Washington State
Energy Facility Site Evaluation Council
AGENDA

MONTHLY MEETING
Tuesday, April 18, 2017
1:30 PM

1300 S Evergreen Park Drive SW
Olympia, WA 98504
Hearing Room 206

1. Call to Order ..... Bill Lynch, EFSEC Chair

2. Roll Call ..... Tammy Mastro, EFSEC Staff

3. Proposed Agenda ..... Bill Lynch, EFSEC Chair

4. Minutes

Meeting Minutes ..... Bill Lynch, EFSEC Chair

- March 21, 2017

5. Projects

a. **Kittitas Valley Wind Project**

- Operational Update ..... Eric Melbardis, EDP Renewables

b. **Wild Horse Wind Power Project**

- Operational Update ..... Jennifer Diaz, Puget Sound Energy

c. **Columbia Generating Station**

- Operational Update ..... Shannon Khounnala, Energy Northwest

d. **WNP – 1/4**

- Non-Operational Update ..... Shannon Khounnala, Energy Northwest

e. **Chehalis Generation Facility**

- Operational Update ..... Mark Miller, Chehalis Generation Staff

f. **Grays Harbor Energy Center**

- Operational Update ..... Rich Downen, Grays Harbor Energy
- Notice of Construction Air Permit ..... Jim La Spina, EFSEC Staff

The Council may consider and take **FINAL ACTION** *on issuing the NOC to cover activities associated with replacement of the cooling tower drift eliminators.*

g. **Tesoro/Savage Vancouver Energy Distribution Terminal**

- Project Update ..... Sonia Bumpus, EFSEC Staff

6. Other

a. **EFSEC Council**

- 4th Quarter Cost Allocation ..... Stephen Posner, EFSEC Staff

7. Adjourn ..... Bill Lynch, 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 42.30.02

Verbatim Transcript of Monthly Council Meeting

Washington State Energy Facility Site Evaluation Council

March 21, 2017

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WASHINGTON STATE
ENERGY FACILITY SITE EVALUATION COUNCIL
Richard Hemstad Building
1300 South Evergreen Park Drive Southwest
Conference Room 206
Olympia, Washington
March 21, 2017
1:30 p.m.

MONTHLY COUNCIL MEETING
Verbatim Transcript of Proceeding

REPORTED BY: ANITA W. SELF, RPR, CCR #3032

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APPEARANCES

Councilmembers Present:

Bill Lynch, Chair
Jaime Rossman, Department of Commerce
Cullen Stephenson, Department of Ecology
Joe Stohr, Department of Fish and Wildlife
Dennis Moss, Utilities and Transportation Commission
Dan Siemann, Department of Natural Resources (via phone)

Local Government and Optional State Agencies:

Larry Paulson, Port of Vancouver (via phone)
Ken Stone, Department of Transportation
Bryan Snodgrass, City of Vancouver (via phone)
Greg Shafer, Clark County (via phone)

Assistant Attorney General:

Ann Essko, Senior Counsel
David Stearns, Assistant Attorney General

Staff in Attendance:

Stephen Posner
Tammy Mastro
Sonia Bumpus
Joan Aitken (via phone)
Ami Kidder

Guests in Attendance:

Rich Downen, Grays Harbor Energy
Mark A. Miller, PacifiCorp Chehalis Generation Facility

Guests in Attendance Via Phone:

Shannon Khounnala, Columbia Generating Station & WNP 1/4
Kristen Boyles, Earthjustice
Karen McGaffey, Perkins Coie
Jennifer Diaz, Puget Sound Energy
Eric Melbardis, EDP Renewables
Tim McMahan, Stoel Rives
Tadas Kisielius, Van Ness Feldman

*****

OLYMPIA, WASHINGTON; MARCH 21, 2017
1:30 P.M.
--o0o--

CHAIR LYNCH: Good afternoon. Today is March 21st -- happy spring, everybody -- and this is the monthly meeting for the Energy Facility Site Evaluation Council.

Can we please have the clerk call the roll?

MS. MASTRO: Department of Commerce?

MR. ROSSMAN: Jaime Rossman is here.

MS. MASTRO: Department of Ecology?

MR. STEVENSON: Cullen Stephenson, here.

MS. MASTRO: Fish and Wildlife?

MR. STOHR: Joe Stohr is here.

MS. MASTRO: Department of Natural Resources?

MR. SIEMANN (via phone): Dan Siemann is on the phone.

MS. MASTRO: Utilities and Transportation Commission?

MR. MOSS: Dennis Moss is here.

MS. MASTRO: Local Government and Optional State Agencies, for the Tesoro project, Department of Transportation?

MR. STONE: Ken Stone is here.

MS. MASTRO: City of Vancouver?

MR. SNODGRASS (via phone): Bryan Snodgrass is on the phone.

MS. MASTRO: Clark County?

MR. SHAFER (via phone): Greg Shafer is on the phone.

MS. MASTRO: Port of Vancouver?

MR. PAULSON (via phone): Larry Paulson's on the phone.

MS. MASTRO: Chair, there is a quorum for the regular Council and for the Tesoro Project Council.

CHAIR LYNCH: Thank you. If we could just have the Council take a look over the proposed agenda today and see if they want to make any changes.

And you'll note that there are no action items today. We originally had proposed to issue a minor air permit, an NOC, but then when we were looking at it, there were just, like, two or three, like, real little things that we needed to fix. And we thought, rather than put it in front of the Council with making all these little fixes, we would just take one good look through it again, and then make any changes we needed to do and take care of it next Council meeting.

Okay. So hearing no changes to the proposed

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agenda, let's move on to the minutes of the February 21st meeting. Does anyone have any suggested edits? I went through the minutes and I didn't see any.

Councilmember Stephenson?

MR. STEPHENSON: Chair, hearing no changes, I move that we approve these minutes.

CHAIR LYNCH: Do we have a second?

MR. MOSS: I'll second that.

CHAIR LYNCH: It's been moved and seconded that the Council approve the February 21st, 2017, minutes as submitted.

All those in favor, say "Aye."

MULTIPLE SPEAKERS: Aye.

CHAIR LYNCH: Motion carries.

So let's go ahead and turn to updates from our various facilities, and we'll start with the Kittitas Valley Wind Project, Mr. Melbardis.

MR. MELBARDIS (via phone): Good afternoon, Chair Lynch, EFSEC Council. This is Eric Melbardis with EDP Renewables for the Kittitas Valley Wind Project.

