

2019 Integrated Resource Plan (IRP) Advisory Group Meeting #3

Hilton Bellevue

Skyview Room

300 NE 112 Avenue Southeast, Bellevue, WA 98004

May 21, 2019

4:30 – 8:30 p.m.

Attendees

- James Adcock, PSE ratepayer
- Lylianna Allala, Representative Pramila Jayapal
- Ruth Allen, 350 Seattle
- Bart Arenson, Vashon Climate Action Group (VCAG)
- Andrea Avni, VCAG and 350.org
- Julia Back, 350 Eastside, Sierra Club
- Holly Bersham, 350 Seattle
- Stephanie Barbee, VCAG
- Julie Beffa, PSE ratepayer
- Jim Bernthal, 350 Seattle
- Jonathan Betz-Zall, PSE ratepayer
- John Bito, Extinction Rebellion Seattle
- Liepa Braciulyte, Cascadia Climate Action
- Rachel Brombaugh, King County
- Joni Bosh, NW Energy Coalition
- Paul Bruno, Climate Reality Project
- Thomas Bozeman, Evergreen Unitarian Universalist Fellowship
- Kathy Carr, Eastside Climate
- Lisa Chambers, VCAG
- Chris Chapin
- Barbara Church
- Martha Clay, 350 Seattle
- Claire Cleve, 350 Seattle
- Fiona Cofeed, Coalition of Eastside Neighborhoods for Sensible Energy (CENSE)
- Eymhy Corpus, Sierra Club
- Jerry Cufley, Washington Physicians for Social Responsibility (WPSR)
- Nic Curtright
- Patsy Dahl
- Kimberly Danke, Sierra Club
- Nate Davern, PSE ratepayer
- Andrea del Moral, 350 Seattle
- Bob Dily
- Annemarie Dooley, WPSR
- Anna Doty, Washington Environmental Council (WEC)
- Marian Dyan, Sierra Club
- Kristine Elsiné
- RaeAnn Engdahl, PSE ratepayer
- Karen Ernst, Sierra Club
- Joe Floyd
- Maureen Foley
- William Golding, Tacoma Stadium District
- Stephen Graham
- Suzanne Greenberg, VCAG
- Eddie Gruffitts, 350 Seattle
- Faye Haas, PSE ratepayer
- Lin Hagedom, 350 Eastside
- Ryan Harris, KOMO Radio
- Karen Hall
- Warren Halverson, CENSE
- Norm Hansen, IRP Technical Advisory Group (TAG)
- Stephanie Hillman, Sierra Club
- Gwen Hanson, Citizens Climate Lobby
- Susan Hosfund, 350 Seattle
- Adam Houston
- Liz Illy, VCAG
- Nancy Johnson, Sierra Club
- Silvermoon Johnson
- Steve Johnson, Washington Utilities and Transportation Commission (WUTC)
- Kevin Jones, VCAG
- Nathaniel Jones, City of Olympia

