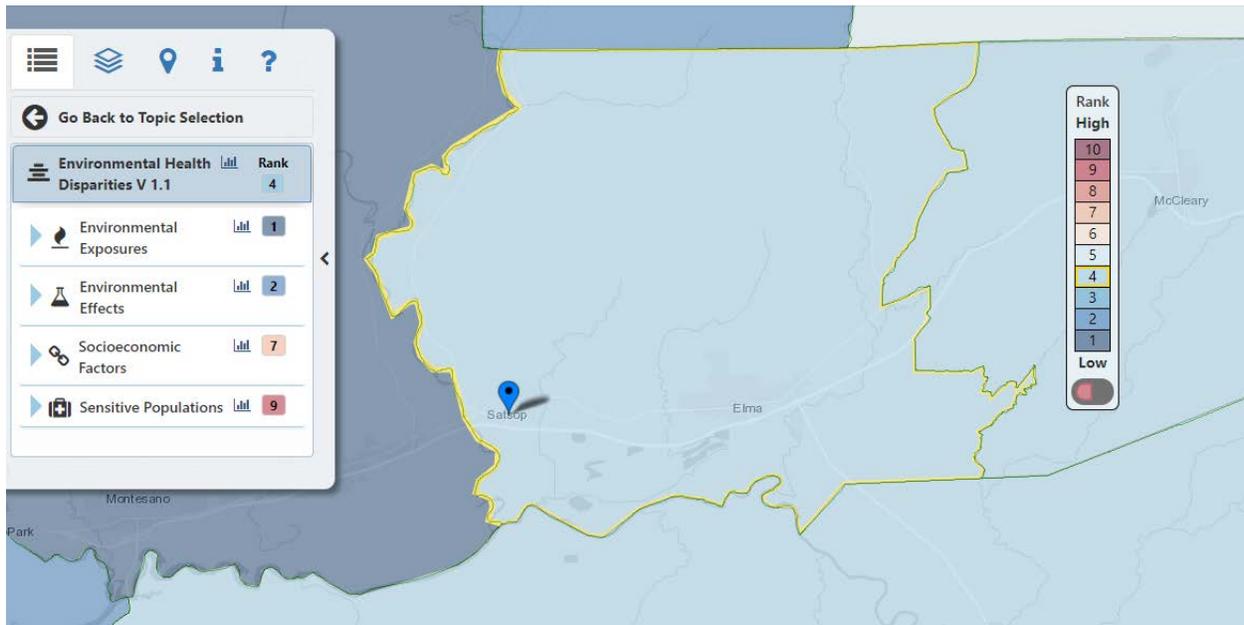
- (a) Routine or necessary maintenance;
- (b) Installation of emission control equipment;
- (c) Installation, replacement, or modification of equipment that improves the heat rate of the facility; or
- (d) Installation, replacement, or modification of equipment for the primary purpose of maintaining reliable generation output capability that does not increase the heat input or fuel usage as specified in existing generation air quality permits as of July 22, 2007, but may result in incidental increases in generation capacity.

Based on permitted (4,352 MMBtu/hr) to future (4,695.4 MMBtu/hr) heat input change (59°F) to the EGU there would be resultant an increase in fuel of seven percent below the trigger level.

6. Environmental Justice

EPA defines Environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EFSEC conducts EJ review to ensure no group of people bears a disproportionate share of the negative environmental consequences as the result of the permitting action. Further, EFSEC strives to effectively and meaningfully engage the affected community in the permitting action, and to ensure compliance with Title VI obligations.

The initial step in this review is to identify any affected populations or communities of concern. EFSEC used EPA's environmental justice screening and mapping tool EJSCREEN. The area of



1. The National Ambient Air Quality Standards (NAAQS) analysis indicates that the project is protective of the community as a whole and no other review is needed. Data indicate that the population speaking English less than very well is below the Title VI threshold of five percent or 1,000 people. EFSEC is not expecting any communication barrier to posting notice on the legal page of the predominant newspaper in the Elma area. If additional outreach materials are developed, EFSEC will ensure these are accessible, use plain language, and limit highly technical content. EFSEC also determines that an enhanced outreach effort is not needed due to the nature and scope of this project.
2. This permit amendment modifies a PSD permit originally issued before various newer NAAQS were established and appropriate Significance Impact Levels (SIL). This permit amendment does not increase PSD emissions, therefore, a new BACT and ambient analysis is not required. The NAAQS that apply are the NAAQS that were in effect on original permit date of November 2, 2001.
3. On June 29, 2017, EFSEC was given full delegation of the PSD program by EPA.

7. State Environmental Policy Act

Under Washington State rules, a final PSD permit shall not be issued for a project until the applicant has demonstrated that State Environmental Policy Act (SEPA) review has been completed for the project. Energy Facility Site Evaluation Council (EFSEC) is the lead agency for SEPA for this project. EFSEC issued a SEPA addendum on **November 17, 2020**, which adds the existing National Environmental Policy Act (NEPA) Environmental impact statement (EIS) for this project. Therefore, no additional action is required. EFSEC

concludes that the applicant has adequately demonstrated compliance with SEPA requirements.

8. Changes to the Permit Conditions

1. Subject to NSPS KKKK: Dropped NSPS Da and GG requirements
2. All VOC lb/hr limits changed from as carbon (3*12) to a propane (44) resulting in an adjustment of 1.22. This is not a change in allowable emissions but will result in more accurate emission estimates.
3. Added clarification to the test requirements for a minimum of 3 hours per test run during the PM test unless otherwise approved in advance by EFSEC.
4. Added Formaldehyde limits consistent with WAC 173-460.
5. Added formaldehyde testing every 2 years, which uses the same test methods as the NESHAP YYYY. If GHE shows the unit is not relying on control to meet the limit, the minimum testing frequency is every 5 years.
6. Added clarification that maximum expected rate for the turbine would be in the winter months and requiring an initial emissions test during these months.
7. Added inlet temperature monitoring prior to the carbon monoxide catalyst to confirm adequate destruction.

9. Public Involvement

This PSD permitting action is subject to a minimum 30-day public comment period under WAC 173-400-740. A newspaper public notice announcing the public comment period was published in the **Olympian on Thursday, December 17, 2020, and in the XXXX on December 17, 2020.** In accordance with WAC 173-400-740(2)(a), application materials, and other related information were made available for public inspection at two locations:

EFSEC
621 Woodland Square Loop SE
P.O. Box 43172
Olympia, WA 98504-3172

The permit documents were posted on EFSEC's website:

<https://www.efsec.wa.gov/energy-facilities/grays-harbor-energy-center>

The public comment period closed on **January 19, 2020.**

Americans with Disabilities Act (ADA) – To request ADA accommodation or materials in a format for the visually impaired, call Joan Owens at (360) 664-1920 (Voice), or (TTD) (877) 210-5963.

10. Agency Contact

Sonia E. Bumpus
Energy Facility Site Evaluation Council Manager
Energy Facility Site Evaluation Council
Utilities and Transportation Commission
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Acronyms and Abbreviations

BACT	Best Available Control Technology
CFR	Code of Federal Regulations
CEMS	Continuous Emissions Monitoring System
CO	carbon monoxide
Ecology	Washington Department of Ecology
EFSEC	Energy Facility Site Evaluation Council
EPA	United States Environmental Protection Agency
FR	Federal Register
gal	gallon(s)
Gr/dscf	grains/dry standard cubic feet
H ₂ SO ₄	sulfuric acid mist
km	kilometers
kW	kilowatt
lb	pound(s)
lb/hr	pound(s) per hour
NAAQS	National Ambient Air Quality Standard
NH ₃	ammonia
NO _x	nitrogen oxides
NSR	New Source Review
O&M	Operations and Maintenance
PM	particulate matter
PM ₁₀	particulate matter less than 10 micrometers in diameter
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter
ppm	parts per million
ppmv	parts per million by volume

ppmvd	parts per million by volume on a dry basis
PSD	Prevention of Significant Deterioration of Air Quality
SCR	selective catalytic reduction
tpy	tons per year
WAC	Washington Administrative Code

**ENERGY FACILITY SITE EVALUATION COUNCIL
P.O. BOX 47250
OLYMPIA, WASHINGTON 98504-7250**

IN THE MATTER OF:]	NO. EFSEC/2001-01, AMENDMENT 5
]	
Grays Harbor Energy Center]	PRELIMINARY DETERMINATION
Grays Harbor Energy, LLC]	APPROVAL OF THE PREVENTION
Electrical Generating Facility]	OF SIGNIFICANT DETERIORATION
Elma, Washington]	(PSD) AND NOTICE OF CONSTRUCTION

This amendment supersedes air quality PSD and NOC approval EFSEC 2001-01, Amendment 4 dated July 12, 2018. Pursuant to the Energy Facility Site Evaluation Council (EFSEC) Permit Regulations for Air Pollution Sources, Chapter 463-78 Washington Administrative Code (WAC), regulation for air permit applications WAC 463-60-536, the Washington Department of Ecology (Ecology) regulations for new source review WAC 173-400-110 and Chapter 173-460 WAC; and based upon the Notices of Construction Application (NOC), submitted by Grays Harbor Energy LLC, the request for modifications to Amendment 4 from Grays Harbor Energy LLC dated August 18, 2020 and supplemental information on October 5, 2020, October 20, 2020 and the technical analysis performed by Ecology for EFSEC, EFSEC now finds the following:

FINDINGS

1. The Grays Harbor Energy Center (GHEC) is located at 401 Keys Road. Elma, WA 98541, Grays Harbor County, Latitude: 46.9692 Longitude: 123.48. On August 18, 2020, Grays Harbor Energy, LLC requested a fifth amendment to the approval in order to install the General Electric (GE) combustion turbine upgrades. The Amendment 5 will change the nominal design heat rate of both combustion turbines from 1,671 million British thermal units per hour (MMBtu/hr) to 1,823 MMBtu/hr (based on 59°F temperature).
2. When operating at 14°F the turbine upgrades will result increasing the design maximum heat rate to at least 2,011 MMBtu/hr.
3. The existing facility is comprised of the following major components:
 - Two General Electric combustion gas turbines (GE 7FA); each turbine having a nominal rating of 1,823 million British thermal units per hour (MMBtu/hr) after the upgrades are installed.
 - Two heat recovery steam generators (HRSG), each with a supplementary duct burner with a maximum rating of 505 MMBtu/hr.
 - One steam turbine generator (STG) rated at 300 MW.
 - One auxiliary boiler rated at 29.3 MMBtu/hr.
 - One cooling tower system.

- One emergency backup diesel generator (Manufactured in 2002, 400 KW).
- One diesel engine-driven fire water pump (Manufactured on 10/25/2001, 300 BHP).