We had a routine month with nothing out of the ordinary to report.

CHAIR LYNCH: Very good. Any questions for Mr. Melbardis? Good.

And before I hear from Ms. Diaz, I forgot to

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ask if there's anybody on the phone who wishes to identify themselves for the record, although they're not required to.

MR. MCMAHAN (via phone): Tim McMahan with Stoel Rives.

MS. DIAZ (via phone): Jennifer Diaz, Puget Sound Energy.

MS. MCGAFFEY (via phone): Karen McGaffey with Perkins Coie.

MR. KISIELIUS (via phone): Tadas Kisielius with Van Ness Feldman.

MS. KHOUNNALA (via phone): Shannon Khounnala, Energy Northwest.

MS. BOYLES (via phone): Kristin Boyles, Earthjustice.

CHAIR LYNCH: So I think we heard Ms. Khounnala and Ms. Kristin Boyles as well.

Anybody else?

MS. AITKEN (via phone): Joan Aitken, EFSEC staff.

CHAIR LYNCH: Joan Aitken, EFSEC staff?

MS. MASTRO: From her sick bed.

CHAIR LYNCH: Well, who is this person sitting in front of her name plate here? That's the thing that we're wondering. Anyway, well, Joan, thanks

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for joining us. She just wanted to make sure that we weren't talking about her while she was gone, I think. Well, we hope you feel better.

MS. AITKEN: Thank you.

CHAIR LYNCH: So let's go ahead and move on to Ms. Diaz, Puget Sound Energy and the Wild Horse Wind Power Project.

MS. DIAZ: Yes. Thank you, Chair Lynch and Councilmembers. This is Jennifer Diaz with the Wild Horse Wind Power Project.

And I have nothing nonroutine to report for the month of February.

CHAIR LYNCH: Very good.

Any questions for Ms. Diaz?

Let's move ahead to the Columbia Generating Station and then WNP 1/4, Ms. Khounnala.

MS. KHOUNNALA: Yes. Thank you, Chair.

In regards to Columbia Generating Station, our outage is upcoming and will begin in 55 days. And outside of that, we have no nonroutine items to report.

CHAIR LYNCH: Any questions for Ms. Khounnala regarding the Columbia Generating Station?

So why don't you go ahead and proceed to inform us about WNP 1/4, Ms. Khounnala.

MS. KHOUNNALA: Certainly. WNP 1/4, there

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really are no changes from the January 2017 report. We're -- we completed our work on the NEPA evaluation. We are working on our land lease with the Department of Energy, and that will continue through this spring.

CHAIR LYNCH: Okay. Very good.

Any questions for Ms. Khounnala?

Okay. Let's move on with Mr. Miller here today with the Chehalis Generation Facility. Welcome.

MR. MILLER: Welcome, or thank you. Good afternoon, Chair Lynch, Councilmembers and Staff. I'm Mark Miller, the plant manager for the Chehalis -- PacifiCorp Chehalis Generation Facility.

While I have no nonroutine comments, I do want to make a statement about the carbon offset mitigation, that the Council had approved our three projects to move forward.

One of the projects, the technology has -- the technology's changed a little bit, so it's an opportunity to gain more efficiency from the reverse osmosis water treatment plant. And I'll be able to -- I will be approaching EFSEC staff within the next month or so, prior to the next meeting, to address how we might want to -- if that can be changed or altered to capture this additional efficiency.

And basically what it is is it's -- we had

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proposed using variable frequency drives for the pumps that push the water through the osmosis process, but we actually can resize those pumps and still use centrifugal pumps and be able to consume less energy, about a ten percent increase in savings.

So I just thought I'd bring that up, because I don't -- I feel uncomfortable sometimes when I don't show anything to report on that mitigation, because I know that Council and Chair were very interested in us moving forward, and we are.

So our engineer at Burns & McDonnell out of Kansas has been working on that diligently, so we're making progress. And I'll demonstrate that, again, and work with the Staff to see how we can approach the Council.

CHAIR LYNCH: Okay. Very good. We appreciate your efforts to be more efficient and energy conscious.

MR. MILLER: All right. Thank you.

CHAIR LYNCH: Thank you.

Any questions for Mr. Miller? Thank you.

And it's not Mr. Valinske with the Grays Harbor Energy Center.

MR. DOWNEN: Not today. Good afternoon, Chair Lynch and Council and Staff. I'm Rich Downen

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representing Grays Harbor Energy.

And I don't have anything off-normal to report, although I would highlight item 2.5 under Environmental, which is just kind of the update on the cooling tower replacement project that's ongoing.

This -- as of February, as it said, there were five of nine cells complete. This week we'll finish up cell number seven, so there will only be two cells remaining that are being worked on as we speak, and they'll get finished up in our month-long maintenance outage, which begins in a week and a half, in about ten days. So by the end of -- end of April, we will have the -- the tower will be completely replaced and all of that work will be complete.

And then the only other off-normal item is that Pete Valinske resigned, so he is no longer with us. He's -- people say, well, what's he doing? Well, he's just sitting at home enjoying -- I think he's going to go do some traveling and he's semi-retired. So I'm back there for a few months until we find a replacement.

CHAIR LYNCH: Well, we are always happy to see Mr. Downen, and give our best to Mr. Valinske.

MR. DOWNEN: I will. I will. Thank you.

CHAIR LYNCH: Thank you.

Any questions for Mr. Downen? I've got one,

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and this has to do with the NOC that we're going to issue.

MR. DOWNEN: Okay.

CHAIR LYNCH: It's -- during the course of your work on the cooling tower, can you tell me again the name of that --

MR. DOWNEN: The component that --

CHAIR LYNCH: Yeah, the component that was found that was wearing -- that needed replacing.

MR. DOWNEN: So it was the drift eliminator, which is one of the items that just reduces -- and that's one of the monitored parameters for the cooling tower, and it's actually in the -- in the air permit. It's the percentage of volume that leaves the tower as mist, and this drift eliminator minimizes that.

So when we were -- we thought that we would be able to utilize the old materials that were taken out, but when we were taking them out, they were -- it's a plastic material, and they were brittle and coming apart, and so we just thought we'd make the decision to replace it.