- Sandra Jones, Interfaith Climate Action First Hill
- Ender Kannen, Sierra Club
- Jennifer Keller
- Devon Kellogg
- David Kipnis, 350.org Seattle
- Daniel Klinkner, 350 Seattle
- William Kupinse, Tacoma resident
- Gayle Leberg, Interfaith Climate Action
- Steve Lewis, Sapere Consulting
- Jess Lee, 350 Seattle
- Katherine Leggett, 350 Seattle
- Christi Lewis, Sierra Club
- Steve Lewis, Sadere Consulting
- Nancy Lewis-Williams, VCAG
- Cynthia Linet
- Virginia Lohr, IRP TAG
- Angela London, VCAG
- Renee Majour
- Kate Maracas, Western Grid Group
- Nathan McCurtain, WEC
- Don Marsh, CENSE
- Marilyn Mayers, East Shore Unitarian Church, 350 Eastside
- Marlene Meyer
- Gail Mitchell
- Claire Mocha, 350 Seattle
- Rachel Molloy, PSE ratepayer
- David Morton, PSE ratepayer
- Sally Neary
- Jinhee Noh, Sierra Club
- Gene Olson, Sierra Club
- Lynne Olson, Sierra Club
- Stacy Oaks, 350 Seattle
- Court Olson, Shift Zero
- Kathie Ossenkop
- Kaloni Palmer
- Joy Paltiel, CENSE
- Mary Paterson, 350 Seattle
- Karl Pauls, PSE ratepayer
- David Perk, 350 Seattle
- Dominic Perould
- Harriet Platts, Seattle First Baptist Church
- Sarah Richards, People for Climate Change
- Spencer Riddering, 350 Seattle
- Lynn Ritter, 350 Seattle
- Phil Ritter, 350 Seattle
- Raj Rolorson, Tukwila resident
- Noah Roselander, VCAG
- Dwight Rousu
- Debbie Rowe, Sierra Club
- Steve Rubicz
- Amy Sacks
- Hillary Sanders, 350 Seattle
- Diane Shaughnessy, 350 Tacoma
- Ruth Sawyer, Sierra Club
- Nalin Singal, PSE ratepayer
- Nancy Shimeall, PSE ratepayer
- Martine Sorets
- April Stevens, PSE ratepayer
- Sue Stronk, CENSE
- Marilyn Subala, PSE ratepayer
- Daniel Swanson, Swanson's Shoe Repair
- Kara Sweidel, 350 Seattle
- Eugene Takahashi, PSE ratepayer
- Patricia Tuor
- Homer Vantus, CENSE
- Cynthia Vayitier, CENSE
- Rich Voget, Sierra Club
- Mark Vossler, WPSR
- Elizabeth Wagner, 350 Seattle
- Diane Walkup, 350 Tacoma
- Jess Wallach, 350 Seattle
- Nikie Walters, Tacoma resident
- Steve Way, 350 Seattle
- Elyette Weinskin
- Paul West, 350.org
- April Williams
- John William, VCAG
- Imogene Williams, First Hill Climate Action Group
- Caryl Worcester, 350.org
- Whit Worcester, 350.org

Guest speakers

- David Mills, Puget Sound Energy (PSE)

Project team

- Diane Adams, EnviroIssues
- Diana Gil-Vargas, EnviroIssues
- Elise Johnson, EnviroIssues
- Michele Kvam, PSE
- Kaiwen Lee, EnviroIssues
- Irena Netik, PSE
- Phillip Popoff, PSE
- Allan Vann, EnviroIssues

Meeting objectives

- PSE provides an overview of the Clean Energy Transformation Act.
- PSE provides 2019 IRP updates.
- PSE listens to public input on the IRP.

Welcome

Diane Adams, IRP Advisory Group (IRPAG) facilitator, opened the meeting at 4:40 p.m. and welcomed the group to the third 2019 IRPAG meeting. Diane reviewed the meeting agenda, meeting objectives and ground rules and provided safety information to attendees. Diane also reviewed the public comment guidelines. For details, see the *IRP public comment guidelines* document as distributed and posted at www.pse.com/irp.

Clean Energy Transformation Act overview

David Mills, PSE Senior Vice President of Policy and Energy Supply, provided an overview of recently passed Washington State legislation and how PSE will incorporate this legislation into its planning process. For details, see the *Washington Clean Energy Transformation Act* presentation as distributed in the meeting packet (available on slides 5 through 9 of the meeting materials posted at www.pse.com/irp).

David concluded this presentation by expressing his interest in listening intently to the public comment period and promising his undivided attention.

2019 IRP updates

Irena Netik, PSE director of Energy Supply Planning, provided a presentation updating attendees on the IRP process and key changes to this process based on the passing of the Clean Energy Transformation Act (CETA). Irena also provided an updated timeline for the completion of the 2019 IRP. For details, see the *IRP update* presentation as distributed in the meeting packet (available on slides 10 through 19 of the meeting materials posted at www.pse.com/irp).