Each gas turbine/duct burner/HRSG unit is defined as a combined cycle gas turbine (CGT). Each CGT has its own exhaust stack. These components are configured in a “power island” comprised of CGT 1 and CGT 2 and sharing one common steam turbine. Each CGT can operate independently with the steam turbine.

4. The project is subject to permitting requirements under WAC 173-400-700 as a fossil fuel fired steam electric generator, one of 28 listed industries that becomes a “major source,” when emitting more than 100 tons per year (tpy) of any regulated pollutant. The Grays Harbor Energy Center CT has the potential to emit PSD significant quantities of nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter (PM), and particulate matter less than 10 micrometers (PM₁₀).
5. The project is subject to permitting under the requirements of WAC 463-78-005(1) and 005(4) (adopting by reference Chapters 173-400 and 173-460 WAC, respectively) for ammonia (NH₃). Emissions of NO_x are reduced by the addition of NH₃. NH₃ emissions are limited in the permit to protect the NO_x catalyst and minimize NH₃ emissions (air toxic and visibility regulations).
6. The combustion turbines, duct burners, and auxiliary boilers will only use natural gas. The fuel for the diesel engines powering the emergency generator and emergency fire water pump is to be on-road specification diesel fuel.
7. The site is within an area that is either in attainment or unclassified with respect to all National Ambient Air Quality Standards (NAAQS) and state air quality standards. The site is approximately 60 kilometers from the nearest Class I area, Olympic National Park.
8. The project is subject to new source review requirements under Chapter 463-78 WAC, which adopts by reference Chapter 173-400 WAC and Chapter 173-460 WAC. The facility is also subject to emission limitation, monitoring and reporting requirements in 40 CFR 60 Subpart KKKK. The site is no longer subject to, Da (applicable to the duct burners), and GG (applicable to the combustion turbines). Chapter 173-400 WAC, 40 CFR 60 Appendices A, B, and F, 40 CFR 75; and gas fuel monitoring requirements under 40 CFR Part 75 Appendix D are applicable to both the turbines and associated HRSGs.
9. For the fifth amendment, EFSEC concludes that the Advanced Gas Path (AGP) package is an upgrade over the standard equipment in the Frame 7FA.03 turbine. According to GE’s technical documents, the 7FA Advanced Gas Path (AGP) program utilizes 7FA.04 Hot Gas Path (HGP) technology, incorporating cooling and sealing enhancements and advanced materials to allow efficient operation at increased firing temperatures.

After installation of the AGP upgrades, the nominal capacity of each individual CT is expected to increase from the current permitted capacity of 175 MW to 181.2 MW, at 100% load and 59°F. There will be no change in the rated capacity of the duct burner or the steam

turbine. The combustion turbine's rated heat input will change from 1,671 million British thermal units per hour (MMBtu/hr) to 1,823 MMBtu/hr. Based on the submittal the generating capacity will increase to 662.4 MW at 59°F. Lower ambient temperatures may result in levels higher than these at 59°F.

- 9.1. The request was deemed administratively complete on November 2, 2020.
 - 9.2. No requested change results in an increase in an annual criteria pollutant emissions rates.
 - 9.3. EFSEC concludes that the CGTs are subject to emission limitation, monitoring and reporting requirements in 40 CFR 60 Subpart KKKK.
10. EFSEC finds that all requirements for new source review (NSR) and PSD are satisfied and that as approved below, the emissions units comply with all applicable federal new source performance standards. Approval of the PSD and NOC application is granted subject to the following conditions:

APPROVAL CONDITIONS

1. This amendment supersedes air quality PSD approval EFSEC 2001-01, Amendment 4 dated July 12, 2018.
2. The CGTs (each consisting of a GE 7FA with AGP combustion turbine and its associated duct burner and HRSG) and auxiliary boiler are limited to the use of natural gas.
3. The diesel emergency generator shall:
 - 3.1. Use only on-road specification diesel oil with 500 ppm or less sulfur content.
 - 3.2. Not exceed 500 hours per any 12 consecutive months of operating time.
4. The emergency fire water pump engine shall use only on-road specification diesel oil with 500 ppm or less sulfur content.
5. Emissions from CGT1 or CGT2 exhaust stack shall not exceed the following, except during start-up and shutdown (CGT over-speed protection testing) unless indicated otherwise, when they must meet the requirements in Condition 11:
 - 5.1. Nitrogen oxide (NO_x) emissions:
 - 5.1.1. 21.7 pounds/hour (lb/hr), 1-hour (1-hr) average.
 - 5.1.2. 17.4 lb/hr, 24-hr rolling average.
 - 5.1.3. 2.5 parts per million by volume, dry (ppm), 1-hr average, corrected to 15 percent oxygen (O₂).
 - 5.1.4. 2.0 ppm, 24-hr rolling average, corrected to 15 percent O₂.
 - 5.1.5. Ongoing compliance with all limits in Condition 5.1 shall be monitored by continuous emission monitors for NO_x and O₂. The continuous emission monitoring system (CEMS) and flow measurement to determine lb/hr emissions shall meet the requirements of Approval Conditions 18.1 and 18.6.
 - 5.2. Carbon monoxide (CO) emissions:
 - 5.2.1. 2.0 ppm, corrected to 15 percent O₂, 1-hr average.
 - 5.2.2. 10.6 lb/hr, 1-hr average.
 - 5.2.3. EPA Reference Method 10 shall determine compliance for each CGT, or an equivalent method agreed to in advance by EFSEC. The span and linearity

calibration gas concentrations in Method 10 are to be modified as appropriate to the CO concentration limits specified in this condition.

- 5.2.4. Ongoing compliance shall be monitored through use of a continuous emission monitor meeting the requirements of Approval and flow measurement to determine lb/hr emissions shall meet the requirements of Approval Conditions 18.3 and 18.6.

5.3. Sulfur dioxide emissions:

- 5.3.1. 19.8 lb/hr, 1-hr average.
- 5.3.2. 3.3 lb/hr, rolling annual-average of emissions determined monthly when the CGTs operate.
- 5.3.3. Compliance with the limit in Condition 5.3.1 shall be determined based on stack testing using EPA Reference Method 6c, or an equivalent method approved in advance by EFSEC.
- 5.3.4. Compliance shall be determined for each CGT through stack testing once per calendar quarter for the first year of commercial operation, and thereafter at 5-year intervals.
- 5.3.5. Ongoing compliance with both limits in Condition 5.3 shall be determined monthly by calculating the hourly average SO₂ emission rates from each CGT in pounds per hour for all hours of operation during the previous month, and the average emission rate in lb/hr over the previous 12-consecutive month period.
- 5.3.6. The following emission rates shall be calculated based on the actual quantity of natural gas used by each CGT and sulfur content of natural gas consumed by each CGT:
- 5.3.6.1. SO₂ rates shall be determined per protocols and test methods described in Appendix D to 40 CFR Part 75, Optional SO₂ Emissions Data Protocol for Gas-Fired and Oil-Fired Units.
- 5.3.6.2. The quantity of SO₂ converted to H₂SO₄ shall be subtracted from SO₂ emissions rates for compliance determination purposes. The quantity of SO₂ converted to H₂SO₄ shall be based on the unit specific conversion rate of potential SO₂ to H₂SO₄ determined per Condition 5.4.2 below.
- 5.3.6.3. The hourly rate of natural gas burned shall be continuously monitored per the methods in 40 CFR Part 75, Appendix D, Section 2.1.
- 5.3.6.4. Sulfur content of natural gas shall be determined at least once per calendar month by sampling the natural gas burned and analyzing samples for total

sulfur content per the method specified in 40 CFR Part 75, Appendix D for high variability, non-pipeline quality natural gas. Any other analysis method listed in 40 CFR Part 75, Appendix D may be used after the use is approved by EFSEC. Valid sulfur test results from the previous month, or an average of valid sulfur data approved by EFSEC may be used when monthly sampling and analysis of the natural gas is inconclusive or results in invalid data.

- 5.3.7. Grays Harbor Energy, LLC shall record monthly and report to EFSEC on a quarterly basis the quantity and average sulfur content of the natural gas burned at the facility, and purchase records and vendor's reports of total sulfur content in the natural gas delivered.

5.4. Sulfuric acid mist emissions:

- 5.4.1. 2.17 lb H₂SO₄/hr, rolling annual average calculated monthly.
- 5.4.2. Hourly H₂SO₄ rates and the unit-specific ratios of H₂SO₄ to SO₂ shall be determined for each CGT based on stack testing using EPA Reference Method 8, or an equivalent method approved by EFSEC. Stack testing shall be performed at each exhaust stack at 5-year intervals. Testing shall be performed between the months of November – March (unless otherwise approved by EFSEC) at representative maximum heat input rate
- 5.4.3. Unit-specific ratios of H₂SO₄ to SO₂ shall be used as conversion factors to apportion the calculated potential SO₂ emissions into sulfuric acid mist emissions and SO₂ emissions.
- 5.4.4. Compliance with the limit in Condition 5.4.1 shall be determined monthly by calculating the average H₂SO₄ emission rate over all hours of operation during the previous month and 12 consecutive month periods based on the quantity and sulfur content of natural gas used by each CGT per Condition 5.3.6 above.

5.5. Volatile organic compound (VOC) emissions:

- 5.5.1. 7.7 lb/hr, 1-hr average, reported as propane.
- 5.5.2. 0.93 ppm, 1-hr average, reported as propane at 15 percent O₂.
- 5.5.3. Use of EPA Reference Method 19 and EPA Reference Method 25A, 25B, or South Coast Air Quality Management District Method 25.3, shall determine initial compliance for each CGT or an equivalent method agreed to in advance by EFSEC. After the initial tests on each CGT stack have been completed, each CGT stack shall be tested at 5-year intervals. Testing shall be performed between the months of

November – March (unless otherwise approved by EFSEC) at representative maximum heat input rate.

5.5.4. Ongoing compliance shall be monitored by calculating hourly VOC emissions rates using:

5.5.4.1. Hours of operation.

5.5.4.2. Fuel flow to each CGT.

5.5.4.3. Application of an emission factor for VOCs derived from the most recent stack testing of the installed CGT.

5.5.4.4. Emission testing of each CGT using one of the methods listed in Approval Condition 5.5.3 is required.

5.6. Particulate matter and particulate matter less than or equal to 10 micrometers (aerodynamic diameter) (PM_{10}) emissions:

5.6.1. 22.6 lb/hr of filterable plus condensable PM_{10} .

5.6.2. Use of EPA Reference Method 19 and Methods 5, 201, or 201A, plus Reference Method 202, or an equivalent PM_{10} test method approved by EFSEC shall be used to determine initial compliance for each CGT exhaust stack with the limit in Condition 5.6.1. Use of EPA Reference Method 5 assumes all filterable particulate is PM_{10} . Use of EPA Reference Method 201 or 201A assumes that the mass of filterable PM is equal to the mass of filterable PM_{10} . If Method 201 or 201A is used, the mass of particulate retained in the cyclone shall be determined and reported. Test runs shall be a minimum of 3 hour each unless otherwise approved in advance by EFSEC.