CHAIR LYNCH: And the new one that you'll replace it with will actually even work even better than --

MR. DOWNEN: It has a higher efficiency

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rating by the manufacturer, so it's a step -- it's an improvement, but -- but it's a change to that permit, so that, either way, it triggers the NOC, which we didn't think that we would have to do, but --

CHAIR LYNCH: We were wondering if -- you know, because the drift eliminator's already covered under the PSD permit, and you're repairing or replacing it, we were kind of wondering why you needed an NOC for that. But it's kind of a -- as some of us were saying here, it's belt and suspenders and a good bit of duct tape wrapped around it at the same time to make sure that we're covering all the bases.

MR. DOWNEN: I agree.

CHAIR LYNCH: Yeah. Thank you.

Any questions for Mr. Downen? Good. Thank you, Mr. Downen.

MR. DOWNEN: All right. Thank you.

CHAIR LYNCH: We're turning to our wonderful and informed staff to give us an update on the Tesoro Savage Vancouver Energy Distribution Terminal.

Ms. Bumpus?

MS. BUMPUS: Thank you. Good afternoon, Chair Lynch and Councilmembers.

I'll start with the SEPA update. As I updated previously in February, EFSEC Staff held

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multiple discussions with the legal counsel involved in the review of the draft final environmental impact statement. It was necessary for Staff to continue discussions with the AAGs involved in that review into early March. And with that input, EFSEC Staff -- and the AAGs included -- EFSEC has given approval to our consultant to begin working on issues and addressing issues in the draft FEIS.

Staff have scheduled meetings later this week where we'll be discussing additional project meetings, the scheduling of additional project meetings, and a work breakdown structure for the tasks that both EFSEC and the consultant need to complete.

That's all I have for the SEPA update. Are there any questions before I move to permits?

CHAIR LYNCH: Any questions for Ms. Bumpus on SEPA? Go ahead and proceed.

MS. BUMPUS: Okay. For the construction stormwater permit, Staff has continued to work with our Ecology contractors on addressing comments and responses to those comments that we received on the draft permit documents, and will continue to coordinate. There's been some additional information that we needed to get from the applicant to do that, and so we're continuing to work with them on that.

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For the NPDES industrial stormwater permit, I coordinated a discussion between the reviewing AAG and the Ecology permit writer, and we identified what the issues were that needed to be addressed, and the Ecology permit writer is making some revisions to the draft permit documents. Once he's done doing that, he'll send that to Staff and we'll take it from there, and hopefully prepare a final draft permit. So I'll keep you posted and see if anything new comes up there, but we're hoping that we've addressed those issues.

For the Notice of Construction air permit, Staff have been engaged in technical discussions with the air permit contractor and the reviewing AAG since the last Council meeting. We've also had correspondence with the applicant to discuss a number of issues that we need to resolve. One we are still trying to work on is related to the capture efficiency rate for the marine vapor combustion units. We need to continue to have discussions on this until we address the issue.

This is one of note for Councilmembers that I wanted to mention because the capture efficiency, if it changes, it affects other calculations for the emissions and, of course, this trickles into the permit, obviously, and into SEPA. So we'll need to update our SEPA work as well with new calculations if that efficiency rate is different.

And that's -- that concludes my updates on the permits.

CHAIR LYNCH: Can I ask you -- so it looks like with -- assuming the air permit, that that one item gets worked out relatively soon and then the -- you've got the industrial water quality permit, do you anticipate that we could go out to public hearing sometime late next month?

MS. BUMPUS: It's possible. If we can get these issues resolved really soon, I think that April is possible.

CHAIR LYNCH: And just for the Council's information, it might be -- I'm not sure when we meet in April, but if we get both permits ready to go for public notice, and it's not until after our Council hearing or -- I might want to call a special meeting just for the purpose of receiving the information about the permits, and then if everyone's fine, going out to public notice on those rather than wait until May -- the May meeting to put those out. And we'll have fact sheets on those that the Staff will have put together and other information.

So just kind of a heads-up that, depending how all that information comes together, it would be

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efficient for us to put those -- both those permits on at the same meeting and have them go out at the same time.

Any questions for Staff?

Anything, Mr. Posner? You look like you want to say something.

MR. POSNER: If I can get this on. No, other than just to compliment Ms. Bumpus on a very comprehensive overview.

MS. BUMPUS: Thank you.

CHAIR LYNCH: Which I should have done myself. Thank you for reminding me. So -- and I just want to say how hard the Staff is working in moving this proposal forward, so I appreciate all your hard work.

And I appreciate all the Councilmembers work, too, in the efforts that you're making on getting our portion of things through as well.

And is there anything for the good of the order -- I don't want to say my basketball team, because last time I mentioned that at Council meeting they lost.

So seeing no further good of the order, we are adjourned. Thank you.

(Meeting concluded at 1:48 p.m.)

-o0o-

CERTIFICATE

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I, ANITA W. SELF, a Certified Shorthand Reporter in and for the State of Washington, do hereby certify that the foregoing transcript is true and accurate to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 31st day of March, 2017.

_____

ANITA W. SELF, RPR, CCR #3032

Kittitas Valley Wind Power Project
Monthly Project Update

April 18, 2017

Project Status Update

March Production Summary:

Power generated:	12,905 MWh
Wind speed:	5.6 m/s
Capacity Factor:	17.2%

Safety:
No incidents

Compliance:
Project is in compliance as of April 14, 2017

Sound:
No complaints

Shadow Flicker:
No complaints

Environmental:
No incidents

Wild Horse Wind Facility

April 2017 update

Safety

No lost-time accidents or safety injuries/illnesses to report for March.

Compliance/Environmental

Pursuant to the Operations Stormwater Pollution Prevention Plan (SWPPP), a stormwater water inspection was completed following a spring snowmelt event. The site responded very well to the warming/melting conditions; a result of implementing an aggressive snow removal program during the winter combined with the establishment of native grasses and vegetation over time. Stormwater BMPs functioned as intended and the site remains in compliance with the SCA.

Operations/Maintenance

Nothing to report.

Wind Production

March wind generation totaled 64,073 MWh for an average capacity factor of 31.59%.

Energy Northwest
EFSEC Council Meeting
April 18, 2017
Shannon Khounnala

I. Columbia Generating Station Operational Status

Columbia is online at 65% power and producing 715 MWs. The plant has been online for 114 days.

Maintenance Outage

Columbia has begun its power "coast down", which will continue through the start of the 2017 Maintenance Outage. The outage begins in 24 days.

There are no other events, safety incidents, or regulatory issues to report.

