## Docket No. UE-210795 - Vol. II

# In the M atter of Puget Sound Energy's Clean Energy Implementation Plan 

## January 24, 2023

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BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of: )
Puget Sound Energy's Clean ,
Energy Implementation Plan ) Docket: UE-210795
Pursuant to WAC 480-100-640 )
)
)
)

* VIDEOCONFERENCE *

PUBLIC COMMENT HEARING
VOLUME II
Pages 36-85

> January 24,2023
> $6: 03 \mathrm{p} . \mathrm{m}$.

* All participants appeared via videoconference *

REPORTED BY: Tia B. Reidt, Washington RPR, CCR 2798 Oregon \# 22-0001

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## COMMENTS BY: PAGE:

Nora Rainwater 10
Frank Damiano 12
Karen Klein 13
Peter Werner 15
Jim Lazar 17
Pete Weymiller 20
Aubrey Newton 23
James Adcock 27
Brian Grunkemeyer 30
Gary Lindahl 33
Adrian Falla 34
Kathy Brenniman 39
Devon Kellogg 45
Richard Leeds 47

Tuesday, January 24, 2023
6:03 p.m.
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P R O C E E D I N G S

MR. DANNER: Alright. Good evening, everyone.

Today is January 24th, 2023, and this is a public hearing of the Washington Utilities and Transportation Commission for the purpose of taking public comment on the Clean Energy Implementation Plan filed by Puget Sound Energy in UTC Docket UE-210795.

I'm Dave Danner. I'm chair of the Commission, and I'm joined by my colleagues Commissioner Milt Doumit and Commissioner Ann Rendahl.

By way of background, in 2019, the Washington Legislature passed the Clean Energy Transformation Act, or CETA, which, among other things, requires that the State's electric utilities remove coal power from their portfolios by the end of 2025 , be net carbon neutral by 2030, and be 100 percent carbon free by 2025.

The Washington Utilities and Transportation Commission regulates the State's investor-owned utilities. To ensure that these utilities achieve the

1 target set out in CETA, the law requires each utility
2 to file a detailed plan, called a Clean Energy
3 Implementation Plan, every four years starting in 2021, 4 with updates every two years after a plan is filed.

By law, the Office of Public Counsel and the Office of Attorney General represents the interests of residential and small business customers of Puget Sound Energy.

The comments we receive tonight, as well as written comments we received from the public, will be made part of the formal record in this proceeding. For this reason, we will need to swear in all those who comment tonight.

The Commissioners act as judges in this case. And for that reason, we're here tonight to listen to your comments, but not to engage in debate with commenters, or to answer questions. If you have questions about this case, we'll refer them either to public counsel or to Andrew Roberts of Commission staff, who will speak to you in a moment.

In fact, $I$ will turn it over to Andrew Roberts right now to cover some meeting logistics.

So go ahead, Andrew.
MR. ROBERTS: Okay. Good evening.
My name is Andrew Roberts. I'm a regulatory analyst with the Commission's Consumer Protection Center. I would like to cover some meeting logistics tonight.

First, this hearing is being broadcast live on

1 TBW. We ask that everyone please mute your connections
2 unless you were called on to speak. If you're
3 participating via Zoom, you can mute your connection by
4 clicking the microphone icon on the bottom of the
5 screen. A slash will appear across a microphone
6 indicating you've muted your connection. If you called
7 in, you can press star 6 to mute your phone. And when
8 you're called on to speak, you can press star 6 again
9 to unmute yourself. After you're done speaking, we
10 remind everybody to please remember to mute themselves. email comments@utc.wa.gov. Once again, that's comments

1 with an "s," Qutc.wa.gov, or call 1(888)333-9882, and 2 ask to speak with me, Andrew Roberts.

Okay. I see Jim Lazar, Pete Weymiller, Aubrey Newton. Sorry. That was -- that was Aubrey Newton. Jim Adcock, Ryan Grunkemeyer, and Gary with their hands raised.

Okay. Is there anybody else?
And please try not to interrupt each other.
Is there anyone else who would like to provide comment today?