5.6.3. The results of the filterable and condensable particulate analyses shall be reported as total particulate, filterable particulate, and condensable particulate.

5.6.4. After the initial tests on each CGT stack have been completed, each CGT stack shall be tested at 5-year intervals. Testing shall be performed between the months of November – March (unless otherwise approved by EFSEC) while operating at representative maximum heat input rate.

5.7. Ammonia (free NH_3 and combined measured as NH_3) emissions:

5.7.1. 5.0 ppm, 24-hr average corrected to 15 percent O_2 .

5.7.2. 16.1 lb/hr, 24-hr average.

- 5.7.3. Initial compliance for each CGT shall be determined by Bay Area Air Quality Management District Source Test Procedure ST-1B, "Ammonia, Integrated Sampling;" EPA Conditional Test Method 027; or an equivalent method approved in advance by EFSEC.
 - 5.7.4. Compliance shall be determined through use of a CEMS, which meets the requirements of Approval Condition 18.2 or Grays Harbor Energy, LLC may propose alternative means for continuous assessment and reporting of NH₃ emissions for approval by EFSEC. Any proposed alternative NH₃ reporting shall be, at a minimum, equivalent to a CEMS meeting the requirements of Approval Condition 18.2 and 18.6.
 - 5.7.5. The Selective Catalytic Reduction (SCR) catalyst system treating the exhaust from one CGT shall be repaired, replaced, or have additional catalyst bed installed at the next scheduled outage, following a calendar month when the average ammonia slip cannot be maintained at or below 4.5 ppm, corrected to 15% oxygen, based on the actual operating hours of the CGT. No month with less than 200 hours of actual operation (excluding start-up and shutdown hours) shall be used for this evaluation. The outage to repair, replace, or install additional catalyst to the SCR system shall be no later than 12 months after the month the ammonia slip exceeds the 4.5 ppm criteria given above in this condition.
- 5.8. Opacity at each CGT exhaust stack:
- 5.8.1. Is not allowed to exceed a 6-minute average opacity of five percent.
 - 5.8.2. Shall be determined by use of EPA Reference Method 9 or an equivalent method approved in advanced by EFSEC.
 - 5.8.3. Ongoing compliance with the opacity limit in Condition 5.8.1 shall be monitored once per day (or weekly if Condition 5.8.3.3 is satisfied) as follows:
 - 5.8.3.1. A certified opacity reader shall read and record the opacity of each operating unit during daylight hours per 5.8.3 frequency, or
 - 5.8.3.2. Opacity shall be monitored using a Continuous Opacity Monitoring system on each CGT as an alternative to EPA Reference Method 9 readings. If installed, the continuous opacity monitor must be installed in the exhaust stack at a location meeting the requirements of Approval Condition 18.4.
 - 5.8.3.3. If readings from daily monitoring are less than the opacity limit in Condition 5.8.1 for the last calendar month, the manual opacity monitoring frequency is reduced to weekly. Readings above the opacity limit in Condition 5.8.1 will require daily manual opacity readings for at least 30 days.

5.9. Formaldehyde emissions of each CT unit during normal operation:

5.9.1. 91 ppb, one -hr average corrected to 15 percent O₂.

5.9.2. Compliance shall be determined by Test Method 320 of 40 CFR part 63, appendix A; ASTM D6348-12e1 provided that the test plan preparation and implementation provisions of Annexes A1 through A8 are followed and the %R as determined in Annex A5 is equal or greater than 70% and less than or equal to 130%; or an equivalent method approved in advance by EFSEC. The initial compliance test shall be performed between the months of November – March, and then biennially (unless otherwise approved by EFSEC) after the initial test. The CT unit at a minimum (excluding duct burner) shall be tested while operating at representative maximum heat input rate. If GHE demonstrated that the unit is not relying on CO catalyst to meet the Formaldehyde emission limit by conducting test at the inlet of CO catalyst GHE may perform compliance test every 5 years instead of every 2 years.

5.10. At the first opportunity after each turbine has been modified within the months between November and March (unless otherwise approved by EFSEC) emission testing of the turbines shall be performed for the following pollutants: VOC, PM₁₀, and formaldehyde.

6. The auxiliary boiler exhaust stack emissions are not to exceed the following:

6.1. NO_x emissions:

6.1.1. 1.03 lb/hr, 1-hr average.

6.1.2. 30 ppm at three percent O₂, 1-hr average

6.1.3. Initial compliance shall be determined in accordance with 40 CFR 60, Appendix A, Reference Method 7E and Method 19.

6.1.4. Compliance shall be determined through periodic stack tests performed at 5-year intervals after the initial compliance test. Upon written request by EFSEC, GHEC shall perform emissions testing using the method in Condition 6.1.3.

6.2. CO emissions:

6.2.1. 50.0 ppm, corrected to three percent O₂, 1-hr average.

6.2.2. 1.07 lb/hr, 1-hr average.

6.2.3. EPA Reference Method 10 and Method 19 or an equivalent method agreed to in advance by the EFSEC shall determine initial compliance. The span and linearity calibration gas concentrations in Method 10 shall be appropriate to the CO concentration limits specified in this condition.

6.2.4. Compliance shall be determined through periodic stack tests performed at 5-year intervals after the initial compliance test. Upon written request by EFSEC, GHEC shall perform emissions testing using the method in Condition 6.2.3.

6.3. SO₂ emissions:

6.3.1. 0.07 lb/hr annual average, calculated monthly.

6.3.2. One ppm at three percent O₂, 1-hr average.

6.3.3. EPA Reference Method 8 shall determine initial compliance with the limit in Condition 6.3.2 for the auxiliary boiler, or an equivalent method approved in advance by EFSEC.

6.3.4. Ongoing compliance with the limit in Condition 6.3.1 shall be determined by mass-balance calculations utilizing the:

6.3.4.1. Monthly Fuel consumption records for the auxiliary boiler, and

6.3.4.2. Sulfur content of the natural gas per Condition 5.3.6.4.

6.4. VOC emissions:

6.4.1. 0.20 lb/hr, 1-hr average, reported as propane.

6.4.2. EPA Reference Method 19 and Method 25A or 25B or an equivalent method agreed to in advance by EFSEC shall determine initial compliance for the auxiliary boiler.

6.4.3. Ongoing compliance shall be determined through periodic stack tests, using one of the above referenced methods, at 5-year intervals after the initial compliance test. Upon written request by EFSEC, GHEC shall perform emissions testing using methods in Condition 6.4.2.

6.5. PM₁₀ emissions:

6.5.1. 0.292 lb/hr, hourly average.

6.5.2. 0.005 gr/dscf, 1-hr average, at three percent O₂.

6.5.3. Initial compliance with the limits in Condition 6.5 for the auxiliary boiler exhaust stack shall be determined by EPA Reference Method 19, Method 202 and either Reference Method 5, 201, or 201A, or an equivalent method agreed to in advance by EFSEC. Use of EPA Reference Method 5 assumes all particulate has an aerodynamic diameter less than 10 microns. Use of EPA Reference Method 201 or 201A assumes that the mass of filterable PM is equal to the mass of filterable

PM₁₀. Test runs shall be a minimum of 3 hours each, unless otherwise approved in advance by EFSEC.

6.5.4. The results of the filterable and condensable particulate analyses shall be reported as total particulate, filterable particulate, and condensable particulate.

6.5.5. Compliance shall be determined through periodic stack tests, using the above specified methods, taken at 5-year intervals after the initial compliance test. Upon written request by EFSEC, GHEC shall perform emissions testing using the methods in Condition 6.5.3.

6.6. Opacity at the auxiliary boiler exhaust stack:

6.6.1. Is not allowed to exceed a 6-minute average opacity of five percent.

6.6.2. Shall be determined using EPA Reference Method 9 or an equivalent method approved in advance by EFSEC.

6.6.3. Ongoing compliance with the opacity limit in Condition 6.6.1 shall be monitored as follows:

6.6.3.1. An opacity reader shall survey the boiler stack daily to determine if any opacity is present. If opacity is not observed over the course of a week, the frequency for surveying the boiler stack may change to monthly. If the survey detects visible emissions, then the company must investigate the cause of the emissions and repair the problem or take EPA Method 9 observations for determining compliance.

7. The diesel generator engine shall meet the following requirements:

7.1. The engine shall comply with the requirements in 40 CFR Part 63, Subpart ZZZZ.

7.1.1. The facility shall maintain engine operation and maintenance records verifying the engine has been operated, maintained, and repaired in a manner consistent with the manufacturer's emission-related specifications. A copy of the manufacturer's recommendations for maintaining the engine shall be kept on-site and made available upon request.

7.2. The engine shall be operated only during routine maintenance, testing, and periods when electricity is not available from the power grid. Maintenance and testing shall not exceed 50 hours per any 12 consecutive month period.

7.3. The engine shall burn only diesel fuel, biodiesel, or a mixture of both. In any case, the fuel used shall have a maximum sulfur content that does not exceed 500 ppm by

weight. A fuel certification from the fuel supplier may be used to demonstrate compliance with this requirement.

- 7.4. The engine shall be equipped with an operable, non-resetting hour meter.
- 7.5. Visible emissions from the engine shall not exceed an average of ten percent (10%) opacity during any 6-minute period except cold start-up, as determined in accordance with EPA Method 9 (Title 40 CFR, Part 60, Appendix A Method 9). Unless defined by the engine manufacturer, "cold start" as used in this condition shall be defined as the period beginning when the engine is started and ending when the temperature of the engine coolant reaches 150°F.
 - 7.5.1. Initial compliance with the limit in Condition 7.5 shall be determined based on EPA Method 9 readings.
 - 7.5.2. Weekly a qualified opacity reader shall survey and record if opacity is present from the engine whenever the engine is operated for testing and after the engine achieves normal operating temperature. If opacity is observed then Method 9 readings shall be performed during the next time the engine is started. The Survey frequency can be reduced to monthly once four readings without opacity are observed.
- 7.6. Visible emissions of ten percent (10%) opacity or more shall trigger prompt (within a week) action to initiate maintenance and/or repair the engine and eliminate opacity exceeding this standard. Maintenance and repair actions shall be documented and available for inspection.
8. The emergency fire water pump engine:
 - 8.1. The engine must comply with requirements in 40 CFR 63 Subpart ZZZZ.
 - 8.1.1. The facility shall maintain engine operation and maintenance records verifying the engine has been operated, maintained, and repaired in a manner consistent with the manufacturer's emission-related specifications. A copy of the manufacturer's recommendations for maintaining the engine shall be kept on-site and made available upon request.
 - 8.2. The engine shall be operated only during routine maintenance, testing, and periods when electricity is not available from the power grid. Maintenance and testing shall not exceed 50 hours per any 12 consecutive month period.
 - 8.3. The engine shall burn only diesel fuel, biodiesel, or a mixture of both. In any case, the fuel used shall have a maximum sulfur content that does not exceed 500 ppm by weight. A fuel certification from the fuel supplier shall be used to demonstrate

compliance with this requirement (An alternative would be testing of the fuel in the storage tank with prior approval).