II. WNP 1/4 Water Rights

NEPA/Leasing

Energy Northwest has finalized a lease agreement with the Department of Energy. The new lease is expected to be signed in early May and become effective at the beginning of July. Under the new lease Energy Northwest will organize funding strategies to begin work on the water distribution system, which will eventually utilize the Water Rights permit granted by the Department of Ecology.

PACIFICORP
A BERKSHIRE HATHAWAY ENERGY COMPANY

Chehalis Generation Facility
1813 Bishop Road
Chehalis, Washington 98532
Phone: 360-748-1300

Chehalis Generation Facility----Monthly Plant Report – March 2017
Washington Energy Facility Site Evaluation Council

04-12-2017

Safety:

- There were no recordable incidents this reporting period and the plant staff has achieved 610 days without a Lost Time Accident.

Environment:

- There were no air emissions or stormwater deviations or spills during the month of March 2017.
- Wastewater and Stormwater monitoring results were in compliance with the permit limits for the month of March 2017.

Personnel:

- The Chehalis plant staffing level is currently 19 of 19 approved positions filled.

Operations and Maintenance Activities:

- The Plant generated 67,379 MW-hours in March for a 2017 YTD generation total of 323,590 MW-hours and a capacity factor of 26.2%.

Regulatory/Compliance:

- The Chehalis plant completed the 2017 annual testing of the continuous emissions monitor's (CEM's) Relative Accuracy Test Audit (RATA). In addition, testing for particulate matter less than 10 microns (PM10), volatile organic compounds (VOC), sulfur dioxide (SO2) and sulfuric acid mist (H2SO4) was performed to satisfy the quadrennial performance testing requirements of Title V Permit No. EFSEC/06-01-Air Operating Permit Rev. 1 was conducted.

  The draft results of the RATA confirmed the CEM's were performing within the limits as required by the Federal Regulation, 40 CFR Part 75Annual specifications. Additionally, the plant is also in compliance with the regulatory specifications for PM10, VOC, SO2 and H2SO4 components.

- On March 29, 2017 EFSEC staff and a representative from the Southwest Clean Air Agency conducted an annual site inspection as required by the Title V Permit. No official comments have been noted at this time.

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A BERKSHIRE HATHAWAY ENERGY COMPANY

Sound monitoring:

- There were no noise complaints to report.

Carbon Offset Mitigation:

- No update to provide this reporting period.

Respectfully,

Mark A. Miller
Manager, Gas Plant

EFSEC Monthly Operational Report

March, 2017

1. Safety and Training
   - 1.1. There were no accidents or injuries during the month of March.
   - 1.2. Conducted scheduled and required monthly training.
   - 1.3. Conducted the scheduled safety committee meeting.
2. Environmental
   - 2.1. Submitted the February Outfall Discharge Monitor Report (DMR) to Ecology.
   - 2.2. Submitted the Annual Emission Inventory for 2016 to the Olympic Region Clean Air Agency (ORCAA).
   - 2.3. Submitted the 2016 Greenhouse Gas Report to Ecology and EPA.
   - 2.4. Four staff completed visible emissions recertification via Northwest Opacity Certification.
   - 2.5. Work on replacing the cooling tower structural lumber with fiber reinforced plastic (FRP) continues. Seven of nine cells are complete, with the final two cells being worked now. Final 2 cells and the basin work will be completed during the April plant outage.
3. Operations & Maintenance
   - 3.1. Grays Harbor Energy (GHE) operated 5 days and generated 29,831 MWh during the month of March.
   - 3.2. The capacity factor (CF) was 6.5% in March, and 43.3% YTD.
   - 3.3. The availability factor (AF) was 100% in March, and 99.9% YTD.
4. Noise and/or Odor
   - 4.1. There were no complaints made to the site during the month of March.
5. Site Visits
   - 5.1. There were no site visits during the month of March.
6. Other
   - 6.1. Grays Harbor is staffed with 21 personnel.
   - 6.2. Grays Harbor Energy will be shut down during the month of April for maintenance. The primary work taking place will be the final stages of the Cooling Tower replacement project, a Steam Turbine minor inspection and replacement of the STG field.

MEMO

April 18, 2017

TO: Energy Facility Site Evaluation Council (EFSEC)

FROM: EFSEC Staff

SUBJECT: Proposal to issue Notice of Construction (NOC) Permit No. EFSEC NOC 17-01 to the Grays Harbor Energy Center

Background

EFSEC issued National Pollutant Discharge Elimination System (NPDES) Permit No. WA-002496-1 to Grays Harbor Energy (GHE), LLC for its Grays Harbor Energy Center (GHEC) on May 13, 2008. The NPDES permit regulates cooling water discharges to the Chehalis River. In order to achieve compliance with state water quality standards GHE is currently replacing the wood frame of its cooling towers to reduce concentrations of arsenic in its discharge to the river.

It was GHE's intent to replace only the wooden frame of the cooling towers and to reuse the existing air pollution control equipment, pumps, fans, and associated equipment. Based on GHE's construction plans EFSEC's compliance contractors, the Department of Ecology (Ecology) and the Olympic Region Clean Air Agency (ORCAA), determined an air quality NOC permit was not required.

The approved standard of performance for GHE's drift eliminators is in the current Prevention of Significant Deterioration (PSD) Permit, Approval Condition 9. Condition 9.1.3.2 requires drift eliminators with a drift loss rate of less than 0.001% of the recirculating water flow rate.

Determination of the Need for an NOC Permit

During an early phase of construction the contractors determined that an important air pollution control device, the drift eliminators, needed to be replaced due to degradation. Drift eliminators are the primary component in cooling towers used to prevent emission of water vapor and air pollutants, such as particulate air pollution, VOC and chlorine compounds.

The replacement of the drift eliminators prompted the need for an NOC permit. Based on the recommendation of ORCAA and concurrence from the AG, an NOC permit application and SEPA checklist were submitted to EFSEC by GHEC.

Based on ORCAA's assessment that the performance of the replacement drift eliminators will be more protective of the environment than the existing equipment, a SEPA Determination of Nonsignificance (DNS) was issued on February 28, 2017.

In accordance with regulations the NOC application was posted on EFSEC's website for 15 days inviting the public to request a formal public comment period. EFSEC did not receive any requests for a public comment period.

Information from the NOC application was used by ORCAA to draft the NOC permit, which has been developed in compliance with applicable regulations.

Based on ORCAA's recommendation to issue the permit and a review of the draft permit by the AG, EFSEC staff recommends the Council approve issuance of the permit.