Frank Damiano, we have your name. Thank you.
Okay. If anyone was not able to raise their hand, could you please speak up now.

MR. FALLA: I'm unable to raise my hand for reasons I cannot explain.

MR. ROBERTS: Okay.
And your name is?
MR. FALLA: Adrian Falla. I have communicated in chat.

MR. ROBERTS: Okay. Thank you.
We have your name.
Okay. With that, I will turn the time over to Chair Danner, Commissioner Rendahl, and Commissioner Doumit.

Thank you.
MR. DANNER: All right.
Thank you very much.

Unless my colleagues have any introductory comments they would like to make, we will get right into the public comment hearing.

And so I would ask if you are intending to comment tonight, we need to swear you in. So please raise your right hand.

Do you swear to tell the truth, the whole truth, and nothing but the truth? Please say "I do."

MR. LAZAR: Yes.
MS. NEWTON: I do.
MR. DAMIANO: Yes.
MS. KLEIN: I do.
MR. DANNER: All right. Thank you. Thank you very much.

We will start.
Jodi Blackburn-Roehl, you have signed up but not clear whether you want to speak. Do you want to make comments tonight?
(No response.)
MR. DANNER: All right. I'm not hearing anything.

Nora Rainwater, would you like to make some comments here?

MS. RAINWATER: Yes, I would like to make a comment.

1 countries, which is not very sustainable or, by the 2 way, ethical.

And another thing to think about is that other countries do not have the same eco-conscious ideas as we do. So if we obtain materials from other countries, China, wherever, they are not even worried about what they do to the land.

So I am asking that you think of these things in consideration of this if the whole point is to live greener. We have to consider or other countries that play into this because you know they don't have our standards.

Thank you.
MR. DANNER: All right. Thank you very much, Nora Rainwater. Appreciate your comments.

Let me turn to Gary Gooch. You signed up. Do you wish to speak tonight?
(No response.)
MR. DANNER: Gary Gooch?
(No response.)
MR. DANNER: All right. We'll turn to Kathy Brenniman.

Are you there?
(No response.)
MR. DANNER: All right. Frank Damiano,

1 are you there?

MR. DAMIANO: Yes, sir.
MR. DANNER: Go ahead, then.
MR. DAMIANO: The problem with these proposals is Puget Sound Energy wants to pass the cost of their ideas onto us. I don't want that. They just increased the cost of natural gas this November 2022, and they increased the cost of electric and natural gas again this January 2023.

Regarding the proposal involving removing coal as a source of electricity, I would like to suggest -why not move toward clean coal technologies, which are already working in other facilities?

Regarding the proposal involving wind and the wind turbines, I have concerns:
A) Ice accumulation on the blades contributed to power outages during the 2021 Texas blackout.
B) Wind turbines are prone to gearbox failure in only ten years. And the gearbox is costly to replace.

It goes without saying when the turbine is not spinning, it's not generating revenue or power.

Finally, the fiberglass blades on the wind turbines last only 20 years. And they're not cost-effective to recycle. Therefore, the blades are

1 often sent to landfills.

Conclusion: We need to make sure we are not solving one problem and creating another.

That's it.
MR. DANNER: All right.
Thank you very much. I appreciate your comments.

Danita Geyer, are you there, and do you wish to speak this evening?
(No response.)
MR. DANNER: All right.
We have someone signed up as Laura, with no last name.

Are you on the line? Do you wish to speak tonight?
(No response.)
MR. DANNER: All right.
Karen Klein, are you there? Are you --
MS. KLEIN: Hi. Yes.
Can you hear me okay?
MR. DANNER: Yes. Thank you.
MS. KLEIN: Yeah. I would like to speak in favor of decarbonizing. I think that's a great idea. I have nothing against wind power or any of the other things that have been mentioned so far tonight.

What I do have a problem with is the
regressive tax structure that we have in our state that then this Commission is going to offload your costs onto your general customer, who is suffering through, you know, not only a pandemic, but an inflationary period and the like. And the average person cannot take, what I'm reading, is a 15.8 percent increase in their bill, you know, soon. And I think that's unreasonable.