8.4. The engine shall be equipped with an operable, non-resetting hour meter.

9. The emissions from the cooling tower are not to exceed:

9.1. 24.5 lb/day PM₁₀, annual average.

9.2. 4.5 tpy PM₁₀, rolling total, calculated monthly.

9.3. Initial compliance shall be determined by:

9.3.1. An affirmative report by the cooling tower drift eliminator manufacturer, based on an on-site inspection of the completed installation, that its product has been installed in accordance with its specifications accompanied by the results of a test or analysis of the cooling tower drift eliminator material indicating that the material has a drift loss of less than 0.001% of the recirculating water flow rate. The required test could be performed on a full size mist eliminator module under laboratory conditions that match the worst case operations scenario of the actual cooling tower.

9.4. Compliance is determined by using the following formula:

$$Q \times C \times DL \times 60 \times 8.34 / 1000000 = D$$

Where: Q = Monthly average recirculation rate in gallons per minute
C = Monthly average total dissolved solids concentration in parts per million by weight (ppmw)
D = PM₁₀ emission rate in lb/hr.
DL = the drift loss rate in gallon lost/gallon of recirculating cooling water

9.5. Calculate the PM₁₀ emissions from the cooling tower once each month. The monthly calculations shall use the formula in Condition 9.4 above. The monthly average recirculating water flow rate for each month shall be used for “Q” in the formula. The monthly average recirculating water flow rate should be at or below the design recirculating water flow rate of 175,000 gpm. The monthly average total dissolved solids content measured or calculated during the month shall be used for “C” in the formula.

9.6. Prior to operation of the cooling tower, Grays Harbor Energy, LLC shall submit to EFSEC, a report describing the manufacturer’s recommendations for installing, operating, and testing the drift eliminators.

10. Annual Emissions.

10.1. Annual emissions, calculated as a rolling 12-month average, shall not exceed the limits in the following table. These limits apply to total emissions over each 12 consecutive month

period and include emissions from all units during start-up, shutdown and periods of malfunction.

Pollutant	CGT 1 and 2 Individually tpy	Auxiliary Boiler tpy	Cooling Tower tpy
NO _x	121.7*	1.3	---
CO	71.6*	1.3	---
SO ₂	14.5	0.088	---
H ₂ SO ₄	9.5	---	---
PM/PM ₁₀	99.0 [†]	0.4	4.5
VOC	45.8*	0.73	---
NH ₃	70.5	---	---
* Includes the emissions from start-up and shutdown events of the CGTs and diesel generators. CGT start-up emissions are equally apportioned between the two turbines. † PM and PM ₁₀ conservatively assumed to be equal.			

10.2. Rolling 12-month total emissions shall be calculated monthly based on the total monthly emissions from each permitted unit summed for the preceding 12 months. The actual emissions shall be based on CEMS, where installed, mass balance and emission factor calculations for SO₂ and H₂SO₄, and emission factors for other pollutants and emission units where CEMS are not installed.

11. Start-up and shutdown of CGTs 1 and 2 (including CGT over-speed protection testing).

11.1. Each CGT is limited to two start-ups per calendar day. This limitation does not apply during the period between initial firing of a combustion turbine for testing purposes and the start-up condition specified in Approval Condition 13.

11.2. A start-up begins when fuel is first fired in the combustion turbine, and ends when the earlier of one of these events occurs:

11.2.1. The operating temperatures of the oxidation and SCR catalysts serving an operating CGT reach 500°F and 525°F, respectively and when the associated combustion turbine achieves operational Mode 6, or

11.2.2. One of the following time limits has been reached, as applicable:

11.2.2.1. Three hundred minutes have elapsed since fuel was first introduced to the applicable turbine on a cold start-up. A cold start-up is any start-up occurring after the applicable turbine has not operated for 48 hours or more.

11.2.2.2. One hundred eighty minutes have elapsed since fuel was first introduced to the applicable turbine on a warm start-up. A warm start-up is any start-up

occurring after the applicable turbine has not operated between 8 and 48 hours.

11.2.2.3. One hundred twenty minutes have elapsed since fuel was first introduced to the applicable turbine on a hot start-up. A hot start-up is any start-up occurring after the applicable turbine has not operated for 8 hours or less.

11.2.2.4. Once per year it is estimated that each CGT will need to be tested to confirm that the over-speed protection is functioning properly (less than 90 minutes). Each test will account for one start-up.

11.3. The Shutdown is defined as the period beginning when the combustion turbine leaves operational Mode 6 and ends when fuel is no longer being introduced to any burner. The turbine manufacturer defines operational Mode 6 as the low emission mode during which all six of the burner nozzles are burning a lean premixed gas steady-state operation. Duration of a planned shutdown period shall not exceed 30 minutes per occurrence.

11.4. During start-up, ammonia injection shall begin no later than when the SCR reaches an operating temperature of 525°F.

11.5. During a start-up and associated shutdown of a CGT, the combined emissions shall not exceed the following:

Pollutant	Emission Limit Per Turbine Per Start-Up/Shutdown
NO _x	900 lb
CO	500 lb
VOCs	730 lb

11.5.1. Ongoing compliance with the NO_x limits in Condition 11.5 shall be monitored by continuous emission monitors for NO_x and O₂. The CEMS and flow measurement to determine NO_x lb/hr emissions shall meet the requirements of Approval Conditions 18.1 and 18.6.

11.5.2. Ongoing compliance with the CO limits in condition 11.5 shall be monitored by continuous emission monitor for CO and O₂. The CEMS and flow measurement to determine CO lb/hr emissions shall meet the requirements of Approval Conditions 18.3 and 18.6.

11.6. To account for VOC emissions during start-up and shutdown when determining monthly or annual emissions, VOC emissions shall be calculated using a VOC

emission factor of 216 lb/start-up/shutdown/CGT. The emission factor accounts for combined VOC emissions during start-up and shutdown.

- 11.7. To account for formaldehyde emissions during start-up and shutdown when determining annual emissions, formaldehyde emissions shall be calculated using a formaldehyde emission factor of 12 lb/hr (or source test during start-up) startup/shutdown/CGT when the catalyst temperature is less than 500°F.
12. Reserved
13. The initial compliance testing, CEMS performance testing, and testing for other, non-acid rain program purposes must occur by the earlier of the following dates:
 - 13.1. The earliest date that electrical power is offered for sale (not test generation) from a CGT and its associated steam turbine, or
 - 13.2. One hundred eighty days after the first CGT in the power island has been synchronized to the electrical distribution grid.
14. Grays Harbor Energy, LLC shall notify EFSEC in writing at least 30 days prior to:
 - 14.1. Initial start-up of any permitted emissions unit for operational testing and manufacturers certification purposes.
 - 14.2. Formal, initial start-up defined in Approval Condition 13.
 - 14.3. The date any emissions testing required by this permit shall be performed when the time between tests is specified to be longer than 30 days.
 - 14.4. The date(s) CEMS performance testing or Relative Accuracy Test Audits will be performed.
15. Sampling ports and platforms shall be provided on each CGT stack, after the final pollution control device. The ports shall meet the requirements of 40 CFR, Part 60, Appendix A, Method 20. Upon request by EFSEC for emissions testing, sampling ports and platforms shall be installed on diesel engines as appropriate. Sampling ports and platforms shall meet the requirements of 40 CFR Part 60, Appendix A, Method 1.
16. Adequate permanent and safe access to the test ports shall be provided. Other arrangements may be acceptable if approved by EFSEC prior to installation.
17. Operating Records for Emissions Units:
 - 17.1. Unless otherwise specified above, operating records shall contain information necessary to determine the operational status of the equipment.

17.2. Specific parameters and acceptable ranges of those parameters shall be specified in the Operation and Maintenance Manual.

17.2.1. Example operating record information includes, but is not limited to (Separate for each equipment for example: turbine and duct burner.):

17.2.1.1. Fuel heat and sulfur content.

17.2.1.2. Fuel consumption during the period (hourly, monthly, etc.).

17.2.1.3. Unit operating parameters:

17.2.1.3.1. Exhaust temperature and inlet temperature to the carbon monoxide catalyst.

17.2.1.3.2. Percent oxygen.

17.2.1.3.3. Output rate (lb of steam/hr, kW output, etc.).

17.2.1.3.4. Operating hours during the reporting period and cumulative for the year.

17.2.1.3.5. For each combustion turbine, unit start-up and shutdown information.

17.2.1.3.5.1. Start-up day and time.

17.2.1.3.5.2. Time Mode 6 attained.

17.2.1.3.5.3. Error codes during start-up and their effect on start-up.

17.2.1.3.5.4. Ammonia flow as registered on an ammonia flow meter.

17.2.1.3.6. For the auxiliary boiler, start-up and shutdown information.

17.2.1.3.6.1. Start-up day and time.

17.2.1.3.6.2. Shutdown day and time.

18. Continuous Emission Monitoring Systems (CEMS):

18.1. CEMS for NO_x and O₂ compliance shall meet the requirements contained in 40 CFR 75, Emissions Monitoring.

18.2. CEMS for ammonia shall meet the requirements contained in 40 CFR, Part 63, Appendix A, Reference Method 301, Validation Protocol, and 40 CFR, Part 60,

Appendix F, Quality Assurance Procedures, or other EFSEC-approved performance specifications and quality assurance procedures.