ENERGY FACILITY SITE EVALUATION COUNCIL
P.O. BOX 43172
OLYMPIA, WASHINGTON 98504-3172

IN THE MATTER OF:	]	**No. EFSEC NOC 17-01**
Grays Harbor Energy LLC	]	
Cooling Tower Replacement Project	]	**Approval**
Grays Harbor Energy Center	]	**Notice of Construction**
Elma, Washington	]	

Pursuant to the Energy Facility Site Evaluation Council (EFSEC) Permit Regulations for Air emissions permits and authorizations Chapter 463-78 (Washington Administrative Code (WAC)), the Washington Department of Ecology (Ecology) regulations for new source review Chapter 173-400 WAC and Chapter 173-460 WAC, and based on the Notice of Construction Application (NOC) submitted by Grays Harbor Energy LLC (GHE) on January 27, 2017 for approval to rebuild the existing cooling tower serving the combined cycle power plant at the Grays Harbor Energy Center (GHE Facility) located at 401 Keys Road, and based on the technical analysis performed by ORCAA for EFSEC, EFSEC now finds the following:

FINDINGS

1. GHE proposes replacing the cooling tower structural lumber with fiber reinforced plastic (FRP). In addition to replacing the cooling tower structure, GHE proposes to replace the cooling tower drift eliminators (DE), which have degraded over time. DE are the primary component in cooling towers used to prevent emission of water vapor and air pollutants, such as particulate air pollution, VOC and chlorine compounds. GHE proposes new DE with a drift loss of less than 0.0005% of the recirculating water flow rate, which is less than the current cooling tower drift elimination performance standard of 0.001% in Condition 9.1.3.2 of the effective PSD permit, EFSEC/2001-01 Amendment 3. GHE also commits to reconstructing the cooling tower using no toxic or hazardous materials and using the same cooling tower water treatment chemicals and chemical rates as are allowed in the effective PSD permit.

2. The project is not subject to PSD review because the project emissions are less than PSD significance levels, and there are no other PSD applicability issues present such as debottlenecking.

3. Best available control technology (BACT) as required under WAC 463-78-005(1) (incorporating WAC 173-400-113(2) by reference), and toxic best available control technology (T-BACT) as required under WAC 436-78-005(4) (incorporating WAC 173-460-040(4) by reference) will be used for the control of all air pollutants which will be emitted by the cooling tower. Table 1 summarizes BACT for this case.

Table 1: BACT Summary

Pollutant	Description of BACT
PM	Drift eliminators with drift loss rate less than 0.0005%.
Chlorine Dioxide	Requirement that GHE develop and implement a plan, monitoring schedule and limits for maintaining free chlorine concentrations in cooling tower water to reasonable levels
Chloroform	

4. The GHE Facility is located within the Satsop Industrial Park in Grays Harbor County at 401 Keys Road near the town of Elma. No areas in Grays Harbor County, or any adjacent counties, have been formally designated as "Non-Attainment" of National Ambient Air Quality Standard (NAAQS). Therefore, the criteria of approval under WAC 173-400-113 (incorporated by reference in WAC 463-78-005(1)), which addresses new sources in attainment or unclassifiable areas, applies to the proposed project.

5. WAC 463-78-005(1) (incorporating WAC 173-400-113(3) by reference) requires demonstration that the increase in allowable emissions will not cause or contribute to violation of any ambient air quality standard. In this case GHE is not proposing any increase in the allowable emissions since the new (re-built) cooling tower will replace the existing cooling tower. Therefore, there is no emissions increase and it can be concluded that the proposed project will not cause or contribute to any violation of any ambient air quality standard.

6. Toxic Air Pollutant (TAP) emissions were evaluated according to Chapter 173-460, the Air Toxics Regulation, incorporated by reference in WAC 463-78-005(4) . Per WAC 173-460-040 of the Air Toxics Regulation, netting out TAP decreases from existing emissions units is allowed in determining the TAP increases requiring analysis. In this case, since the new cooling tower will take the place of the existing cooling tower, there is a reduction in TAP emissions. This satisfies the requirement that the increase in emissions of TAP from the new or modified emission units are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects.

7. Public outreach requirements in WAC 463-78-005(1) and WAC 173-400-171 have been met. The application does not trigger a formal public notice and comment period. Notice of GHE's NOC application was published on EFSEC's website on March 28, 2017, and remained posted for 15-days. EFSEC has not received any comments from the public or requests for any hearing. This satisfies the requirements for public outreach per WAC 463-78-005(1) and WAC 173-400-171.

8. A State Environmental Policy Act (SEPA) Determination of Nonsignificance (DNS) was issued by EFSEC for this project on March 27, 2017.

9. EFSEC finds that all requirements for new source review (NSR) are satisfied and that as approved below, the new emissions unit complies with all applicable new source performance standards. Approval of the NOC application is granted subject to the following conditions:

APPROVAL CONDITIONS:

Emission Limits

1. Cooling tower PM10 emissions over any twelve-consecutive month period shall not exceed 4062 kg PM_{10} (4.5 tons), calculated monthly.

2. Drift loss shall not exceed 0.0005% of the recirculating water flow rate. Initial compliance shall be determined by an affirmative report by the cooling tower drift eliminator manufacturer, based on an onsite 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 0.0005% of the recirculating water flow rate. The required test may be performed on a full-size mist eliminator module under laboratory conditions that match the worst-case operations scenario of the actual cooling tower,

3. Compliance with the annual emissions limit in Condition 1 shall be determined by using the following formula:

$$\frac{Q \times C \times 0.000005 \times 60 \times 8.34}{1000000} = D$$

Where:

Q = recirculating water flow rate in gallons per minute
C = total dissolved solids concentration in parts per million by weight (ppmw)
D = particulate emission rate in lb/hr.
0.000005= the drift loss rate in gallon lost/gallon of recirculating cooling water

4. PM_{10} emissions from the cooling tower shall be calculated each month using the formula in Condition 3 above. The monthly average recirculating water flow rate for each month shall be used for "Q" in the formula. The monthly average total dissolved solids content measured or calculated during the month shall be used for "C" in the formula.

5. 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.

6. Prior to operation of the cooling tower, Grays Harbor Energy, LLC shall submit to EFSEC their plan for maintaining cooling tower water quality. The plan shall include procedures for cooling tower chemical use, operating limits for free chlorine levels, schedule for testing free chlorine levels, and test methods.

PERMIT APPEAL

Pursuant to WAC 463-78-140(1) this permit is subject to judicial review under the Administrative Procedures Act, Chapter 34.05 RCW.