And I think that we need to look to taxing billionaires in this state. And we need to look to our legislature to fund the decarbonization of fossil fuels by taxing the right people. And this is not fair for the average person in Washington state. And it's going to be hard on families. And I -- I'm just (inaudible Zoom audio) against it. We know that there's plenty of wealthy people that are for decarbonizing. Let them pay for it.

That's the end.
MR. DANNER: All right.
Thank you very much for your comment.
Peter Werner, and then Jim Lazar.
Peter Werner, are you there?
MR. WERNER: Yes. I just -- I just --
MR. DANNER: All right. be transported. There's no way of storing wind or

1 solar, other than directly into batteries. But
2 batteries themselves are no more a source of energy,
3 unless charged, than empty tanks are a source of fuel.

So it's a dangerous path, I believe, in going down and expecting that you're going to take wind and solar and voltaic solar. You know, there's thermal solar. That's another source of steam. But that's my main concern.

If we were truly interested in reducing the problems with burning fossil fuels, and there are, okay? I think they're fairly overblown -substantially overblown. But if there is a concern in reducing the pollution due to the burning of fossil fuels, there should be a stellar interest in the fission of uranium or what other -- so right now uranium is the most logical source. And that seems to be totally off the board, from what $I$ can read. Every -- all of the -- all of the efforts seem to be towards wind and solar.

And there's so many problems with turbines. A couple people have mentioned them, but wind turbines, the larger they get, the higher they are, the more massive they are on towers that are actually around the world beginning to fall down because they're extremely complicated systems to engineer effectively.

In the mid ranges, in the high kilowatt levels, they're reasonably safe and doable, even though there are units that are up into the megawatts.

Anyway, I could go down a ton of rabbit holes here. I think all the folks involved in this have to look at it from a good practical engineering position and understand the difference between power and energy. There's a huge, huge difference between power and energy.

And with wind and voltaic solar, you're dealing with power. It's intermittent, and it diluted. And it's not energy. Unless you can store it and move it, it's not energy.

So I'll stop at that.
I'm sure you're well-intentioned. I'm very certain you're all well-intentioned. But many of you -- many of you are technically misguided.

MR. DANNER: All right.
Thank you for your comments.
Jim Lazar followed by Pete Weymiller.
Jim Lazar, go ahead.
MR. LAZAR: Thank you. And Good evening.
I recommend that the Commission order in this docket direct PSE to include two additional measures in its next update of the CEIP.

The first of these is to include examination of a service rule change, that water heaters and EV chargers over 3 and a half kw be served by smart circuit breakers or other control networks. This would make a great deal of additional demand response available on the order of a thousand at peak for water heaters alone.

The shape of these two loads is very peak coincident. Every new electric water heater already has a socket for control radio. Most 6 kw and above EV chargers also have controls enabled.

You can identify these with the interval data that smart meters provide. Water heaters typically hold a day's supply, so being curtailed for an hour here and there is just not a problem. Modern heat pump water heaters can be set to heat pump only mode and will not exceed the 3.5 kw limit. Every one of us would rather have our hot water and EV chargers interrupted if the alternative is a rolling blackout or purchase of extremely expensive power.

The second issue is that PSE should study the transfer of its customers in Skagit, Whatcom, Kitsap, and Kittitas Counties to electric service by the local public utility districts. This would reduce PSE loads, and thus accelerate the rate at which they could move

1 to a hundred percent clean energy.

These PUDs can access VPA power in the 2027 new contract process and serve these customers with clean energy. They will likely be able to provide service at rates comparable to or lower than PSE. So these customers will be worse off because of BPA's lower wholesale power prices.

Because these are counties in which PSE provides only electricity, not natural gas, PSE does not achieve economies of scope as it does, for example, in Thurston County, where it provides both electricity and natural gas.

As a result, those of us who take both services from PSE in essence subsidize those who take only electricity and pay more than our share of the admin costs. I believe shutting these customers will help lower costs for PSE's remaining customers. So please direct PSE to study these two items in the order in this docket.