- 18.3. CEMS for CO shall meet the requirements contained in 40 CFR, Part 60, Appendix B, Performance Specification 4 or 4A, and in 40 CFR, Part 60, Appendix F, Quality Assurance Procedures.
 - 18.4. Continuous Opacity Monitoring Systems shall meet the requirements contained in 40 CFR Part 60, Appendix B, Performance Specification 1 and in 40 CFR, Part 60, Appendix F, Quality Assurance Procedures.
 - 18.5. Continuous emission and opacity monitors must meet the requirements of 40 CFR 60.13, except that the term “applicable subpart” as used in 40 CFR 60.13 means this permit. Monitors shall be capable of determining emissions during start-up, shutdown, and periods of malfunction.
 - 18.6. Stack flows for calculating mass emissions must be determined in accordance with the following. Natural gas combusted in the CGT’s and boiler must be sampled and analyzed based on the sampling and analysis frequencies established in the requirements of Approval Condition 5.3.6.4 for composition using Universal Oil Products (UOP) Laboratory Test Method 539-97 “Gas Analysis by Gas Chromatography” or equivalent. The gas composition must be used to determine the heat content of the gas in terms of British thermal unit, high heat value, per standard cubic foot (Btu/scf) and to determine the EPA Method 19 Fd factor for the gas. An alternative method to EPA Method 19 can be used to determine the Fd factor if pre-approved by EFSEC.
19. Relative Accuracy Test Audits (RATA) for NO_x, CO, ammonia Continuous Emission Monitoring Systems:
- 19.1. RATA testing is to be performed at the calendar year/calendar quarter frequency required by the quality assurance procedures referenced in Condition 18, except as provided for in Conditions 19.2 and 19.3.
 - 19.2. The testing shall be based on “QA operating quarters” as that term is defined in 40 CFR 72.2.
 - 19.3. A RATA is to be performed for all pollutants measured by CEMS as required by 40 CFR Part 75, Appendix B, Section 2.3, including the minimum frequency of once every eight calendar quarters.
 - 19.4. A test plan shall be prepared and submitted to EFSEC and Olympic Regional Clean Air Agency (ORCAA) for review at least 30 days prior to the RATA test. The test plan shall cover all pollutants required to be monitored during that RATA test. The

test plan shall include the proposed dates of the testing. The permittee must revise the test plan to address comments provided by EFSEC or ORCAA.

- 19.5. A report of the results of the RATA and other emission testing shall be submitted to EFSEC and ORCAA within 45 days of completing the test.
20. CEMS and process data shall be submitted quarterly, in written form (or electronic if permitted by EFSEC) within 30 days of the end of each calendar quarter to EFSEC and ORCAA.
21. The format of the reporting described in Approval Condition 20 shall match that required by EPA for demonstrating compliance with the Title IV Acid Rain program reporting requirements. Pollutants not covered by that format shall be reported in a format approved by EFSEC that shall include at least the following:
 - 21.1. Process or control equipment operating parameters.
 - 21.2. The hourly maximum and average concentration, in the units of the standards, for each pollutant monitored.
 - 21.3. The duration and nature of any monitor downtime.
 - 21.4. Results of any monitor audits or accuracy checks.
 - 21.5. Results of any required stack tests.
 - 21.6. Results of any other stack tests performed after the initial performance test.
 - 21.7. The above data shall be retained at the Grays Harbor Energy Center for a period of at least five years.
22. For each occurrence of monitored emissions in excess of the limits in this permit, the quarterly emissions report (per Approval Conditions 20 and 21) shall include the following:
 - 22.1. For parameters subject to monitoring and reporting under the Title IV, Acid Rain program, the reporting requirements in that program shall govern excess emissions report content.
 - 22.2. For all other pollutants:
 - 22.2.1. The time of the occurrence.
 - 22.2.2. Magnitude of the emission or process parameters excess.
 - 22.2.3. The duration of the excess.
 - 22.2.4. The probable cause.

22.2.5. Corrective actions taken or planned.

22.2.6. Any other agency contacted.

23. Grays Harbor Energy, LLC shall have on-site, and shall follow, an Operating and Maintenance manual, and an equipment Start-up, Shutdown, and Malfunction Procedures manual for all equipment that has the potential to affect emissions to the atmosphere. Copies of the manuals shall be available to EFSEC or ORCAA at the facility. Emissions that result from a failure to follow the requirements of the manuals may be considered evidence that emission violations have occurred. The above manuals must be reviewed annually and updated as needed. EFSEC and ORCAA shall be notified whenever the manual is updated.
- 23.1. The Operating and Maintenance manual should contain equipment-specific operating parameter and maintenance information.
- 23.2. The Start-up, Shutdown, and the Malfunction manual shall contain information on the proper procedures, and sequencing of actions for plant operations staff to follow in order to safely, efficiently start and stop the various equipment at the station under all reasonably ascertainable normal and abnormal start-up and shut down situations.
24. Any activity, which is undertaken by Grays Harbor Energy, LLC, or others, in a manner, which is inconsistent with the application and this determination, shall be subject to enforcement under applicable regulations. Specific elements in the application to be followed are the structure locations and sizes depicted on site plans, emitting and process equipment specifications, and emitting equipment stack height and diameters used for demonstrating compliance with ambient air quality impacts.
25. Nothing in this determination shall be construed so as to relieve Grays Harbor Energy, LLC of its obligations under any state, local, or federal laws or regulations.
26. At all times, Grays Harbor Energy, LLC must maintain and operate the emission units covered by this permit, including all associated emission control equipment and work practices, in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether acceptable operation and maintenance procedures are being used shall be based on information available to EFSEC or ORCAA. This information may include, but is not limited to, monitoring results, opacity observations, operating and maintenance procedures, all operation and maintenance records, and site inspections.
27. Access to the source by EFSEC or ORCAA, shall be permitted upon request for the purpose of compliance assurance inspections. Failure to allow access is grounds for action under the Washington Clean Air Act.

Prepared by:

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Washington Department of Ecology

Date

Approved by:

Kathleen Drew
Energy Facility Site Evaluation Council

Date



STATE OF WASHINGTON

ENERGY FACILITY SITE EVALUATION COUNCIL

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WASHINGTON STATE
ENERGY FACILITY SITE EVALUATION COUNCIL
RESOLUTION NO. 348
AMENDMENT NO. 6 TO THE
GRAYS HARBOR ENERGY SITE CERTIFICATION AGREEMENT

Nature of Action

On August 18, 2020, the Washington Energy Facility Site Evaluation Council (EFSEC) received a written request from the certificate holder, Grays Harbor Energy LLC (GHE), to amend the current Grays Harbor Energy Center Site Certification Agreement (SCA). The amendment request consists of two distinct revisions to the SCA.

The first of the two proposed SCA revisions would authorize the installation of General Electric's Advanced Gas Path (AGP) package in the operational combustion turbines in Units 1 and 2.

The second proposed revision is a request for EFSEC to extend the start of construction deadline for Units 3 and 4, which obtained site certification under SCA Amendment No. 5, but have not yet been constructed.

GHE's SCA amendment request would change the following in the Grays Harbor Energy Center SCA:

- Increase combustion turbine output to 181.2 MW from the current 175 MW for operating units 1 and 2.
- Extend the start of construction date for Units 3 and 4 to be no later than February 18, 2028. This would extend by seven years the February 18, 2021, deadline to begin construction for units 3 and 4, which is 10 years from the date of execution of SCA Amendment 5.

Background

The Grays Harbor Energy Center is located on a 22-acre site within the 1,600-acre Satsop Development Park. In 1976, the initial SCA authorized construction of Nuclear Projects No. 3 and No. 5, which were never completed. In 1996, the SCA was amended to authorize construction of a natural gas-fired combined cycle generating facility, and in 1999, the terms relating to the nuclear projects were removed.

In the decade that followed, EFSEC amended the SCA several times to reflect changes in the project ownership, from Energy Northwest to Duke Energy and then to GHE, and to reflect changes in the equipment proposed for Units 1 and 2. Units 1 and 2 were eventually constructed and put into operation in April 2008.

In 2011, the SCA was amended to authorize an expansion of the facility. This SCA amendment authorized a doubling of the facility's output, with the construction of two additional combustion turbine

units, heat recovery steam generators and a steam turbine generator. The SCA refers to this expansion as Units 3 and 4. Construction on Units 3 and 4 has not yet begun.

Procedural Status

EFSEC's SCA amendment procedure is governed by chapter 80.50 RCW and chapter 463-66 WAC.

GHE and EFSEC have complied with procedural requirements of Chapter 463-66 WAC as follows:

- Pursuant to WAC 463-66-030, the request for amendment of the SCA was submitted in writing on August 17, 2020.
- At its monthly meeting on September 15, 2020 the Council determined a schedule for action on the amendment request as follows: EFSEC conducted a public informational hearing on the GHE amendment request on October 6, 2020. Due to COVID-19 public health and safety concerns EFSEC held the public informational hearing virtually. Though not required by its rules EFSEC invited public comment via US mail or online submittal from September 24, 2020 through midnight October 6, 2020.
- Pursuant to WAC 463-66-030, notice of a public hearing was distributed to the GHE project distribution list. The public notice issued by EFSEC advised that GHE had requested an amendment to the SCA, and that a public informational hearing to consider the matter would be conducted on October 6, 2020. The public notice for the EFSEC virtual public informational hearing stated that public comments would be heard at the public hearing and could also be submitted online or via US mail to EFSEC from September 24, 2020 through midnight October 6, 2020.
- EFSEC conducted a virtual public informational hearing session in which the public was provided an opportunity to comment on this matter on October 6, 2020.
- No public comments were received.
- At the Council's November 17th, 2020, monthly meeting EFSEC Manager Sonia Bumpus discussed the status of EFSEC's SEPA review and staff's recommendation regarding the GHE SCA amendment request:
 - Sonia Bumpus proposed that the Council bifurcate the GHE SCA Amendment request Council decision. Separate draft SEPA Addendums were presented and discussed by EFSEC staff at the meeting. Copies of the SEPA Addendum for GHE Units 1 and 2 and GHE Units 3 and 4 were provided in council member packets and made available on EFSEC's website.
 - EFSEC Siting Specialist Kyle Overton discussed the content of two supporting SEPA staff memos to the EFSEC SEPA Addendum documents. Copies of the SEPA staff memo for GHE Units 1 and 2 and for Units 3 and 4 were included in EFSEC council member packets and made available on EFSEC's website.
 - At the meeting, the Council resolved to bifurcate its decision for the GHE SCA Amendment request. The Council directed EFSEC staff to draft a resolution for Council review consistent with the staff recommendation.
- The Council considered information in GHE's SCA amendment request, the proposed amendments to the Amended GHE SCA, the SEPA Addendums and supporting SEPA Staff Memos, and a draft of this Resolution No. 348 at the December 15, 2020 Council meeting.

Discussion

WAC 463-66-040 outlines the relevant factors that the Council shall consider prior to a decision to amend an SCA. In reviewing any proposed amendment, the Council shall consider whether the proposal is consistent with:

1. The intention of the original SCA;
2. Applicable laws and rules; and
3. The public health, safety, and welfare; and
4. The provisions of chapter 463-72 WAC.

At its November 17, 2020, meeting, the Council resolved to review the equipment upgrade and the extension request separately.

As noted above, GHE has requested two unrelated changes to its SCA. The first requested change would authorize equipment and software changes to existing Units 1 and 2. The second change would extend by seven years the existing ten year expiration date of SCA Amendment 5, which authorized the construction of two new generating units (Units 3 and 4) by February 18, 2021.

Under these circumstances, the Council concludes it is reasonable to bifurcate and give separate consideration to GHE's request for an extension of the ten year construction authorization expiration date set out in SCA Amendment 5, apart from the equipment upgrade request.

