Verbatim Transcript of Monthly Council Meeting

Washington State Energy Facility Site Evaluation Council

April 18, 2017

BUELL REALTIME REPORTING
COURT REPORTING AND LEGAL VIDEO

1325 Fourth Avenue • Suite 1840 • Seattle, Washington 98101

206.287.9066

www.buellrealtime.com

Olympia | **360.534.9066** Spokane | **509.624.3261** National | **800.846.6989**

email: info@buellrealtime.com

Certified WBENC Women's Business Enterprise

WASHINGTON STATE

ENERGY FACILITY SITE EVALUATION COUNCIL

Richard Hemstad Building

1300 South Evergreen Park Drive Southwest

Conference Room 206

Olympia, Washington

April 18, 2017

1:30 p.m.

MONTHLY COUNCIL MEETING

Verbatim Transcript of Proceeding

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

Buell Realtime Reporting, LLC.
1325 Fourth Avenue
Suite 1840
Seattle, Washington 98101
206.287.9066 | Seattle
360.534.9066 | Olympia
800.846.6989 | National

www.buellrealtime.com

A P P E A R A N C E S

Councilmembers Present:

Bill Lynch, Chair
Jaime Rossman, Department of Commerce
Joe Stohr, Department of Fish and Wildlife (via phone)
Dennis Moss, Utilities and Transportation Commission

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

Staff in Attendance:

Stephen Posner
Jim LaSpina
Tammy Mastro
Sonia Bumpus
Joan Aitken
Ami Kidder

Guests in Attendance:

Rich Downen, Grays Harbor Energy
Mark Goodin, Orcca
Shannon Khounnala, Columbia Generating & WNP 1/4

Guests in Attendance via Phone:

Kristen Boyles, Earthjustice
Karen McGaffey, Perkins Coie
Jennifer Diaz, Puget Sound Energy
Eric Melbardis, EDP Renewables
Tim McMahan, Stoel Rives
Kyler Danielson, Schwabe, Williamson & Wyatt

* * * * *

OLYMPIA, WASHINGTON, APRIL 18, 2017

1:30 P.M.

--o0o--

CHAIR LYNCH: Good afternoon. Today is Tuesday, April 18th, the April monthly meeting of the Energy Facility Site Evaluation Council.

Could we please have the clerk call the roll?

THE CLERK: Department of Commerce?

MR. ROSSMAN: Jaime Rossman is here.

THE CLERK: Department of Ecology?

CHAIR LYNCH: Mr. Stephenson is excused.

THE CLERK: Fish and Wildlife?

MR. STOHR (via phone): Joe Stohr is on the phone.

THE CLERK: Department of Natural Resources?

CHAIR LYNCH: Councilmember Siemann is excused.

THE CLERK: Utilities and Transportation Commission?

MR. MOSS: Dennis Moss is here.

THE CLERK: Local Governments and Optional State Agencies, for the Tesoro project, Department of Transportation?

MR. STONE: Ken Stone is here.

THE CLERK: City of Vancouver?

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

THE CLERK: Clark County?

Port of Vancouver?

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

THE CLERK: Chair, there is a quorum for the regular Council and Tesoro project Council.

CHAIR LYNCH: Thank you.

And if we have people on the phone who wish to identify themselves at this time, though you're not required to do so, please go ahead. And then I think I'll hold off on having those people who represent our various facilities having to -- because you'll be speaking later, you don't need to identify yourself at this time.

MS. MCGAFFEY (via phone): Jennifer McGaffey from Perkins Coie.

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

MS. DANIELSON (via phone): Kyler Danielson, Schwabe, Williamson & Wyatt.

MS. BOYLES (via phone): Kristen Boyles,

Earthjustice.

CHAIR LYNCH: Anybody else? Okay.

I'm going to have the councilmembers take a look at the proposed agenda for today. And you'll see that we do have one action item that we bumped from last month to this month's meeting. This has to do with the NOC for the Grays Harbor Energy Center installing a new drift eliminator. And that's the only action item that we'll be taking today.

Are there any suggested changes to the proposed agenda? Hearing none, we'll move on.

And we need approval of the March 21, 2017, minutes. And I looked them over, and I didn't see any edits, but I'll ask councilmembers if they have any suggested changes at this time. And if not, I'd entertain a motion for their approval.

MR. MOSS: Chair Lynch, I'd move the adoption of the minutes as transcribed for the meeting of March 21st, 2017.