Thank you.
MR. DANNER: All right. Thank you very much.

And Pete Werner, I think, followed by Aubrey Newton.

Pete Werner, go ahead.

MR. WEYMILLER: Pete Weymiller?
MR. DANNER: I'm sorry. Could you spell
that, sir?
MR. WEYMILLER: Can you hear me?
MR. DANNER: Yes.
MR. WEYMILLER: $W-E-Y$ (inaudible Zoom audio). And I'm sure you know how to spell the first name.

MR. DANNER: Yes.
MR. WEYMILLER: Okay. Very good.
Hello, Commissioners. And thank you for holding this hearing and for showing interest in the welfare of PSE Customers.

The Intergovernmental Panel on Climate Change is a globally-accepted authority on climate change, probably because their report is the consensus of 97 percent of publishing climatologists. Recently the IPCC reported that climate change is now widespread, rapid, and intensifying. We've witnessed this in recent years.

Two weeks ago, NOAA released a report showing that damage from climate changes this last year in the US total \$165.1 billion. We're already seeing how increasing temperatures evaporate more moisture in our atmospheric rivers locally, and we're still seeing

1 droughts, forest fires, higher incidences of lightning
2 strikes, higher risk -- the list goes on. A large
3 share of greenhouse gases come from our energy sector.
4 Not only do fossil fuels poison our land, water, and 5 air, they're overheating our planet quicker than even 6 the IPCC predicted. outdated appliances. A neighbor and I have heat pumps,

1 but our electricity was still over $\$ 250$ a month. And 2 this is before the 8.7 percent increase.

1 things worse. Please don't wait for RFP and jump on 2 all the opportunities to modernize our electricity 3 generation and use. We can always change the plan 4 later. Let's cover all bets.

1 America, or LIUNA, which represents over 500,000
2 workers in the United States and Canada. Again, we
3 thank you for the opportunity to submit comments on 4 PSE's CIP this evening. employment targets and baseline data, the proposed

1 metrics will provide an incomplete picture of net
2 benefits. The company and the Commission can use data
3 related to the Lund Hill Solar Farm developed by
4 Avangrid for PSEs Green Direct program as a baseline to
5 measure the indicators. Alternatively, the company can
6 compare proposed clean energy job metrics to the
7 quality of fossil fuel construction jobs.
Because our members have been employed on both clean energy and fossil fuel construction jobs, and our local affiliates regularly visit construction job sites, we know that the clean energy sector has lower local employment rates and offers lower wages and benefits compared to fossil fuel related energy, projects. Therefore, the Commission and the utilities can also reference public infrastructure projects in Washington State for targeted hiring rates of local workers, registered apprentices, and workers from historically disadvantaged communities.

Furthermore, PSE and the Commission can utilize union collective bargaining rates and prevailing wages and benefits as a baseline to assess the quality of clean energy construction jobs.

If the Commission does not adopt these recommendations, the Commission should order PSE at least to work with labor stakeholders to establish

1 employment targets for local workers and workers from

MR. DANNER: Oh.
MR. WERNER: I would love to keep talking. But...

MR. DANNER: I'm sorry. I'm getting you mixed up with Pete Weymiller. So pardon me for doing that.

MR. WERNER: And I think he -- anyway, I'll let you go.

MR. DANNER: All right.
If you have additional comments, we would accept written comments, as Andrew Roberts laid out earlier.

MR. WERNER: Understood.
MR. DANNER: So now we will go, then, to Jim Adcock, followed by Brian Grunkemeyer.

MR. ADCOCK: Thank you.
MR. DANNER: Jim Adcock, are you there?
MR. ADCOCK: Yeah. Thank you.
Can you hear me?
MR. DANNER: Yes, I can.
MR. ADCOCK: James Adcock, electrical engineer, MIT stakeholder, and leading Puget Sound critic for the last dozen-plus years.

What Puget should be doing? Maximizing energy efficiency, maximizing demand response, such as demand response in electric water heaters. These are lowest costs. They are always lowest costs. Lowest costs first.