This Notice of Construction Approval has been prepared by:

_____ _____

Mark V. Goodin, P.E. Date
Olympic Region Clean Air Agency

This Notice of Construction has been approved by:

_____ _____

William H. Lynch Date
Chair
Energy Facility Site Evaluation Council

NOTICE OF CONSTRUCTION
TECHNICAL SUPPORT DOCUMENT for
Energy Facility Site Evaluation Council
NOC No. 17-01

IN THE MATTER OF:
Grays Harbor Energy LLC]
Cooling Tower Replacement Project] Olympic Region Clean Air Agency
Grays Harbor Energy Center] Recommendation for Approval
Elma, Washington]

1. Summary

Pursuant to the Energy Facility Site Evaluation Council (EFSEC) Permit Regulations for Air Pollution Sources, Chapter 463-78 Washington Administrative Code (WAC), 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 (GHE), Olympic Region Clean Air Agency (ORCAA) recommends conditional approval of GHE's proposal to rebuild the existing cooling tower serving the combined cycle power plant at the Grays Harbor Energy Center (GHE Facility) located at 401 Keys Road. Cooling towers emit particulate air pollution, Volatile Organic Compounds (VOCs) and certain Toxic Air Pollutants (TAPs). The proposed conditions of approval recommended by ORCAA are for purposes of assuring ongoing compliance with applicable air regulations and standards. ORCAA recommends these conditions be approved and incorporated into the Air Operating Permit (AOP) for the facility.

2. Proposed Project

GHE proposes replacing the cooling tower structural lumber with fiber reinforced plastic (FRP). In addition to replacing the cooling tower structure, GHE proposes to replace the cooling tower drift eliminators (DE), which have degraded over time. DE are the primary component in cooling towers used to prevent emission of water vapor and air pollutants, such as particulate air pollution, VOCs and chlorine compounds. GHE proposes new DEs with a drift loss of less than 0.0005% of the recirculating water flow rate, which is more stringent than the current cooling tower drift elimination performance standard of 0.001% drift loss in Condition 9.1.3.2 of the effective PSD permit, EFSEC/2001-01 Amendment 3. GHE also commits to reconstructing the cooling tower using no toxic or hazardous materials and using the same cooling tower water treatment chemicals and chemical rates as are currently allowed in the effective PSD permit. Design specifications stated in the NOC application for the new cooling tower are as follows:

- 1,535,200 cubic feet per minute (ft3/min) air flow through cooling tower at design conditions (9 fans total)
- 175,000 gallons per minute (gpm) circulating water flow
- 1165 milligrams per liter (mg/L) total dissolved solids
- Addition of 93% H2SO4 (sulfuric acid) to cooling tower water at a variable rate, but approximately 70 gallons per day (gpd) average when the plant is running.
- Addition of 12.5% NaClO (sodium hypochlorite) to cooling tower water at a variable rate, but approximately 104 gal/day average when the plant is running.
- 2H Drift Eliminators manufactured by ENEXIO with a drift rate less than 0.0005 percent.

Based on GHE's NOC application, design specifications for the cooling tower will remain the same including the design air flow and circulating water flow. GHE does not propose any changes to water treatment chemicals or chemical inputs rates. The DEs proposed by GHE will have a lower drift loss rate than the ones currently in use. Therefore, from a net emissions standpoint, emissions rates for both criteria air pollutants and Toxic Air Pollutants (TAPs) will be lower than the current cooling tower rates. GHE affirms in their NOC application that the particulate emissions from the proposed new cooling tower will be less than the current permit limit of 24.5 lb/day.

3. Regulatory Background

EFSEC regulations (WAC 463-78-005(1) and (4)) adopt by reference the procedural requirements of WAC 173-400-110 and Chapter 173-460 WAC for New Source Review (NSR). NSR is the air regulatory program required by the Washington Clean Air Act under Chapter 70.94 RCW requiring review and evaluation of air quality implications prior to construction, installation, establishment or modification of any new air contaminant source. NSR is also required prior to replacement or substantial alteration of air pollution control technology, establishing a voluntary limit on emissions or modifying limits in already
established Approval Orders. The goal of NSR is to assure new sources of air pollution, changes to air pollution controls and other actions triggering NSR are established in a manner that maintains compliance with applicable air regulations and standards, including equipment performance standards and ambient air quality standards.

ORCAA concluded replacing the structural elements of the cooling tower and replacing the DEs is substantially equivalent to rebuilding the cooling tower, which triggers NSR as "replacement" of an air contaminant source. In addition, replacing air pollution control technology at an existing source of air pollution triggers NSR. Because DEs are the primary air pollution control technology for cooling towers, replacing them triggers NSR.

Under the procedural requirements of WAC 463-78-005(1) (adopting by reference WAC 173-400-171), NSR is initiated by the project proponent submitting a Notice of Construction (NOC) application containing information on the proposed project of

sufficient detail to characterize air impacts. GHE submitted a NOC application to EFSEC and ORCAA on January 27, 2017.

For NOC applications not subject to a mandatory public comment period, the permitting authority is required to post an announcement of the receipt of each NOC application on the permitting authority's internet web site. The internet posting must remain on the permitting authority's web site for a minimum of fifteen consecutive days and must include a notice of the receipt of the application, the type of proposed action, and a statement that the public may request a public comment period on the proposed action. In this case, the proposed project does not trigger a mandatory public comment period since the proposed DEs will have efficiency that is the same as or better that the efficiency of the current DEs. Notice of receipt of the NOC application was posted on EFSEC's website:

Article I.STATE OF WASHINGTON

ENERGY FACILITY SITE EVALUATION COUNCIL

PO Box 43172 • Olympia, Washington 98504-3172

Receipt of Notice of Construction Application and Opportunity for Public Comment

March 28, 2017

The Energy Facility Site Evaluation Council (EFSEC) has received an application for approval of construction from Grays Harbor Energy, LLC for modification of an air pollution source at its Grays Harbor Energy Center.

A formal public comment period will be provided if requested by any person, government agency, group, or the applicant.