1. Advanced Gas Path Package/Increase in Authorized Generating Capacity

The Council first reviews just those proposed changes to the SCA that are necessary to authorize installation of the Advanced Gas Path Package in the existing combustion turbines, Units 1 and 2, under the criteria in WAC 463-66-040.

a. Consistency with intention of the original SCA

Under WAC 463-66-040(1), the Council must consider whether the proposed amendment is consistent with the intention of the original SCA. In general, the intention of every SCA is to grant State authorization to a certificate holder to construct and operate an energy facility that has been determined to be in the interest of the State of Washington because the facility will produce a net benefit after balancing need for the facility against impacts on the broad public interest, including human welfare and environmental stewardship. An SCA provides a "license" and GHE as the certificate holder, in-turn, commits itself to comply with the terms and conditions of the SCA.

The intent of the SCA authorizes "electrical generation facilities at the Satsop site, first the nuclear facility, then a natural gas-fired 2x1 combined-cycle combustion turbine facility, and then a second 2x1 combined-cycle combustion turbine addition to the facility (which has not been built)." (Grays Harbor Energy Center Request to Amend the Site Certification Agreement, letter dated August 17, 2020) The Advanced Gas Path Package is an equipment and software improvement to combustion turbine units 1 and 2, which is expected to increase operation efficiency and output. Currently each turbine is nominally rated at 175 megawatts and the upgrade is expected to increase the output of each turbine to approximately 181 MW. While some minor impacts to air and water are anticipated, they are addressed within the existing SCA and/or air and water permit requirements. An application for a minor modification to the Prevention of Significant Deterioration (PSD) permit will address the technical changes to operation without requiring an increase to existing PSD permits limits. The Council finds that installation of the Advanced Gas Path Package for efficient gas-fired electrical generation is consistent with the intent of the SCA.

b. Consistency with applicable laws and rules

Under WAC 463-66-040(2), the Council must consider applicable laws and rules, including chapter 80.50 RCW, chapter 43.21C RCW and chapter 197-11 WAC (the State Environmental Policy Act and EPA rules), WAC 463-66-070 through -080, and the construction and operation standards for energy facilities in WAC 463-62.

I. Consistency with SEPA (chapter 43.21C RCW and chapter 197-11 WAC)

The Council is charged with the responsibility to review proposed projects under SEPA, RCW 43.21C and chapter 197-11 WAC. That law provides for the consideration of probable adverse environmental impacts and possible mitigation measures. Pursuant to WAC 463-47-140, EFSEC is the lead agency for environmental review of projects under the jurisdiction of RCW 80.50; the Council Manager is the SEPA responsible official, per WAC 463-47-051.

GHE submitted an amendment request and SEPA Checklist which EFSEC staff reviewed along with the other materials submitted to EFSEC. EFSEC reviewed the SEPA Determination of Significance/Adoption for the Satsop Combustion Turbine Project; adoption of the NEPA Bonneville Power Administration's 11/1995 EIS document; which is the SEPA document being added for this proposal. An Addendum under SEPA, 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 it is determined that 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)) then an addendum is appropriate for documenting this review under SEPA.

As no substantial changes to the proposal or new information indicating probable significant adverse impacts were identified, EFSEC's SEPA responsible official determined that an Addendum to the SEPA EIS prepared by the Washington State Thermal Power Plant Site Evaluation Council is appropriate. EFSEC's SEPA responsible official considered all of the information in the above referenced documents for the installation of the Advanced Gas Path Package in turbine units 1 and 2. The SEPA Addendum for Units 1 and 2 identified resource impacts but no new or significant unavoidable impacts were identified. The SEPA staff memo dated November 17, 2020, and the Final SEPA Addendum for Units 1 and 2 discusses impacts and mitigation which are consistent with existing mitigation and permit requirements in the SCA.

EFSEC invited public comment on the GHE SCA Amendment request at a virtual public hearing session held on October 6, 2020. EFSEC also invited public comment via US mail or through online submittal from Thursday, September 24, 2020 through midnight on October 6, 2020. No substantive comments were submitted for the SCA amendment request. The Council finds that installation of the Advanced Gas

Path Package for efficient gas-fired electrical generation is consistent and in compliance with SEPA laws and rules in chapter 43.21 C RCW and chapter 197-11 WAC.

ii. Consistency with WAC 463-66-070: Approval by Council Action and -080: Approval by governor

WAC 463-66-070 and -080 discuss the two options available to the Council for approval of a request for amendment to an EFSEC site certification agreement.

WAC 463-66-080 provides:

An [SCA] amendment which substantially alters the substance of any provision of the SCA or which is determined to have a significant detrimental effect upon the environment shall be effective upon the signed approval of the governor.

On the other hand, WAC 463-66-070 provides:

An amendment request which does not substantially alter the substance of any provisions of the SCA, or which is determined not to have a significant detrimental effect upon the environment, shall be effective upon approval by the council. Such approval may be in the form of a council resolution.

The Council considered whether the SCA Amendment request related to the Advance Gas Path Package would result in, “significant detrimental effects” on the environment. EFSEC relied upon its SEPA review to identify potential significant adverse impacts. If potential significant unavoidable adverse impacts were identified, these would be categorically characterized as “significant detrimental effects.” No new significant adverse impacts from the installation of the Advance Gas Path Package on GHE Units 1 and 2 were identified in EFSEC’s SEPA review.

The Council therefore concludes that this amendment may be approved by Council resolution pursuant to WAC 463-66-070.

iii. Consistency with WAC 463-62 Construction and Operation Standards for Energy Facilities

Chapter 463-62 WAC implements EFSEC’s policy and intent outlined in RCW 80.50.010. Performance standards and mitigation requirements that address seismicity, noise limits, fish and wildlife, wetlands, water quality, and air quality are identified in the rule.

Within the existing terms of the SCA, the proposed SCA amendments pertaining to installation of the Advanced Gas Path Package demonstrate compliance with the construction and operation conditions outlined in WAC 463-62.

Seismicity:

No new seismicity issues are anticipated for installation of the Advanced Gas Path Package.

Noise:

Installation of the Advanced Gas Path would occur during the annual maintenance outage which will be 45 days in 2021. Noise levels are expected to remain within existing operating limits established in the SCA and permits; no new concerns related to noise were identified.

Fish and wildlife habitat and function:

No issues related to wildlife and function were identified.

Wetland impacts and mitigation:

No issues related to wetland and mitigation impacts were identified.

Water quality:

Due to higher firing temperatures from the Advanced Gas Path, the facility's water consumption drawn from the Chehalis River could increase, but by no more than 3%. There are several variables that determine the actual amount of water consumption at the facility, which results in a range of water consumption over time. The current SCA includes a water withdrawal authorization that does not require any change as part of this amendment request (2010 SCA Attachment III). Additionally, EFSEC consulted Ecology regarding the potential increase in water withdrawal from the Chehalis River. Ecology confirmed that the GHE amendment request does not change the amount of water GHE is already approved to withdraw for Units 1 and 2 (Ecology email 10/20/2020). No new concerns related to environmental impacts to water or from withdrawal from the Chehalis River are identified. GHE's current NPDES permit is expected to adequately address water quality.

Air quality:

Following installation of the Advanced Gas Path Package, the 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.). EFSEC received a PSD minor permit modification application which will be processed. Proposed updates to the PSD permit are expected to address any potential air quality impacts from the addition of the Advanced Gas Path package and no increase in PSD permit limits are anticipated. No new concerns related to environmental impacts to air quality were identified.

Based on the results of the SEPA environmental review conducted by EFSEC, and within the terms of the SCA as proposed for amendment to authorize installation of the Advance Gas Path Package on Units 1 and 2, the Council hereby concludes that the standards for construction and operation in chapter 463-62 WAC are satisfied. Therefore, the Council determines that the SCA Amendment pertaining to installation of the Advance Gas Path Package is consistent with WAC 463-62.

c. Consistency with public health, safety, and welfare

Under WAC 463-66-040(3) and -050, the Council must consider whether the SCA Amendment request would be consistent with public health, safety, and welfare. In considering whether a proposed amendment is consistent with the public health, safety and welfare, WAC 463-66-050 requires the Council to consider the long-term environmental impacts of the proposal, and further requires a consideration of "reasonable alternative means by which the purpose of the proposal might be achieved" along with the "availability of funding to implement the proposal."

Installation of the Advanced Gas Path package will occur during the annual maintenance outage which will be for 45 days in 2021. This equipment upgrade will occur within the existing and approved facility footprint with no change to the site boundary. Increased turbine generation output to approximately 181 MW at 100% load is expected. A minor PSD permit modification will address any potential air quality impacts from the addition of the Advanced Gas Path package, within existing PSD permit limits. Increased water consumption is anticipated with this upgrade and the GHE SCA already includes a water withdrawal authorization that does not require any change as part of this amendment request (2010 SCA

Attachment III). EFSEC coordinated with Ecology during its SEPA review of the SCA amendment request regarding the potential increase in water withdrawal from the Chehalis River, and Ecology confirmed that the Advanced Gas Path Package upgrade will not change the amount of water GHE is already authorized to withdraw for Units 1 and 2 (Ecology email 10/20/2020).

The proposed equipment upgrade will involve the use of more de minimis amounts of toxic or hazardous chemicals already addressed in GHE's existing site Spill Prevention, Control, and Countermeasure Plan and Dangerous Waste Management Procedures.

As with the previous environmental resources discussed above, greenhouse gas emissions were evaluated in previous SEPA documents that EFSEC reviewed. The GHE facility has an approved Greenhouse Gas Mitigation Plan which generally requires the certificate holder to mitigate potential carbon dioxide emissions from the facility that exceed a rate of 0.675 lb./kWh. Potential greenhouse gas emissions resulting from the equipment upgrade will be addressed by updating the greenhouse gas emissions mitigation payment calculations at startup post construction (EFSEC SEPA Addendum GHE Units 1 and 2).

GHE will continue to implement the purpose of the original project, though with slightly increased generating capacity. The Advanced Gas Path Package installation will not result in potential significant adverse impacts on public health and safety. Consequently, as supported by the documentation in the SEPA Addendum for GHE Units 1 and 2, and the Amended SCA, this equipment upgrade is consistent with the public health, safety and welfare.

d. Consistency with WAC 463-72

WAC 463-72-020 provides that site restoration or preservation plans shall be prepared in sufficient detail to identify, evaluate, and resolve all major environmental and public health and safety issues, to include provisions for funding or bonding and monitoring.

The Council has already approved a site restoration plan for the Grays Harbor Energy Center. The requested amendment does not propose any change to that approved plan or to the SCA's site restoration conditions.

The Council concludes that this amendment is consistent pursuant to WAC 463-72.

Conclusion regarding Advanced Gas Path Package

The Council concludes as follows with regard to the proposed SCA revisions to authorize installation of the Advanced Gas Path Package. That portion of the proposed amendment that is necessary to authorize installation of the Advance Gas Path Package on Units 1 and 2 is consistent with: (1) the intent of the Original Project SCA; (2) the public health, safety, and welfare; (3) all applicable laws (including SEPA); and (4) the provisions of WAC 463-72.