Next, wind power. Lowest cost wind power. Wind power is about $\$ 35$ a megawatt hour; less than just the fuel costs of running natural gas generation.

Every wind tower Puget build saves ratepayers money. It does not cost us money. It saves us money. But Puget tells us IPR stakeholders that is not what they are going to do. They are not going to build what Puget calls renewables overbuild. It is not overbuild unless more than 100 percent of Puget's power comes

1 from renewables. percent, as required by CETA.

Off-ramps. The 2 percent off-ramp does not exist until after 2030, but Puget is required by CETA to get 80 percent -- to get to 80 percent by 2030. So there is no 2 percent off-ramp excuse for Puget not to get to 80 percent. But Puget is claiming they can make that excuse. No, they can not. Puget can not avoid the 80 percent by 2030 requirement simply by wasting ratepayer monies in sufficient amounts to get out of that requirement. Puget must get to 80 percent by 2030 period.

There is, on the other hand, a different off-ramp. There is the cost containment alternative compliance payments that the legislature built into CETA to keep ratepayers from getting ripped off. Rather than pay an excess amount of ratepayer money for any method, Puget can just use alternative compliance. So Puget should never be paying more per megawatt hour for any method than the price of natural gas generation plus the alternative compliance payment, which gives you total something like $\$ 120$ per megawatt hour.

So if Puget wants to spend more than about \$120 per megawatt hour on some method, UTC must simply say clearly, no, that is too expensive. Nothing should cost ratepayers more than about $\$ 120$ per megawatt hour, period. That is why the legislature put the cost

1 containment cap in there. $\$ 120$ max. Not $\$ 550$ per 2 megawatt [indecipherable].

We shift charging for electric vehicles to the best time of day to keep EV charging green and cheap. And we can help charge cars before weather events cause power outages to improve resiliency. I want to raise the bar for our vision and ambition by talking about our solution.

We've done work with utilities in Australia and the US to avoid EV charging during peak times. In Australia, we were able to shift about three-fourths of the charging to off-peak times, and we helped to soak up excess solar. In Australia, they frequently have negative power prices, so this shifting was a great way to lower total system costs. We can do the same thing by importing solar from California.

In Maine, we were able to shift 85 percent of the power away from their peak period. And with a project with Rocky Mountain Power, we modeled that we can save 45 percent of the carbon emissions used to charge your car.

This technology is ready for my company and several others. We could have helped reduce carbon emissions last year. It's time to embrace demand flexibility to reduce carbon emissions now.

So getting to the CEIP, I think PSE should be looking at a higher amount of demand response. We

1 would like to replace demand response with demand
2 flexibility where utilities incentivize doing the right
3 thing everyday instead of begging people to shut off 4 power on a few peak days. However, DR is a good step 5 in the first direction. Or a small -- a small first 6 step.

And to echo Jim Lazar's point, smart hot water heaters are a perfect idea for our region, especially since our state already requires smart hot water heaters to be installed everywhere.

Execution-wise, I would like to make sure that PSE actually builds something quickly as a result of this CEIP. They have, in the past, issued RFPs, but not necessarily acquired any resources as a result of that RFP. That process makes you wonder whether it's just a legal requirement as opposed to a more deliberate way to expand their portfolio.

And lastly, the Sierra Club and Northwest Energy Coalition both provided very good comments. Please review them if you haven't.

Thank you very much.
MR. DANNER: All right. Thank you very much. Appreciate your comments.

All right. We have an individual who identified themselves as Gary.

Gary, are you on the line?
MR. LINDAHL: I am.
Can you hear me okay?
MR. DANNER: Yes.
You didn't provide a last name. Do you wish to do so or --

MR. LINDAHL: Yes, I do. Last name is
Lindahl, $\mathrm{L}-\mathrm{I}-\mathrm{N}-\mathrm{D}-\mathrm{A}-\mathrm{H}-\mathrm{L}$.
MR. DANNER: All right. Thank you.
MR. LINDAHL: And I'm also a professional engineer.