Applicant: Grays Harbor Energy, LLC
Location: 401 Keys Road, Elma
Description: Permit No. EFSEC NOC 17-01
Posted: March 28, 2017
Contact: Jim La Spina, 360-664-1362

Deadline to express interest in the application and/or a formal public comment period:

Deadline date: April 11, 2017
By Mail: EFSEC, PO Box 43172, Olympia, WA 98504-3172

By Email: efsec@utc.wa.gov

The GHE Facility is located within the Satsop Industrial Park in Grays Harbor County at 401 Keys Road near the town of Elma. No areas in Grays Harbor County, or any adjacent counties, have been formally designated as "Non-Attainment" of National Ambient Air Quality Standard (NAAQS). Therefore, the criteria of approval under WAC 173-400-113, which addresses new sources in attainment or unclassifiable areas, applies to the proposed project. WAC 173-400-113 (adopted by EFSEC by reference in WAC 463-78-005(1)) establishes the following criteria for approving new sources of air pollution:

1. ***Performance Standards*** - Any new stationary source or modification will likely comply with applicable air-performance standards such as the federal new source performance standards (NSPS), national emission standards for hazardous air pollutants (NESHAPs), and any performance standards adopted under chapter 70.94 of the Revised Code of Washington (RCW);
2. ***BACT*** - The new or modified stationary source will be controlled to a level that meets the standard of "Best Available Control Technology" (BACT);
3. ***Ambient Air Quality*** – Any increase in air emissions will not cause or contribute to violation of any ambient air quality standard;
4. ***Federal Air Permitting Requirements*** – All applicable federal air permits, if required, are secured;
5. ***Air Toxics*** - If there are increases in toxic air pollutant (TAP) emissions, the requirements of Washington's Controls for New Sources of Toxic Air Pollutants under Chapter 173-460 WAC are met; and,
6. ***Public Outreach*** – Public notice and comment requirements in WAC 173-400-171 and EFSEC's regulations are met.

These criteria of approval are addressed individually in the following sections.

4. Best Available Control Technology (BACT)

New sources of air pollution and modifications to existing sources of air pollution are required to use Best Available Control Technology (BACT) to control air pollutants not previously emitted, or those for which emissions would increase because of the new source or modification. In this case, the new cooling tower is considered and regulated as a new source because the project will require substantially rebuilding the cooling tower and because the DEs will be replaced. The requirement for BACT applies to emissions with respect to the new source: In other words, BACT applies to emissions increases from the new cooling tower alone. Net emissions based on subtracting emissions from the former cooling tower from the new cooling tower emissions result in a reduction in emissions. However, netting is not accepted in Washington for purposes of determining BACT applicability. Therefore, BACT applies to emissions from the new cooling tower and is applied on a pollutant by pollutant basis.

BACT is defined in Chapter 173-400 WAC (adopted by EFSEC by reference in WAC 463-78-005(1)) as, "*an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under chapter 70.94 RCW emitted from or which results from any new or modified stationary source, which the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each pollutant.*"

Particulate emissions from cooling towers are a result of mist carryover from the cooling water. In this case, cooling water will be obtained from the Chehalis River. The Chehalis River cooling water, which is used to transfer heat to the atmosphere, contains dissolved and suspended solids and salts that form particulate emissions when mist is entrained in the cooling tower air flow. Besides maintaining good water quality, DEs are the principle means to minimize mist and air pollutant emissions from cooling towers. DEs are typically a series of baffles and/or mesh screens designed to collect water droplets entrained in cooling tower air flow. DEs capture water droplets and mist before exiting the cooling tower by causing the droplets to change direction, lose velocity and fall back in to the cooling tower reservoir.

GHE proposes model 2H Drift Eliminators manufactured by ENEXIO, which have a drift rate less than 0.0005 percent. This drift rate is less than the drift rate determined BACT in the most recent NSR case involving a cooling tower in ORCAA's region, which was the NOC approving construction of a new cooling tower at Nippon Paper Industries USA located in Port Angeles (No. 12NOC889, March 11, 2013). ORCAA staff consulted other local air agencies and searched for other cooling tower BACT determinations nation-wide. For example, the Texas Commission on Environmental Quality (TCEQ) publishes current BACT determinations on their website and lists BACT for cooling towers as DE with a drift loss of <0.001 percent. EFSEC's BACT determination for cooling towers at the Pacific Mountain Energy Center (EFSEC Application 2006-01) was "High Efficiency Mist Eliminators" with < 0.001 percent drift. Based on this review, ORCAA concluded GHE's proposal of DEs with a drift loss rate < 0.0005 percent meets the definition of BACT for controlling PM in this case.

Besides PM, the cooling tower has the potential to emit certain Toxic Air Pollutants (TAPs). Potential TAPs includes chlorine dioxide and chlorine disinfection byproducts such as chloroform, which may form in the cooling tower water from the use of sodium hypochlorite (NaClO). BACT for TAPs, or T-BACT, is required under Chapter 173-460 WAC. Since chlorine dioxide and chloroform are emitted as gases, the principle means for control is by minimizing use of NaClO through efficient use of water treatment chemicals. To facilitate this end, ORCAA recommends requiring GHE develop a plan, monitoring schedule and limits for maintaining free chlorine concentrations to reasonable levels in the cooling tower water as T-BACT.

Table 1: BACT Summary

Pollutant	Description of BACT
PM	Drift eliminators with drift loss rate less than 0.0005%.
Chlorine Dioxide	Requirement that GHE develop and implement a plan, monitoring schedule and limits for maintaining free chlorine concentrations in cooling tower water to reasonable levels
Chloroform	

5. Protection of Ambient Air Quality Standards (AAQS)

WAC 173-400-113(3) requires demonstration that the increase in allowable emissions will not cause or contribute to violation of any ambient air quality standard. In this case GHE is not proposing any increase in the allowable emissions since the new (re-built) cooling tower will replace the existing cooling tower. Therefore, there is no emissions increase and it can be concluded that the proposed project will not cause or contribute to any violation of any ambient air quality standard.

6. Applicable Performance Standards

WAC 173-400-113(1) requires a determination that a new source or modification will comply with all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories, emission standards adopted under chapter 70.94 RCW and, for sources regulated by an authority, the applicable emission standards of that authority. ORCAA reviewed all relevant federal, state and local emissions performance standards and concluded that the new cooling tower proposed by GHE will likely comply with applicable standards. Table 2 lists relevant air performance standards and whether they apply to the new cooling tower.