PSE listening session on the IRP

The listening session began with facilitator Diane Adams reviewing the comment period guidelines. Each commenter was given two minutes of speaking time, with the speaking order determined by lottery. Lottery tickets were drawn 10 at a time, with participants whose tickets were drawn queuing at the front of the room. Those who wished to provide public comment but arrived late could still sign up for the lottery and have their ticket added to the pool if they signed up prior to 8:15 p.m. Elected officials and tribal officials were invited to provide public comment first before beginning the lottery draw. For detailed comment guidelines, see the *IRP public comment guidelines* document as distributed in the meeting

packet and posted at www.pse.com/irp. Summary of the speakers are provided below in the order of the lottery draw.

1. Nathaniel Jones, Olympia City Council: I'm here to represent 53,000 residents and employees who use PSE power, both electricity and gas supplied PSE. Olympia, upon hearing about the Green Direct program, jumped to sign up for this 100% renewable energy. We were one of the first to sign an agreement for 20 years, for Green Direct. We were excited by this opportunity provided by PSE. As the renewable energy system becomes more efficient, we appreciate you sharing savings with customers. We want to move forward with you. Your customers in Olympia also appreciate your support for clean energy legislation. You've broken new ground for WA and raised the bar for other states. My constituents are appreciative for you finding a pathway to clean renewable energy. Without the effort to find a clean energy, our efforts in Olympia would be overshadowed by natural gas emissions. As I listen to my constituents, they have some concerns. Today, I want to elevate their concerns. There are many people today who have concerns about the LNG plan. Specifically, my constituents in Olympia simply do not want to pay for construction of that plan. My understanding is that 40%, up to \$140 million, will be passed on to rate payers. People in Olympia do not want to pay. We have no trouble paying for our fair share for transitioning to clean energy, but the current plan is not fair to people in my hometown. We value our relationship with PSE. We will tell you when we like something and when we don't. Thank you for your work on Green Direct and clean energy. Please change your direction on Tacoma LNG plan.

2. Stephanie Hillman, Sierra Club: I want to thank you for this listening session. I'm here in solidarity with the Puyallup tribe, for the LNG facility being built in Tacoma and the disregard for the tribe and community. I stand with the governor, who said he can no longer stand with the project. Regarding the opposition, I was reading a letter from the attorney general in response to the tribe's concerns with permitting. I was also reading comments from the Department of Ecology on the sole sourcing from British Columbia; a letter from the Human Rights Commission that the project is bearing on the human rights of the Puyallup tribe and immigrant community; and the Puyallup Tribe's letter to the UTC regarding safety concerns with siting and the needs for the facility regarding the many changes since the FEIS was submitted. We need to recognize the considerable and mounting opposition to this proposal. My concerns are not just safety and environmental, but unjust issues where public dollars will subsidize PSE's for-profit LNG project without recovering their costs. At this point as it stands rate payers will be on the hook for 43% of the cost while only using 2%. If you are a rate payer, you should voice your concerns.

3. Dominic Petard, Seattle resident: I live in Seattle. I have friends in Tacoma. I am a consumer of energy, but there are people living in Tacoma who live on the tide flats. They have lived there for 10,000-15,000 years, nobody knows really. They have lived there a long time. It's their land. It's a tidal flat, it's squishy, it's built on top of a Superfund, which is a pile of toxic slag. It's on a fault line. The land is not PSE's, the land belongs to the Puyallup Tribe. The permits have been given to a facility which is not the facility that is being built because all the justifications have been changed. The money will be paid by people who stand to be killed by the thing. My message is, "PSE please stop killing everybody for a buck." Thank you very much.

4. William Golding, Tacoma resident: I currently live in the Stadium District, so I oversee the LNG plant and it is a concern. I want to acknowledge we are meeting on the ancestral lands of the Duwamish people who were in the 1855 treaty, and the historical land and treaty lands cannot be forgotten. And the laws of the Medicine Creek treaty are still active, and it is interesting to see this project carry out the history of abuse. As a citizen concerned about climate change, we cannot build LNG because it is detrimental to future generations and we need to take a different route. Different governments are saying they want to go in a different direction and these actions by PSE are directly opposing those efforts. We need to move to 100% renewable energy, and no more LNG.