MR. DANNER: Okay.
Go ahead, then.
MR. LINDAHL: The CEIP appears to be overly reliant on intermittent, unreliable solar and wind. I think this will lead to a less reliable grid. And the CEIP mentions a maximum power output expected from wind and solar. I find that very misleading because the maximum power for these systems is rarely achieved for more than an hour or two a day.

It also mentions a battery peak power, but not the energy capacity of the battery, which would be like kilowatt hours. I also find that very misleading. They throw out these big numbers, but it's kind of meaningless.

They also mentioned a biomass, which I find amusing. If we're going to burn stuff for energy, why not build waste energy facilities like Europe does? So burying garbage is just a cheep methane generator.

The plan for more base load power is surly lacking. I didn't see anything on small modular reactors. I think Bill Gates could help you with that, by the way.

I know we do have a lot of water power in this state. But, as you know, the earth is heating up. What if we run out of water like Lake Mead is experiencing right now? I think this whole plan is a plan for disaster, and we need to focus a lot more on base load power.

Thank you for your time.
MR. DANNER: All right.
Thank you very much. Appreciate your comments.

Adrian Falla, are you there?
MR. FALLA: I am. Thank you.
MR. DANNER: All right.
Please go ahead.
MR. FALLA: Hello.
I'm a one-year resident of Soundview Estates, which is a roughly two-year-old development located

1 inside Census Tract 0900 .

I have begun gathering information in recent weeks to brief our homeowners association board, since all of our members were surprised by the October 22nd -- excuse me, October 2022 announcement of a planned biodiesel peaker plant . 2 miles directly to our west.

Whidbey Seabrook developer Tenaska is angling for a contract with PSE. We are playing catch-up, so we are unclear where their proposal may fit in this draft CIP. So I apologize for not being well-oriented to the specifics of the discussion on the document in hand. But we will catch up.

The [indecipherable] family, the site owners, pitched the site to the developers as remote and secluded. Their application studiously underplays our proximity as a low-density residential zone in the northeast, approximately . 2 miles.

Soundview Estates is a development which has 241 homes built. 230-plus families have purchased homes there, including my own. We have 269 active registered voters. Our personal capital investment in our homes to date is in excess of $\$ 152$ million. And there are 99 more homes currently under construction at Soundview West, which is even closer to the proposed

1 plant.

I have some metrics on why our Census Tract 080900 does not deserve to be saddled with the emissions of a 219 megawatt biodiesel peaker plant pumping its emissions 60 feet over our heads.

Our immediate neighbors comprise a population living in poverty at level 8 out of 10 . Babies in our vicinity are at risk for low birth weight at level 9 out of 10. In a single-parent household, that level is 9 out of 10. Overcrowded housing is level 9 out of 10. We're 9 out of 10 for premature deaths. Our social vulnerability to hazards overall is 8 out of 10 . We're already at level 10 out of 10 for toxic releases from facilities on the RSEI model. And we also enjoy proximity to not one, not two, but 3 EPA Superfund sites.

We may well meet Department of Health standards for environmental health disparities and a designation as a highly impacted community. We'll be exploring that pretty energetically in the coming weeks.

Our census tract score is level 7 out of 10 for sensitive populations. And our downwind tract also includes tribal lands.

Our district has historically been electorally

1 passive, with low voting rates at level 9 out of 10 . I 2 promise you, we're going to fix that. which pose known adverse health impacts and others, but very little is known as yet. We are expecting to develop our concerns with greater knowledge of the airshed patterns that are modeled.

We are playing catch-up with a vengeance. And we've already gained significant initial insights from initial public records requests we filed with various agencies, including PSCAA for the Seabrook application itself, which is quite interesting.

We've obtained voter registration records, FEC contribution histories for elected officials in the area and so forth. We're very aware of the razor-thin margins by which local races are decided.

I just wanted to let you know that we will be paying close attention and getting engaged with the Commission in every way that we can.

Thank you.
MR. DANNER: All right. Thank you.
Appreciate your comments.
That's -- let me go back to some folks that I called on earlier who did not respond.