CHAIR LYNCH: Do we have a second?

MR. ROSSMAN: I'll second.

CHAIR LYNCH: It's been moved and seconded that the Council minutes from the March 21st meeting be approved. All those in favor, say "Aye."

MULTIPLE SPEAKERS: "Aye."

CHAIR LYNCH: Opposed? Motion carries.

Now, if we could just move ahead to the updates from our various facilities. And we'll start first with Mr. Melbardis of the Kittitas Valley Wind Project.

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

For the reporting period, there was nothing nonroutine to report.

CHAIR LYNCH: I'm just taking a quick look at your handout, Mr. Melbardis, and no complaints, no complaints, no incidents, we like that.

Any questions for Mr. Melbardis? Thank you.

Let's go ahead and turn to Ms. Diaz with Puget Sound Energy and the Wild Horse Wind Power Project update.

MS. DIAZ (via phone): Yes. Thank you, Chair Lynch and Councilmembers. For the record, my name is Jennifer Diaz. I'm the project manager for Puget Sound Energy at the Wild Horse Wind and Solar Facility.

And I have one nonroutine update for the month of March. Pursuant to the Operations Stormwater Pollution Prevention Plan, a stormwater inspection was

completed following spring snow melt --

CHAIR LYNCH: I'm sorry, Ms. -- excuse me, Ms. Khounnala [sic], I'm going to have to stop you and have you repeat that because you're a little too soft.

MS. DIAZ: I'm going to take off my headset and maybe that will help.

CHAIR LYNCH: That will probably help.

MS. DIAZ: Okay. Can you hear me now?

CHAIR LYNCH: Yes.

MS. DIAZ: Is that better?

CHAIR LYNCH: Yes.

MS. DIAZ: Okay. So I just have the one nonroutine update for March. Pursuant to the Operations Stormwater Pollution Prevention Plan, a stormwater inspection was completed following spring snow melt.

The site responded very well to the warming and melting conditions, which is a direct 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 site certification agreement. And that's all I have.

CHAIR LYNCH: Very good.

Any questions for Ms. Diaz? No questions

for Ms. Diaz. Thank you very much.

MS. DIAZ: Thank you.

CHAIR LYNCH: Now we'll turn next to Ms. Khounnala with Energy Northwest. Welcome.

MS. KHOUNNALA: Thank you. Now, last time I was here, there was quite the learning curve with this microphone. There we go. So thank you.

Good afternoon, Chair Lynch and the rest of the Council. It's a pleasure to be here today. It's been a little over a year since we've attended in person.

So beginning our operational update, starting with Columbia Generating Station, you'll notice in your packets that Columbia is operating in a reduced power state. There's two contributing factors to this; one, we're in our coastdown in preparation for our outage; additionally, we also have been working with BPA on power management and some planned down-powers due to high flows in the Columbia River.

So both of these contributing factors are contributing to our reduced power operations at this time. We expect that we will have to continue to work with BPA on helping them manage the flows of the Columbia River as we also prepare for our outage.

You'll also see that we provided a mount- --

an outage update status. That does begin in 24 days, and it's scheduled for a duration of 40 days.

A couple of key points on that outage. We do plan to do some significant work on some cleaning as well as utilizing some newly installed equipment that will help us capture some additional power up-rate, in addition to the ongoing maintenance of a variety of facilities and refueling our reactor.

At the time that I prepared the operational update, I sent that before I had an opportunity to include an update on our radwaste shipping status. You may have seen that there were a couple of items in the paper documenting our radwaste shipping practices, and we did receive what I would call a conditional reinstatement of that ability to ship low-level radwaste to US Ecology. That provisional reinstatement was received Thursday of last week, so we will begin to put into place a couple of those conditions that they have in that -- in that approval, and prepare for our continued shipment to US Ecology.

Outside of those, there are no other safety incidents or other events to report for Columbia.

Any questions?

CHAIR LYNCH: Any questions for Ms. Khounnala regarding Columbia Generating Station? No

questions.

Please proceed to WNP --

MS. KHOUNNALA: -- 1/4, yes.

In regard to WNP 1/4, we have completed all of the NEPA and federal reviews needed by the Department of Energy. With that completion that happened here in the January/February timeframe, it allowed us to finalize the lease that we have with the Department of Energy. We expect that that lease will be signed at the end of this month or beginning of May.