5. Anna Doty, Washington Environmental Council: Hi, my name is Anna Doty. I'm the Fossil Fuel Campaign Manager with the Washington Environmental Council. I'm here in solidarity with Puyallup Tribe in opposition of the LNG facility. The LNG facility has not been adequately assessed using the best available science. There has not been adequate consultation with Puyallup Tribe. There are threats to the Puyallup Tribe and the detention center. The commission has also sent concerns citing the UCC supplemental statement to address concerns raised by the tribe. Washington is leading the nation in equitable climate policy, and we cannot allow fracking policies to undermine that. Tacoma LNG is to provide energy with no enforceable limits. The most recent SEIS does not evaluate all possible scenarios of these uses and does not use the best available science for impacts of fracked gas. We should not use fracked gas infrastructure that hasn't been evaluated. To move towards 100% clean electricity, move towards maritime fuels that protect port communities.

6. Richard Voget, Sierra Club: Currently you have no incentive to curb the cost of energy production because you can expect the UTC to have a return on investments you can profit from. Hopefully, you can think of a new way. The fear expressed from utilities on the 100% clean electricity bill is that it would be too costly or unreliable to meet the new target without using gas fired peaker plants. Solar energy is technology driven and technology rapidly changes. In 2007 the first iPhone was introduced. Look at what has changed since then. Surely solar energy and batteries will be ready for peak demand situations sooner than 2040, and the cost of renewable energy keeps decreasing. Offshore wind production increased. Renewable energy will cost much less sooner than 2040. Natural gas will become more expensive for two reasons. The cost will be so much that the production subsidies will be removed, and someone will sue for damages due to health problems from fracking. Then you will be frack out of luck. Please only invest in renewables going forward.

7. Virginia Lohr, PSE ratepayer and TAG member: Vice President Mills, I want to begin by acknowledging we're on the ancestral lands of Duwamish and want to thank you for listening to us. Early in this process during a break, a PSE staff member explained to me that this process was about "threading the needle" to get the commission to approve the plan. This person didn't say this plan was about humanity's future. During a TAG meeting, a frustrated member of the public asked what it'd take for PSE to move towards a fossil free future. She was told we need a new law. We have a new law, and I'm disappointed that the IRP does not include a livable future for humanity and other beings as well. I do not mean to be disrespectful, but sometimes I feel your IRP team are playing games with the TAG. Please have your IRP team work openly and honestly with us to move towards a livable future for all.

8. Nancy Shimeall, PSE ratepayer: I'm from Redmond, living on Duwamish land. I came here as a ratepayer and the owner of a Douglas fir farm on Skagit tribal land. At their maturity, there will be 15,000 trees. They should absorb large amounts of carbon dioxide per year. There are more than 42 million acres of forest land and we want all of them to live. However, the changing drought conditions will lead this state to lose one third of the land for growing Douglas firs. That means today native tree are already stressed. Gas is over 20 times more potent than carbon. You must include the cost to all of us, the harm using LNG will cause. How much of the 42 million acres will survive? Over the next 20 years I will be trying to keep my trees alive. In your planning you must account for changing futures. Don't use old data. In your IRP, for the next 20 years while we are keeping our trees alive, we ask you plan and execute a plan towards only renewable energy.

9. Kevin Jones, Vashon Climate Action Group: I appreciate the opportunity to speak to you. I want to acknowledge traditional Duwamish lands. I want to talk about my values too; the forests I hike in are important to me, are at risk now, we can all see the smoke. There are more communities that are impacted more than us; much of this is driven by climate. The Interagency Working Group document cites high impact social cost of carbon value. There are low probability high impact changes; regulators could see what the consequences are of decisions that you as a company and IRP team will make. I think it's important that regulators see implications that the Interagency Working Group intended. I'm curious if you would agree. I'm curious if you would ask your IRP team to include these values. I would like PSE to clarify their position on this. We have an IRP TAG meeting in a week. I am an IRP TAG advisor as well. I would appreciate clarification at that meeting next week. I appreciate this opportunity to talk, this is my home, and let's make it a home for all as well.