Jodi Blackburn-Roehl, are you on the line, and

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do you wish to comment this evening?
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(No response.)
MR. DANNER: All right.
Gary Gooch, are you on the line, and do you

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    wish to comment this evening?
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(No response.)
MR. DANNER: Kathy Brenniman, are you on
the line?
(No response.)
MR. DANNER: Danita Geyer?
(No response.)
MR. DANNER: And Laura, who did not provide a last name?
(No response.)
MS. BRENNIMAN: Hello?
MR. DANNER: Yes. Who is this?
MS. BRENNIMAN: Yes, this is Kathy
Brenniman. Sorry. My -- it was muted earlier --
MR. DANNER: Oh, okay.
MS. BRENNIMAN: -- so I did respond.
MR. DANNER: Okay.
We can --
MS. BRENNIMAN: Thank you.
MR. DANNER: We can hear you. I hope you can hear us.

MS. BRENNIMAN: Yes. Great. Thank you. Thanks for the opportunity to speak. So my concerns are about the environment and climate change.

The wind energy has been hailed as the least polluting and least harmful to the environment among the renewable energy resources. We have been told that their greenhouse gas emissions are low, and so it's assumed that we impact global warming climate change the least. And when energy is renewable. So these are significant advantages. However, there are a number of negatives. And the number one is our threat to wildlife.

Wind turbines are known to disrupt wildlife in multiple ways. Wherever commercial wind farms are located, the birds have a hard time surviving. Whether they're small or big, Birds stand a slim chance of surviving a direct hit with the turbine blades. And with many turbines located in an area, it's no wonder that the population of birds goes down.

I'm a resident of Whidbey Island, and I see bald eagles and other migratory birds in the area. And the continued extinction of bird species would be a tragedy for all of us. In the US alone, the annual bird toll estimated to be 500,000 and 700,000. This

1 doesn't take into account the insect fatalities.

1 raise the temperature by up to 2.7 degrees Fahrenheit, 2 and cool it down by up to . 7 decrease Fahrenheit. This 3 is from a 2018 study by Harvard University scientists. 4 This research supports more than ten other studies that 5 have observed warming near operational US wind farms.

1 habitats of sea creatures.

The (inaudible Zoom audio) location is another problem. Typically wind farms are located far away from cities and towns. Intentionally, remote locations are chosen for setting up wind farms so that large-scale land acquisition is possible. However, this means paving new roads and transporting machinery and construction material to the site.

The same is the case with offshore wind farms. They can increase boat traffic, leading to more greenhouse gas emissions and pollution. In the (inaudible Zoom audio) phase, also they increase traffic in the region and adversely impact the environment.

The carbon footprints of turbines. The manufacturer of wind turbines needs metals and other materials. Collection of these raw materials as well as the manufacturing process are often run using fossil fuels. After manufacture, the turbines need to be transported to the location of the wind farms.

Further, the construction of the wind farms and the setting up of the turbines are an additional assault on the environment. It requires 60 gallons of oil to lubricate the tur-...
(Pause.)

MR. DANNER: Did we just disconnect?
(No response.)
MR. DANNER: No? Okay.
Carol [sic] Brenniman, I'm afraid we lost your connection.

All right. At this point that is everyone who has signed in to speak.

Let me ask if there is anyone on the call who has not spoken and did not sign in who wishes to speak this evening. You can either use the raise your hand function or simply speak up.
(No response.)
MR. DANNER: All right.
Hearing nothing, that concludes the public comment this evening.

We have -- again, I want to make clear that we will be receiving written comments.

Let me ask my colleagues, do we have a cutoff date for written comments at this point?

MS. RENDAHL: Commissioner Danner, it's usually a week after the hearing is concluded. I believe the hearing concludes next Wednesday, the 1st.

MR. DANNER: Okay.
MS. RENDAHL: So I believe the deadline would be the 8 th in our --

MR. DANNER: Okay.
MS. RENDAHL -- usual practice.
MR. DANNER: All right.
That is my understanding as well.
So we will be receiving written public
comments through February 8th. And as you can see on the slide, here are the ways to provide comments.