The Council hereby determines that it is appropriate to approve Amendment 6 to the Grays Harbor Energy Center SCA, as necessary to reflect the proposed Advance Gas Path Package upgrade to Units 1 and 2.

2. Units 3 and 4 Construction Start Deadline Extension

The Council turns now to review GHE's request to extend, to February 18, 2028, the SCA's requirement to begin construction of Units 3 and 4 by February 18, 2021.

As discussed above, the first criterion for the Council’s review of a request to amend an SCA is whether the proposed amendment is consistent with “the intention of the original SCA.” WAC 463-66-040(1).

A key consideration under this criterion is whether the SCA term the certificate holder proposes to change was fundamental to the Council and the Governor’s approval of the original SCA. If the term was fundamental to approval of the original SCA, but the reasons the certificate holder provides for the requested change are not compelling or do not adequately address the fundamental issue that led to the inclusion of that term in the original SCA, then the Council may deny the request.

For purposes of the Council’s review of the extension request, Amendment 5 (Feb. 18, 2011) to GHE’s SCA is the “original SCA.” The Council reviewed GHE’s October 2009 application for certification of Units 3 and 4 using the same procedural steps that are required for a new application for site certification. The Council issued a mitigated determination of non-significance under SEPA, determined the project would be consistent and in compliance with land use plans and zoning ordinances, and granted expedited processing. The Council ultimately prepared a recommendation to the Governor to approve certification of Units 3 and 4, subject to conditions to mitigate the adverse environmental effects of the project.

Amendment 5, Art. II.B.2, pp. 4-5, includes the following requirements concerning start of construction:

This Site Certification Agreement authorizes the Certificate Holders to begin construction of Units 3 and 4 within ten (10) years of the execution of Amendment No. 5. If construction of Units 3 and 4's major components has not been commenced within ten (10) years of the execution of Amendment No. 5, all rights under this Site Certification Agreement to construction and operation of Units 3 and 4 will cease.

If the Certificate Holders do not begin construction of Units 3 and 4 within five (5) years of the execution of Amendment No. 5, the Certificate Holders will report to the Council their intention to continue and will certify that the representations in the application, environmental conditions, pertinent technology and regulatory conditions remain current and applicable, or identify any changes and propose appropriate revisions in the Site Certification Agreement to address changes. Construction may begin only upon prior Council authorization, upon the Council’s finding that no changes to the Site Certification Agreement are necessary or appropriate, or upon the effective date of any necessary or appropriate changes to the Site Certification Agreement.

Further, if the Certificate Holders do not begin construction of Units 3 and 4 within five (5) years of the execution of Amendment No. 5 and the Council has adopted by rule changes to the standards governing "construction and operation for energy facilities" specified in WAC chapter 463-62, the construction and operation of Units 3 and 4 will be governed by the regulations in effect at the time the Council authorizes construction to proceed.

(Italics added.) When explaining this provision in its recommendation to the Governor, the Council stated that although “there is a benefit to the public to have permitted facilities ready to be constructed whenever it becomes known that more generation capacity is needed,” the Council nonetheless recognized “that an unlimited ‘build window’ for a proposed project is not appropriate as, over time, technology or mitigation measures presented in an application may no longer be protective of environmental standards and conditions at the time the facility is constructed.” Council Order No. 860, p. 13.

The Council’s recommendation that the Governor approve certification of Units 3 and 4 was based on its weighing of the need for the project against the project’s environmental impacts at the proposed location.

The Council stated that, in reviewing a request for site certification, it “must consider whether an energy facility at a particular site will produce a net benefit after balancing the legislative directive to provide for abundant energy at a reasonable cost with the impact to the environment and the broad interests of the public.” *Id.* at p. 15. The Council did not merely assume a need for the project, but instead specifically found that:

[T]he evidence in the record supports the conclusion that the region needs to continue to add electrical generation capacity. The Project will contribute to the diversification and reliability of the state’s electrical generation capacity, and will therefore support the legislative intent to provide abundant energy at a reasonable cost.

Based on the Council’s recommendation, the Governor approved the request.

The Council’s evaluation of the evidence of need for Units 3 and 4 followed the approach the Council had taken in its 1996 order regarding authorization of Units 1 and 2 at Satsop. Council Order No. 694 (Modified April 15, 1996). In that order, the Council declined the applicant’s request to exclude the issue of project need, reasoning that it is impossible to balance need and the public interest without evaluating the urgency of the need for a particular facility at a particular location.

GHE is now requesting that the Council amend the SCA to extend the deadline for commencing construction of Units 3 and 4 by seven years, from February 2021 to February 2028. GHE’s request states that “[a]lthough market conditions do not currently support construction of Units 3 and 4, GHE believes that they may by 2028, given the planned [coal plant] baseload retirements.”

GHE admits that market demand currently is not sufficient to support construction. In addition, GHE does not explain how its prediction of possible future need squares with recent changes in state law regarding transition away from fossil fuel by Washington utilities, which could have a bearing on the Council’s analysis of need for the facility. Under the 2019 Clean Energy Transformation Act (Laws of 2019. ch. 288; RCW 19.405), utilities must eliminate coal-fired electricity from their state portfolios by 2025 (RCW 19.405.030), and by 2030 a greenhouse neutral standard will apply, which means utilities have flexibility to use limited amounts of electricity from natural gas if it is offset by other actions (RCW 19.405.040). By 2045, utilities must supply Washington customers with electricity that is 100% renewable or non-emitting, with no provision for offsets (*Id.*).

In summary, in recommending certification of Units 3 and 4, the Council stated it did not believe an “unlimited build window” would be appropriate. The Council also considered the applicant’s evidence of need for the project to be a necessary part of its recommendation of approval. As such, GHE’s extension request is not only inconsistent with the intention of the original SCA, it also fails to provide a compelling demonstration of need to justify changing the ten-year expiration of Amendment 5 to the SCA.

The Council concludes that the proposed SCA Amendment is inconsistent with the intent of SCA Amendment No. 5. Consequently, it is unnecessary to review GHE’s extension request under the other three criteria.

Conclusion regarding Units 3 and 4 Construction Extension

Because it is inconsistent with the intent of the original SCA, and GHE has not put forth a compelling reason for the proposed extension of the construction start deadline for Units 3 and 4, GHE’s proposed amendment to SCA Amendment 5 should be denied. Denial of this request should be without prejudice to GHE’s ability to submit a new application for certification of additional generating units in the future, should need arise.

RESOLUTIONS

For the foregoing reasons, the Council:

Grants Grays Harbor Energy's request to amend its SCA to allow GHE to install the Advanced Gas Package. The Council's approval is memorialized in the attached SCA Amendment.

Denies Grays Harbor Energy's request to amend SCA Amendment 5 to extend the construction start deadline for Units 3 and 4.

Assuming that GHE has not commenced construction, Amendment 5 will expire by its own terms on February 18, 2021. This expiration will be without prejudice to GHE's ability to apply to build new generating units in the future. If market conditions eventually change to support construction of new generating units, GHE may submit a new application to be reviewed in the same manner as its 2009 request.

The approved SCA changes are shown in the Amended SCA.

The supporting SEPA review documentation is set out in attachment 1 to this resolution.

Appeals:

A request for judicial review of the SCA amendment is subject to the requirements of the Administrative Procedures Act, Chapter 34.05 RCW.

DATED at Lacey, Washington and effective on December ____, 2020

WASHINGTON ENERGY FACILITY SITE EVALUATION COUNCIL

Kathleen Drew, EFSEC Chair

Sonia E. Bumpus, EFSEC Manager

**ADDENDUM TO SEPA MDNS for the SATSOP COMBUSTION TURBINE PROJECT (Phase II) -
REQUEST FOR AMENDMENT NO. 5 TO SITE CERTIFICATION AGREEMENT**

Pursuant to Chapter 463-47 WAC,
WAC 197-11-600 (3)(b), and (4)(c) and WAC 197-11-625

Addendum to the **SEPA MDNS for the Satsop Combustion Turbine Project (Phase II)** issued by the Energy Facility Site Evaluation Council (EFSEC); in response to a request to amend the Site Certification Agreement(SCA) for the Grays Harbor Energy Center (GHE) to extend to 2028 the deadline for commencing construction of Units 3 and 4, which the Council and the Governor authorized by SCA Amendment 5.

Date of Addendum: December 10, 2020

Date of original MDNS: 2/12/2010

Description of New Information:

- The EFSEC Staff Memorandum (December 10,2020) evaluates the Certificate Holder’s request to extend to 2028, the deadline for commencing construction of Units 3 and 4 and is incorporated by reference to this Addendum. The following is a summary of the new information discussed in the Staff Memo.
 - Mitigation was identified in the 2010 MDNS for Earth, Air Water, Plants, Animals, Noise, Light and Glare, and Transportation. No additional mitigation beyond the 2010 mitigation was identified in the Staff Memo for those environmental topics.
 - SCA Amendment No. 5 currently requires the certificate holder to provide mitigation for twenty percent of the carbon dioxide emissions that would be produced by Units 3 and 4, consistent with RCW 80.70.020(4) and WAC 463-80-050(4). Ecology is currently creating new rules (see Governor’s directive 19-18) to address Greenhouse Gas (GHG) impacts and mitigation with an overall goal of no net increase in greenhouse gas emissions attributable to the project. The rules are due to be in place in September 2021. If an extension is granted as requested, it is not entirely clear whether EFSEC will be able to revisit its SEPA review of Units 3 and 4 (and the question of adequate greenhouse gas mitigation) when Grays Harbor Energy submits a request to commence construction of Units 3 and 4 under SCA Amendment No. 5, Art. II.B.2. Therefore, if the Council grants the extension request, it could consider expressly reserving the right to update its SEPA analysis at the time the certificate holder submits its request to commence construction.
 - There were no concerns identified for other environmental topics.
 - EFSEC considered the potential cumulative effects of this request to extend the deadline for commencing construction of Units 3 and 4 together with the request to upgrade Units 1 and 2 with a Gas Path package. Both the upgrades to Units 1 and 2 and the construction of Units 3 and 4 do 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 activities have had mitigation applied, and/or are within existing permit requirements. Cumulative effects would be minor.
- All background documents listed in part A of the EFSEC staff memorandum supporting this review are also incorporated by reference in this Addendum.

Proponent: Grays Harbor Energy LLC

Location of proposal: 401 Keys Road, Elma, WA 98541. The site is located in Grays Harbor County, Washington on a 22-acre site within the 1,600-acre Satsop Development Park.

The site is located south of the Chehalis River near the town of Elma. 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.

Mitigation: No mitigation has been identified.