10. Adam, PSE ratepayer: My name is Adam. I'm a North Seattle resident, PSE ratepayer, and educator at the University of Washington. I study and teach about sustainable agriculture, and I work with young people who are interested in sustaining our food supply and justice and equity. All of these are threatened by PSE. I'm here with students and young people who will live in the world we are creating. I stand in solidarity with the Puyallup Tribe and hope PSE will transition to green energy as soon as possible.

11. Kara Sweidel, 350 Seattle: I am here tonight as a PSE ratepayer. I opened my bill last month and there was a flyer in there that talked about a solar and wind farm that PSE has. Then I found out you can go and tour that. I wish I was thanking PSE for building onto that rather than having to say I am opposed to the construction of the LNG facility. Earlier David said he believed in markets, and I believe in science. The SEIS that has been done so far has used older science, there is newer science ; we need to include fracked gas impacts. As mentioned earlier, it's being built on tide flats, it's in a dangerous place, and near humans who live and work there. The Puyallup tribe has said they oppose it, there has been no proper consultation. That's a problem that needs to be addressed. As a ratepayer, knowing we will pay 43% but will on peak days use 2%; kind of offensive that I will be used to pay for that ; a maritime company, Maris, has committed to carbon neutrality, has spent a billion dollars to do research on that. I would like to see PSE do research and development into renewable energy sources. We've known about climate change for a long time, energy companies should be looking into improving those things.

12. David Perk, 350 Seattle: You guys look great, it is a sea of red. I'm grateful to be here on Duwamish land. I'm a concerned citizen and a volunteer with 350 Seattle. Mr. Mills, when you were in Bellingham you mentioned you watch a lot of horror films with your sons. I got you a book. It is called "The Uninhabitable Earth". It describes what will happen if we fail to meet our Paris Accord targets, something every country is failing to do. Please read it, and then share it with your CEO and your board. Climate scientists say we need to reduce emissions by 10% per year, and fracked gas won't help. The impacts of fracked gas include missing and indigenous women, poisoned water, the list goes on. Gas conservation needs to become PSE's other top priority. It isn't enough to eliminate fracked gas in new construction, but to move people off of gas. And it needs to be a priority in next year's legislative session. Are there UTC folks here? There is no justification for the extension of the North Seattle pipeline. The dissenting FERC commissioner said the greenhouse gas emissions were not followed at the federal level, and Snohomish county is not equipped to do that analysis. PSE needs someone to do that for them. Thank you, and I hope you enjoy the book.

13. Victoria Leistman, Sierra Club: Good evening, my name is Victoria Leistman, I'm an organizer for the Sierra Club. I am commenting in solidarity with Puyallup tribe. I am from Seattle and Duwamish land. I just want to bring light that, it seems remarkable, that the first lottery ticket was Stephanie Hillman ; it seems wonderfully, charismatically, universally something bigger that that would maybe happen. So, I want to point out that the Power Past Fracked Gas Coalition is part of the tide; we have stopped every single fossil fuel project that has been proposed in WA state. I would love to know why PSE thinks they can bully their way into building a facility without permits they need and violating the Medicine Creek Treaty. It's a bullying tactic and we're going to make sure this facility does not get built. In full transparency, because Sierra Club is really transparent with our activists and supporters, PSE requested that they come to our office last week. We had a conversation and dialogue over all the issues. We gave them T-shirts, maybe for another occasion when they announce they'll stop building the fracked gas facility. There are better alternatives than bunker fuel and Washington state deserves better and we will hold PSE accountable until they stop building LNG facility.

14. Nathan McCurtain, Washington Environmental Council: I live in Tacoma in the Stadium District, so I have a great view of the port and the LNG facility. I'm commenting today on PSE's use of fracked gas and continued work on the LNG facility on Puyallup land in the City of Tacoma. I've had the pleasure of working with activists in the city of Tacoma who said no on methanol and are saying no on LNG and respect the tribe and work with the people of Tacoma. They are inspiring and the reason I'm up here. It is time to turn the page on the LNG plant. Governor Inslee did. We can't lock ourselves into a fossil fuel future when you consider the steps that go with it. We need to turn the page on the City of Tacoma and building without a full permit, and that is hurting the tribes and their future. We need to respect the tribe. There has not been consultation with the tribe and the full effects of the environment. The future is not fracked gas. We heard we are in danger of losing our gas supply and I didn't hear why. I had a guess it was because of the BC pipeline explosion, and we are supposed to think this a good reason to build a facility in Tacoma? I am not filled with a lot of confidence for it.