That lease will be effective as of July 2017. And once we're in an operating -- or in our new approved lease status, we will then put into practice the methods and some of the infrastructure needed to capitalize on the water rights that were provided by -- and approved by the Department of Ecology back in 2014, I believe. So that will begin after the July timeframe.

Any questions in regard to WNP 1/4?

CHAIR LYNCH: Any questions for Ms. Khounnala, WNP 1/4? No questions.

MS. KHOUNNALA: Okay.

CHAIR LYNCH: Thank you. Always good to see you.

MS. KHOUNNALA: Thank you. Thank you for

having us.

CHAIR LYNCH: Yes, thanks.

And Mr. Miller is not here today for the -- to give us an update about the Chehalis Generation Facility, but as you can see by their report, they have nothing to report.

Oh, and here we have Mr. Downen from the Grays Harbor Energy Center.

MR. DOWNEN: Good afternoon, Chair Lynch, Councilmembers. My name is Rich Downen. I'm the acting plant manager at Grays Harbor Energy.

To cover our monthly report, there are only two things that, I guess, these days they're -- one of them has become pretty normal, is the cooling tower work. That work is just about complete. I'd say all of the wood is now out of the tower, so it's just finishing up some of the -- some of the reinstall of wind walls and putting in some bracing in the cooling tower basin. So that -- that work will be done this month. I think next week we'll be doing a walk down with the contractor to just look at punch list items.

And then at the bottom of our sheet, item 6.2, is the plant is shut down this month. We're about halfway through our annual spring outage. This year it's a full month rather than the typical two weeks. A

lot of work on the -- on finishing up the cooling tower, and then a steam turbine minor inspection.

And we wound up needing to replace the steam turbine generator field. That's the rotary part of the generator. So we just had some vibrations in there that we had to pull the field and put in a new one, so it's a big job. I think that's it for my report.

CHAIR LYNCH: Any questions for Mr. Downen regarding the operational update report for the Grays Harbor facility? No questions. Thank you.

And at this point in time, I guess I'll just turn it over to Mr. LaSpina who can talk to the Council about the Notice of Construction Air Permit. He's got some materials for you, and we also have the permit writer available with us here today.

Mr. LaSpina?

MR. LASPINA: Thank you, Chair Lynch, good afternoon. And good afternoon, Councilmembers.

EFSEC staff requests your approval to issue a Notice of Construction permit to Grays Harbor Energy for its replacement of the cooling tower drift eliminators. I'll give you just a little bit of background, sort of an abridged memo that I believe you all received.

During an early phase of construction to

replace the drift -- to replace the cooling tower wood, 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 emissions of water vapor and air pollutants such as particulate matter, VOCs and chlorine compounds.

The replacement of the drift eliminators, which were not originally required, prompted the need for an NOC permit. Based on the recommendations of the Olympic Region Clean Air Agency, which is EFSEC's compliance contractor, and the Department of Ecology, and with concurrence from the attorney general's office, an NOC permit application and SEPA checklist were submitted to EFSEC.

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 was issued on February 28th, 2017.

Information from the NOC application was used by ORCAA to draft the NOC, which has been developed in compliance with appropriate regulations. EFSEC staff, therefore, recommends the Council approve issuance of the NOC.

And to answer any questions you may have, the Clean Air Agency permit writer, Mark Goodin, is sitting here, and so if you want to ask any questions, he's available.

CHAIR LYNCH: I think we'll have Mr. Goodin -- why don't we just have you come up and sit next to Mr. Downen up here. You can pull up another chair.

And there might be some questions regarding the NOC. So I'll ask, are there any Council questions at this time?

Yes, Councilmember Rossman?

MR. ROSSMAN: Yes, thank you. And I'm sorry. Your name again, sir?

MR. GOODIN: Good afternoon. My name is Mark Goodin.

MR. ROSSMAN: Mr. Goodin, thank you for joining us.

I have a question, and I had talked with Mr. LaSpina before the meeting, and I'm trying to understand the relationship between the drift loss rate and the total emission limit of PM10 in this NOC.

Can you tell me how those two are related?

MR. GOODIN: Well, the drift loss rate is one of the variables in the equation used to compute the

overall mass rate. So the drift loss rate is the -- essentially the efficiency of the drift eliminators.