MS. RENDAHL: Commissioner Danner, there was a hand up from someone with the initials "DEK."

And I don't know if that person wished to speak or not. I just wanted to let you know.

MR. DANNER: Okay. I do not -- I do not see that.

Andrew Roberts, do you?
(No response.)
MR. DANNER: All right. Let me ask again.
Is there anyone on the line who wishes to speak to us this evening?
(No response.)
MR. DANNER: Okay.
MS. BRENNIMAN: I think $I$ was cut off. But maybe it ran too long?

MR. DANNER: Well, I do see a "DEK" with a hand up.

MS. KELLOGG: Hi, there.

This is Devon Kellogg, DEK.
MR. DANNER: All right.
And how do you spell your name?
MS. KELLOGG: It's D-E-V-O-N, Kellogg
$\mathrm{K}-\mathrm{E}-\mathrm{L}-\mathrm{L}-\mathrm{O}-\mathrm{G}-\mathrm{G}$.
MR. DANNER: Okay.
And do would you wish to comment this evening?
MS. KELLOGG: Yes.
MR. DANNER: Okay.
MS. KELLOGG: Although I am a novice. So
I'm trying to just incorporate all of the reading through the summary of the CEIP and listening to the testimony.

I just wanted to just share my concerns about meeting the climate goals of the CETA.

And just to address some of the concerns people are having about, one, the birds, about the wind turbines. I know that Autobahn, who is very concerned about bird welfare, they actually support clean energy and wind as part of that. It's just a siting issue, where they're located.

And I know that if you're comparing that to, like, buildings, it's a very small fraction. So there's -- I don't want to say it's not a concern. I just think that the bigger concern of the climate is

1 much more applicable to the bird survival.

1 listening to my thoughts.

Thank you.
MR. DANNER: Thank you.
And we very much appreciate your coming out tonight and offering them to us.

So thank you very much.
I see another hand up. Anne K?
ANNE K: Yes. I didn't sign up to
comment. So I know you're at the end of your time. So
I humbly request a few moments for actually my husband, Richard Leeds, here to make a comment.

MR. DANNER: All right.
ANNE K: All right. Thank you.
MR. DANNER: He is welcome to go ahead.
ANNE K: Thank you.
MR. LEEDS: I was hoping that you might have information for the comparative environmental impact, both in the -- in the full -- full gamut of impacts comparing wind with -- with fossil fuels of different types, natural gas, oil and coal.

I've certainly seen huge amounts of devastation at the mining level, the railroad transportation level, the refinement, the burning, and certainly the number of wind turbines to equal -- a fossil fuel plant is not one-to-one, so $I$ would think

1 that there might be something in the per kilowatt hour
2 or megawatt hour or hundred megawatt hour production so
3 that we could get a better understanding of the
4 comparison of the environmental damage done in the --

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    (No response.)
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MR. DANNER: All right.
In that case, we have come to the end of our public hearing tonight.

As I said, we will continue to receive public comments in writing. As you can see on the screen, you can email comments to comments@utc.wa.gov. We also have a public comment forum. And a PO Box, PO Box 47250, Olympia Washington 98504.

So with that, unless my colleagues have any other comments that they wish to make tonight?
(No response.)
MR. DANNER: All right.
Hearing nothing, we will adjourn this meeting.
And thank you all for participating. We really appreciate it. This is a very important part of what we do.

So with that, thank you.
We're adjourned.
(Public Comment Hearing adjourned at 7:07 p.m.)
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STATE OF WASHINGTON
COUNTY OF PIERCE

I, Tia Reidt, a Certified Court Reporter in and for the State of Washington, do hereby certify that the foregoing transcript of the Public Comment Hearing, on January 24,2023 , 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 January, 2023.
/S/ Tia B. Reidt
Tia B. Reidt, RPR, CCR 2798
NOTARY PUBLIC, State of
Washington.
My Commission expires 5/15/2026.