15. Gene Olson, Sierra Club: My name is Gene Olson. I'm a PSE customer. I live in Redmond WA, and I'm a member of the Sierra Club. The May 27th issue of Time Magazine featured Greta Thunberg on its cover as one of the next generation influential leaders. She's a 16-year old climate activist from Sweden and leader of climate action strikes to wake up the adult world on necessary actions against climate change. When she talks, she likes to tap the microphone to and ask, "Can you hear me?" What she's asking is, "Are you listening?" Now is the time to fully implement the clean energy bill and not find ways to circumvent it. Support rulemaking upstream [to oil well head to in use by doing so], using modern methods of measuring it and not numbers you heard about it. Thank you for listening.

16. Karl Pauls, PSE ratepayer: I'm a resident of Capitol Hill and a PSE ratepayer. This is the IPCC 1.5 degrees report. It accounts for that new science. Page 16 shows what we need. I did the math, and this is our carbon dioxide progress. It should be going down. Here is the zero-emission nuclear process. It should be going up. The IRP and the TAG are in negligence if you did not submit an RFP for this. Jay Inslee is on the same page here. I recommend the cost born by the customer respects the cost-buffering and not rent seeking so that when those costs go up and down with supply that we are not charged for this giant facility without benefit. So, when it comes time to decide how we will invest our sources, you will see companies have freedom of speech. What happened in Pennsylvania, we saw gas companies and environmentalists on the same side. We may see the time when gas and fossil fuel interests are fooled into believing we are sustaining the science. Pennsylvania is about to lose 90% of their clean energy legislation because of that. We have a privately held company and Energy Northwest, which is a cooperative owned by our PUDs. That's owned by us.

17. Barb Church, Tacoma resident: Hi, my name is Barb Church. I'm a resident of NE Tacoma. I live a couple miles from LNG facility. This whole project started off so sneaky. I live so close to this project and they didn't notify anybody beyond 400 feet. There were no residents [within] 400 feet. We didn't know anything about it. Once they started construction with all these huge trucks from out of state, we were supposed to be bringing in jobs for local people. These were all out of state. We were bringing in out of state jobs, they were breaking down the roads, laying pipe, and the neighbors right across the street from this were saying what's going on? They called King 5 news who came out to my house to tell me and a bunch of neighbors what was going on. There were some local residents from Redefine Tacoma and from Advocates for Cleaner Tacoma who sat down and shared what they know because they'd done the research. Since then, I've followed a lot of this project. I was at the Tacoma City Council meeting with the tribe and their elders opening up their hearts, to open up what their land meant, and the tribal elder Ramona Bennett said we just want our piece of the sky. And then our city council votes on expanding fossil fuel industry and this project is already getting its foothold. It's not just LNG but also restaurants and other companies that want to use LNG to move forward on their projects. It's liquid methane.

18. Stephanie Barbee, Vashon Climate Action Group: It is great to be here at this listening session. It is brave of you. These are exciting times we are in because we are in the middle of transforming the energy economy. That's what I see. I want to offer some expertise from my work. I'm a therapist. I do a lot of listening. I listen for a living. I want to offer to the IRP team, Irena and David and Philip, please listen to the volunteers on the committee who are offering their expertise. I invite you to listen to your hearts, really listen. It isn't strictly an intellectual thing you are doing. I would invite you to think about who you love, and what you love. Basketball, gardening, your country, children, grandchildren, the murdered and missing indigenous women who are at the man camps of fossil fuel extraction? This planet, this biosphere, there isn't another one around. We have this one chance to get it right. We are with you. I'm the one who asked the

question of “What do we need to do,” and you said, “Change the law.” Well we did. How do you make the money and how do you lead our country into the new economy?