And one of the requirements, under the Washington Clean Air Act, is that any new construction utilize what's referred to as best available control technology. Well, over the ten years or so since the original cooling tower was installed, the efficiency of drift eliminators that are suitable for this cooling tower have improved, and that's why EFSEC came in the door with an application for higher efficiency drift eliminators, and that meets the requirement for best available control technology, or BACT, and that's what we require.

Though the drift elimination efficiency is related to pollutant mass rate, we didn't see a need, and we didn't recommend to EFSEC staff to change the pollutant mass rate because there was no regulatory basis via the Clean Air Act to do so, because the overall pollutant mass rate has already been modeled and already shown to meet -- to not cause or contribute to ambient violations.

So we did not touch the pollutant mass rate, or we recommended EFSEC staff not change that condition, but we did update the drift elimination efficiency in condition 3, I believe.

MR. ROSSMAN: And so the pollutant mass rate, is that that 4,062 kilograms of -- is that the 4,662 kilograms of PM10?

MR. GOODIN: Yes. That's the annual mass rate, and that's determined by the equation in condition 3.

MR. ROSSMAN: And where have actuals been -- do you know off the top of your head what the actual levels have been?

MR. GOODIN: I don't.

MR. ROSSMAN: All right.

So we would expect to see a reduction in that, all things being equal; is that the case?

MR. GOODIN: Yes. There's going to be less emissions from the cooling tower, yet, you know, the amount of particulate matter or emissions is going to be dependent also on the dissolved solids and the solids in the water and the flow rate. So there's other variables in that equation. They are variables and they're not -- they're not explicitly limited.

What was of main concern here, and what -- an authority under the Clean Air Act is that you continuously keep up with the latest, greatest technology, and that's the requirement referred to as best available control technology.

MR. ROSSMAN: I guess that's what I'm wondering about, because it would have intuitively seemed that the total emissions would also be reduced by that factor of 50 percent synthesis, 50 percent more efficient.

And I guess, is there any concern that that would allow a higher concentration of dissolved solids, or a higher flow rate, or any unintended consequences of keeping that limit the same.

MR. GOODIN: No, no unintended consequences. Emissions will be reduced, with all other things stable, meaning the dissolved solids in the water and the flow rate through the cooling tower remain stable, but that's not the case. Those are variables in that equation in condition 3. They're intended as variables, and there was no need through the permit to place limits on those variables.

So for this permitting action, the concern was that Grays Harbor Energy install the most state-of-the-art, most efficient drift eliminators, which they came in the door with that proposal, and that's what rolls down there in condition 2. And that was basically the only change to the set of conditions that were established originally in the PSD permit.

MR. ROSSMAN: Got it. Thank you.

CHAIR LYNCH: Any other questions?

At this point in time, I'd entertain a motion for the Council -- for the core Council, I guess I'll call it, to vote on the Notice of Construction Air Permit as submitted.

MR. ROSSMAN: Mr. Chair, I'll move that we approve the Notice of Construction as submitted.

CHAIR LYNCH: Do we have a second?

MR. MOSS: I'll second that.

CHAIR LYNCH: It's been moved and seconded that the NOC Air Permit be approved by the Council as submitted.

All those in favor, say "Aye."

MULTIPLE SPEAKERS: "Aye."

CHAIR LYNCH: Opposed? Motion carries. Very good.

And let's see. And would all councilmembers who believe in telekinetics please raise my right hand? Sorry. That's a shout out to Kurt Vonnegut who -- the anniversary of his death was not too long ago, and I read that in the newspaper as one of his great quotes. And that's always a good reason why we should continue to read newspapers, I think.

So if we could turn, then, to the Tesoro/Savage Vancouver Energy Distribution Terminal

update.

Thank you for coming.

MR. GOODIN: Thank you. Good afternoon.

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

Just a couple of updates for SEPA. Work to address the issues identified in the Draft FEIS are underway. EFSEC staff are coordinating closely with our consultants, and each week we are having regularly scheduled calls to track our progress with them.

Myself, Ms. Kidder and Patty Betts are meeting as a group multiple days each week where we're having work sessions to focus on these issues as a team and tackle the issues in discussion. We're planning several more of these as we receive deliverables from the consultant and review the sections.

I'm going to now give you an update on permits if there aren't any questions on the SEPA update.

CHAIR LYNCH: Any questions on the SEPA update? Please proceed.

MS. BUMPUS: For the Construction Stormwater NPDES permit, I don't have any new updates since last council meeting. We're still working with our contractors to address comments.