Purpose of Addendum:

Background: The existing natural-gas fired combined cycle generating facility (Combustion Turbine Project, including Combustion Turbine Units 1 and 2) was authorized to be constructed in 1996 in the Site Certification Agreement (SCA) Amendment No. 2 (between the State of Washington and Grays Harbor Energy LLC) and was put into operation in April 2008. EFSEC currently regulates the facility.

In 2010, GHE submitted a request to add two more natural gas combustion turbine units (Units 3 and 4) and received approval from EFSEC in December 2010 (SCA Amendment No 5).

Present: In 2020, GHE submitted a request for an amendment to the SCA for GHE to extend to 2028 the deadline for commencing construction of Units 3 and 4¹. This amendment is subject to review under the State Environmental Policy (SEPA). EFSEC considered other environmental information generated since the original SEPA review for construction of Units 3 and 4 in 2010: August 2020 SEPA checklist, and data requests 1 and 2. EFSEC reviewed the new information and analyzed whether there was new information indicating likely significant adverse environmental impacts not covered by the impacts and mitigation analyzed in the existing SEPA document.

Consistent with WAC 197-11-600 (3)(b)(i) and (ii) concerning when a proposal has been changed or there is new information following completion of SEPA review, EFSEC has determined that the current action (SCA amendment to extend the deadline to commence construction of Units 3 and 4) triggering SEPA review involves minor changes to the proposal and that the new information collected and reviewed as part of this SEPA review does not substantially change the analysis of significant impacts and alternatives in the existing environmental documents. Consistent with WAC 197-11-600 (4)(c), an addendum is appropriate for documenting this environmental review under SEPA.

Comment period: No comment period is required for an addendum.

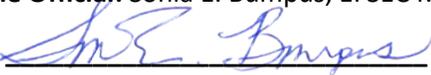
¹ The Certificate Holder submitted one request for an amendment to the SCA to: 1) upgrade Units 1 and 2 with the gas path package and 2) extend the deadline for commencing construction of Units 3 and 4 to 2028. EFSEC is separating the SEPA review for upgrading Units 1 and 2 from the request to extend the deadline for Units 3 and 4. This SEPA review applies to extending the deadline for commencing construction for Units 3 and 4. SEPA review for upgrading Units 1 and 2 will occur separately. Please see further discussion in the Staff Memorandum, **Part C**.

Applicable SEPA Rules.

The GHE Units 3 and 4 Deadline for Construction Extension SEPA Addendum and supporting documentation can be found on EFSEC's website: <https://www.efsec.wa.gov/energy-facilities/grays-harbor-energy-center/grays-harbor-energy-center-sca>

Name of agency: Energy Facility Site Evaluation Council
P.O. Box 43172
Lacey WA 98503-3172

Responsible Official: Sonia E. Bumpus, EFSEC Manager

Signature: 

Contact person: Amí Kidder
360-664-1305

Attachment: 12/10/2020 EFSEC staff memorandum to Sonia Bumpus from Amí Kidder



STATE OF WASHINGTON

ENERGY FACILITY SITE EVALUATION COUNCIL

PO Box 43172 • Olympia, Washington 98504-3172

Memorandum

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

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

Date: December 10, 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 Extend the Construction Deadline for Units 3 and 4

PROPOSAL: Gray's Harbor Energy LLC (GHE) a subsidiary of Invenergy LLC (the Certificate Holder) requests the Council amend the SCA to extend to 2028 the deadline for commencing construction of Units 3 and 4, which the Council and the Governor authorized by SCA Amendment 5.

CASE NUMBER: EFSEC SCA Amendment No. 06
Docket No: 180305

CERTIFICATE HOLDER: Grays Harbor Energy LLC

LOCATION: 401 Keys Road, Elma, WA

OTHER PERMITS: None identified

REQUIRED SUBMITTALS: No submittals 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
2020 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.	8/17/2020	All
2010 MDNS	SEPA MDNS to add two combustion generators: Units 3 and 4	2/12/2010	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
DR1	Data Request 1 – GHE Response	10/16/2020	DR1-1,2,7,8
DR2	Data Request 2 – GHE Response	10/21/2020	DR2-2

B. STAFF REVIEW OF THE ENVIRONMENTAL INFORMATION

EFSEC staff and the Council visited the site on 06/18/2019.

The following sections correspond with elements of the environment listed in WAC 197-11-444 and with the sections in the environmental checklist WAC 197-11-960, and were used to organize and document EFSEC's environmental review for the GHE request for a SCA amendment. Additional information (listed in Part A above) was provided by the Certificate Holder, existing SEPA documents, and by Washington regulatory technical experts as contracted to EFSEC and used as part of the environmental review.

1. EARTH

- Mitigation measures for earth were identified in the 2010 MDNS
- No new concerns related to environmental impacts to earth identified.

Mitigation: No additional mitigation measures for earth recommended.

2. AIR

Air Quality

- Mitigation measures for air quality were identified in the 2010 MDNS.

- An amended Notice of Construction and Prevention of Significant Deterioration permit and amended Title V Air Operating permit would be required and would address any potential air issues.
- No new concerns related to environmental impacts to air quality

Mitigation: No additional mitigation measures for air quality recommended.

Greenhouse Gas

- SCA Amendment No. 5 requires Grays Harbor Energy to mitigate carbon dioxide emissions in accordance with RCW 80.70 (Carbon Dioxide Mitigation) and WAC 463-80 (Carbon Dioxide Mitigation Program for Thermal Electric Generating Units). The law requires fossil-fuel thermal electric generation facilities that received site certification after 2004 (when the statute was enacted) to provide mitigation for twenty percent of the total carbon dioxide emissions produced by the facility. RCW 80.70.020(4); WAC 463-80-050(4).
- Governor Inslee directed Ecology (Governor's Directive 19-18) to develop rules that would apply to major industrial and fossil fuel projects. Ecology has been directed to develop rules that ensure a comprehensive assessment and quantification of direct and indirect GHG emissions resulting from the project. The rules would also include "Methods, procedures, protocols, criteria or standards for mitigation of greenhouse gas emissions, as necessary to achieve a goal of no net increase in greenhouse gas emissions attributable to the project." (emphasis added). Ecology is directed by the governor to have the rules adopted by September 2021. The effort is underway.
- If an extension is granted as requested, it is not entirely clear whether EFSEC will be able to revisit its earlier SEPA review of Units 3 and 4 (and the question of adequate greenhouse gas mitigation) when Grays Harbor Energy submits a request to commence construction of Units 3 and 4 under SCA Amendment No. 5, Art. II.B.2. Therefore, if the Council grants the extension request, it could consider reserving the right to update its SEPA analysis.

Mitigation: No additional mitigation related to GHG emissions.

3. WATER

- Mitigation measures for water withdrawals from the Chehalis River were identified in the 2010 MDNS.
- As noted in the 2010 MDNS, wastewater discharges from Units 3 and 4 would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) permit.
- No new concerns related to environmental impacts to water quality identified.

Mitigation: No additional mitigation measures related to water quality.

4. PLANTS

- Project location was previously adjusted to avoid a forested area and to use other Public Development Authority land in the 2010 MDNS.
- No new concerns related to environmental impacts to plants identified.

Mitigation: No additional mitigation measures related to plants.

5. ANIMALS

- Mitigation measures for animals were identified in the 2010 MDNS.

- No new concerns related to environmental impacts to animals identified.

Mitigation: No additional mitigation measures related to animals.

6. ENERGY AND NATURAL RESOURCES

- 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

- No new concerns related to environmental impacts from toxic or hazardous chemicals identified.

Mitigation: No mitigation measures related to environmental health.

8. NOISE

- Mitigation measures for noise were identified in the 2010 MDNS.
- No new concerns related to environmental impacts to noise identified.

Mitigation: No additional mitigation measures related to noise.

9. LAND AND SHORELINE USE

- No new concerns related to environmental impacts to land and shoreline use identified.

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

10. HOUSING

- No new concerns related to environmental impacts to housing.

Mitigation: No mitigation measures related to housing.

11. VISUAL AND AESTHETICS

- No new concerns related to environmental impacts to visual and aesthetics identified.

Mitigation: No mitigation measures related to visual and aesthetics.

12. LIGHT AND GLARE

- Mitigation measures for light and glare were identified in the 2010 MDNS.
- No new concerns related to environmental impacts to visual and aesthetics identified.

Mitigation: No additional mitigation measures related to environmental health.

13. RECREATION

- No new concerns related to environmental impacts to visual and aesthetics identified.

Mitigation: No mitigation measures related to recreation.

14. HISTORIC AND CULTURAL PRESERVATION

- No new concerns related to historic and cultural preservation identified.

Mitigation: No mitigation measures related to historic and cultural preservation.

15. TRANSPORTATION

- Mitigation measures for transportation, including a Traffic Management Plan developed in consultation the County Dept of Public works, were identified in the 2010 MDNS. 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.
- No new concerns related to transportation identified.

Mitigation: No additional mitigation measures related to transportation.

16. PUBLIC SERVICES

- No new concerns related to public services identified.

Mitigation: No mitigation measures related to public services.

17. UTILITIES

- No new concerns related to utilities identified.

Mitigation: No mitigation measures related to utilities.

Cumulative Effects of adding a Gas Path Package to Units 1 and 2 and commencing construction of Units 3 and 4 by 2028. EFSEC considered the potential cumulative adverse environmental effects from the Certificate Holder's request to add a new gas path package to Units 1 and 2 in combination with this request. Construction of the two activities occur at different times. Both the upgrades to Units 1 and 2 and the construction of Units 3 and 4 affect 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 activities have mitigation applied, and/or are within existing permit requirements. Additionally, Units 3 and 4 will have to adhere to existing regulations at the time of construction.

C. APPLICABLE SEPA RULES

EFSEC previously conducted an environmental analysis related to Grays Harbor Energy's proposal to construct and operate Units 3 and 4 (MDNS 2/12/2010)

Separating SEPA review for extending the deadline to 2028 for commencing construction of Units 3 and 4

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 to 2028 the deadline for commencing construction of 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:

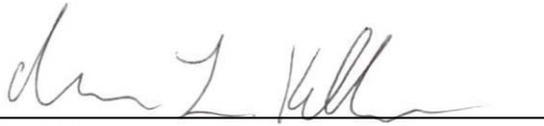
- (i) Substantial changes to a proposal so that the proposal is likely to have significant adverse environmental impacts (or lack of significant adverse impacts, if a Determination of Significance (DS) is being withdrawn); or
- (ii) New information indicating a proposal's probable significant adverse 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 and have identified no substantial changes to the proposal nor new information indicating the proposal's probable

significant adverse impacts to the environment. I hereby recommend an Addendum to the 1972 SEPA EIS prepared by the Washington State Thermal Power Plant Site Evaluation Council.



Ami Kidder,
EFSEC Siting and Compliance Manager

Date 12/10/2020