Table 2: Applicability of Relevant Performance Standards

Regulation/Standard	Description	Applicable?
WAC 173-400-040 General Standards for Maximum Emissions	WAC 173-400-040, General Standards for Maximum Emissions contains general maximum emissions standards and prohibitions that apply to all sources and emissions units. EFSEC adopts these standards under WAC 173-78-005.	Yes
40 CFR Part 63 Subpart Q	40 CFR Part 63 Subpart Q "National Emission for Hazardous Air Pollutants of Industrial Process Cooling Towers" apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals. GHE does not propose to use chromium-based water treatment chemicals; therefore, Subpart Q does not apply.	No

7. Other Air Permitting Requirements

There are no other NSR air permitting requirement that apply to this project. Since the cooling tower will be part of the GHE Center, it will be part of a major stationary source of air emissions and, therefore, subject to the requirement to operate under an Air

Operating Permit issued under Chapter 173-401 WAC (adopted by reference by EFSEC, WAC 463-005(2)).

8. Compliance with Washington's Air Toxic Regulations

Washington's regulations titled Controls for New Sources of Toxic Air Pollutants (Air Toxics Regulation) under Chapter 173-460 of the Washington Administrative Code and adopted by reference by EFSEC (WAC 463-78-005(4) apply to new stationary sources of Toxic Air Pollutants (TAPs). The purpose of these regulations is to, "... maintain such levels of air quality as will protect human health and safety." The TAPs covered under the regulation include carcinogens and non-carcinogens. There are two independent requirements of the Air Toxics Regulation:

1. The new or modified emission units must employ T-BACT for all TAPs for which the increase in TAP emissions will exceed de minimis emission values listed in WAC 173-460-150; and,
2. A notice of construction application must demonstrate that the increase in emissions of TAPs from the new or modified emission units are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects.

The new cooling tower is considered a new source of emissions including TAP emissions. Therefore, the Air Toxics Regulation applies. Meeting the first requirement of the Air Toxics Regulation, T-BACT, was discussed previously under Section 4. ORCAA's conclusion is that GHE's proposal to install DEs with a drift loss rate < 0.0005 percent and to minimize water treatment chemicals in the cooling tower meet requirements for BACT and T-BACT in this case. To help assure T-BACT in the future, ORCAA recommends requiring GHE develop a plan, monitoring schedule and limits for maintaining free chlorine concentrations to reasonable levels in the cooling tower water as T-BACT.

The second requirement requires demonstration that the increases in emissions of TAPs from the new or modified emission units are sufficiently low to protect human health and safety from potential carcinogenic and/or other toxic effects. The Air Toxics Regulations allow for a multi-tiered approach to assess potential health and safety impacts from TAP increases. In addition, per WAC 173-460-040 of the Air Toxics Regulation, netting out TAP decreases from existing emissions units is allowed in determining the TAP increases requiring analysis. In this case, since the new cooling tower will take the place of the existing cooling tower, and the new DEs will be more efficient than those being replaced, TAP emissions are reduced from a net-emissions standpoint, which satisfies the second requirement of the Air Toxics Regulation.

9. Public Outreach

Public outreach requirements in WAC 173-400-171 (adopted by EFSEC by reference – WAC 463-78-005(1)) have been met. Notice of GHE's NOC application was published on EFSEC's website on March 28, 2017, and remained posted for 15-days. EFSEC did

not receive any comments from the public or requests for any hearing. This satisfies the requirements for public outreach per WAC 173-400-171.

10. State Environmental Policy Act (SEPA)

A Determination of Nonsignificance (DNS) was issued by EFSEC for this project on March 27, 2017.

11. Recommended Conditions of Approval

ORCAA recommends the following conditions of approval be implemented by EFSEC through an enforceable Order of Approval:

1. Cooling tower PM10 emissions over any twelve-consecutive month period shall not exceed 4062 kg PM_{10} (4.5 tons), calculated monthly.

2. Drift loss shall not exceed 0.0005% of the recirculating water flow rate. Initial compliance shall be determined by an affirmative report by the cooling tower drift eliminator manufacturer, based on an onsite 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 0.0005% of the recirculating water flow rate. The required test may be performed on a full-size mist eliminator module under laboratory conditions that match the worst-case operations scenario of the actual cooling tower,

3. Compliance with the annual emissions limit in Condition 1 shall be determined by using the following formula:

$$\frac{Q \times C \times 0.000005 \times 60 \times 8.34}{1000000} = D$$

Where:

Q = recirculating water flow rate in gallons per minute
C = total dissolved solids concentration in parts per million by weight (ppmw)
D = particulate emission rate in lb/hr.
0.000005 = the drift loss rate in gallon lost/gallon of recirculating cooling water

4. PM_{10} emissions from the cooling tower shall be calculated each month using the formula in Condition 3 above. The monthly average recirculating water flow rate for each month shall be used for "Q" in the formula. The monthly average total dissolved solids content measured or calculated during the month shall be used for "C" in the formula.

5. 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.

6. Prior to operation of the cooling tower, Grays Harbor Energy, LLC shall submit to EFSEC their plan for maintaining cooling tower water quality. The plan shall include procedures for cooling tower chemical use, operating limits for free chlorine levels, schedule for testing free chlorine levels, and test methods.

12. Final Determination

ORCAA staff's final determination is that GHE's application should be approved, provided that the conditions described in section 8 above are implemented through an enforceable Approval Order.

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PREPARED & REVIEWED BY: Mark V. Goodin, PE Date

Energy Facility Site Evaluation Council

Non Direct Cost Allocation
for
4th Quarter FY 2017
April 1, 2017 – June 30, 2017

The EFSEC Cost Allocation Plan (Plan) was approved by the Energy Facility Site Evaluation Council in September 2004. The Plan directed review of the past quarter's percentage of EFSEC technical staff's average FTE's, charged to EFSEC projects. This information is used as the basis for determining the non-direct cost percentage charge, for each EFSEC project. In addition, the Plan allows for adjustment due to anticipated work load and the addition of new projects.

Based on the levels of work during the 3rd quarter of FY 2017, using the procedures for developing cost allocation, and allowance for new projects, the following percentages shall be used to allocate EFSEC's non direct costs for the 4th quarter of FY 2017:

Kittitas Valley Wind Power Project	**6%**
Wild Horse Wind Power Project	**8%**
Columbia Generating Station	**18%**
WNP-1	**3%**
Whistling Ridge Energy Project	**3%**
Grays Harbor 1&2	**9%**
Chehalis Generation Project	**9%**
Desert Claim Wind Power Project	**3%**
Grays Harbor Energy 3&4	**3%**
Tesoro Savage	**38%**

_____ Date: _____

Stephen Posner, EFSEC Manager