For the NPDES Industrial Stormwater Permit, EFSEC staff have received draft permit documents from our Ecology contractor, and we're currently working on those and preparing those for a comprehensive legal review. So that will be happening soon. We're working on them and hope to finish them this week.

For the Notice of Construction, this week I'm working to prepare the draft documents to get them ready to send to the councilmembers this Friday.

I did want to note that the Southwest Clean Air Agency permit contractor had some additional questions. They're more points of clarification and getting confirmation from the applicant about some things, so we've sent that request on to the applicant, and Jared and I spoke just before the meeting, and it sounds like they're planning to submit that to us today by the end of the day.

CHAIR LYNCH: Good.

MS. BUMPUS: So that will be forwarded on to the SWCAA contractor to review.

And I think -- I just wanted to note that we're planning to have an executive session and special council meeting on May 2nd, and that's just given that we get the permit to councilmembers to review by this Friday and that all goes as scheduled.

So I think you received an email letting you know about that tentative date. And we would, I think, at this time plan to ask for a tentative approval for the NOC if all goes well there.

CHAIR LYNCH: And that meeting would most likely be starting early afternoon right after lunchtime?

MS. BUMPUS: I think that's right. Based off room availability, I think we're starting at 1:00 or so.

Is that correct, Stephen?

MR. POSNER: Yes.

MS. BUMPUS: Yeah, 1:00.

CHAIR LYNCH: And the -- does it still look like we would be able to do that Industrial Stormwater Permit around the same time -- or excuse me -- I'm stuck between construction stormwater and industrial stormwater, but the --

MS. BUMPUS: I think I know what you're asking --

CHAIR LYNCH: Yeah.

MS. BUMPUS: -- Chair Lynch.

The NPDES Industrial Permit needs to undergo the final legal review. If there aren't any major issues that come up as part of that review, it's

possible that we could do them at the same time or very close to that time. And I'd still like to try to do that. I'm just not able to say for sure until Phyllis reviews the draft document, and I haven't sent it to her yet as of today, so --

CHAIR LYNCH: Okay.

MS. BUMPUS: So we'll try to do that. We'll have to see. We're not sure yet.

CHAIR LYNCH: I'm very pleased that we're getting there on both of those permits. It's good work by all of you. Thank you.

MS. BUMPUS: Thank you.

CHAIR LYNCH: Any questions regarding the permits?

Ms. Bumpus, do you have anything else?

MS. BUMPUS: That's all I have.

CHAIR LYNCH: Any questions regarding the Tesoro/Savage Vancouver Energy Distribution Terminal for Ms. Bumpus? Okay. We'll move on.

And this is always the most exciting part of our council meetings when Mr. Posner goes over the quarterly cost allocations.

Mr. Posner?

MR. POSNER: Good afternoon, Chair Lynch, Councilmembers. And as we do every quarter at the

beginning of the quarter, we do a recalculation of our non-direct costs and cost allocation. And there's a green sheet in your councilmember packets, and it has a breakdown of the numbers for the fourth quarter, which will run from April 1st through June 30th of this year.

I'll go ahead and read the breakdown for the benefit of those folks who are on the phone. For the Kittitas Valley Wind Project, the percentage is 6 percent; for Wild Horse, it's 8 percent; Columbia Generating Station, 18 percent; WNP 1/4, 3 percent; Whistling Ridge Energy Project, 3 percent; Grays Harbor 1 and 2, 9 percent; Chehalis Generation, 9 percent; desert Claim, 3 percent; Grays Harbor Energy 3 and 4, 3 percent; and Tesoro/Savage, 38 percent.

And that's all I have on that subject. If there's any questions, I'll be happy to answer them.

CHAIR LYNCH: Any questions for Mr. Posner?

Anything for the good of the order?

MR. SHAFER (via phone): Chair Lynch, Greg Shafer. And I apologize for my five-minute tardiness, but I was able to join the agenda by phone today.

CHAIR LYNCH: Thank you, Mr. Shafer. We know that you are very attentive to council business, so we appreciate you being on the line again.

MR. SHAFER: Just running from another

meeting.

CHAIR LYNCH: Anything else for the good of the order? Hearing none, we're adjourned.

(Meeting concluded at 1:59 p.m.)

-o0o-

C E R T I F I C A T E

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 28th day of April, 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.

PACIFICORP
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.

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