19. David Morton, PSE ratepayer: Hi, I’m David, I’m a ratepayer. The IRP says it must consider the risks associated with environmental effects including CO2 emission. While PSE has analyzed its CO2 emissions, a thorough analysis of methane emissions is lacking. It’s not unlikely that scrupulous measures are taken to detect methane leaks from the wellhead all the way to PSE’s destination including power plants and LNG facility. Reports show that US natural gas is leaking way more methane than previously thought. Solar and wind tech are becoming price competitive much faster than predicted. The IRP ignores most recent costs in renewable energy. The 100 percent clean energy legislation require PSE to come clean and promises on green energy by Green Direct and the promises of the marketing campaigns. PSE knows its current and future combustion of fossil fuels and leakage of methane; will continue to contribute to global warming. PSE plans to sell more electricity by burning fracked natural gas by its combustion of natural gas and leakage of methane. PSE has created public nuisance in which public suffers rising seas, wildfires, hurricanes, heat waves, and other impacts of climate change. Please, no new fracked gas infrastructure. Thank you.

20. Jennifer Keller, PSE ratepayer: I want to acknowledge we are guests on Duwamish land. Someone was concerned about the climate legacy we are leaving. Now is the time to move to a just transition to clean energy. The CETA brings us all forward into a time where it is clear we are shifting our sources and efficiency practices. Washington made it clear it is time to do that. I came here to let PSE know that I care, and I for one will be watching and listening to hear how PSE is pressing rapidly forward into a clean energy future. Now is the time. PSE’s IRP and clean energy action plan will lay out how we get to that goal. That means the plans must not propose the construction of new gas infrastructure, including two proposals moving forward in their resource solicitation. Phase out existing gas plants. Now is the time. I hear PSE is committed to their customers; their customers who deserve a livable future and deserve to breathe clear air in the midst of summer. To the extent that PSE is committed to their customers, PSE is committed to moving to 100% clean energy for all its customers.

21. Nikie Walters, elected PCO in 29th legislative district in Tacoma: We are here on Duwamish land. I reside on the land of the Puyallup where they graciously allow me to live. We are all guests on these lands. I wanted to bring up that by federal treaty, the Puyallup tribe is entitled to have consultation. Without consultation, PSE is in violation federally with that. Recently, Bob Ferguson stated that this consultation process is effective immediately. So, because this LNG refinery is a proposed project, they are still entitled to this consultation. I hope you guys contact Bob Ferguson before he comes after you guys. I also wanted to talk about that PSE is still found in violation from Puget Sound Clean Air Agency because they don’t have their construction permit. This is not OK. There is a lot wrong with this project that I don’t have time in 2 minutes to go over. I know you guys have heard all of this from us for years now. It’s time to start acting. Do this government to government, government to agency. The tribes deserve respect. They are entitled to this by their treaty. Governor Inslee is opposing the project in Tacoma and Kalama now. And LNG the ratepayers use peak shaving, it will be 2% or less, but they’ll be paying for almost half. The impacts on human life and our planet far supersede that.

22. Imogene Williams, 350 Seattle and First Hill Climate Action Group: I'm Imogene Williams. I'm in First Hill Climate Action group and 350 Seattle and SRA? And our current emissions continue to climb, increase. Although the things that came through the legislature this session certainly were a sea of change. But still, emissions continue to rise. But it seems like people are becoming aware, that climate change is a terrible threat to our children and our grandchildren and our great-grandchildren. And perhaps you at PSE will begin to have resistance from within to PSE like Amazon. And for sure you will have resistance from all of us, increasingly. So, why don't we cut to the chase. Why don't we do this thing. Because why don't we do this thing and stop the gaming and don't use fracked gas for anything and let's do this for our children and our grandchildren, and our great-grandchildren.

23. Noah Roselander, Vashon Island Climate Action Group, 350.org and TAG member: I think we are all familiar with the data—we are facing a crisis, unless we make substantial changes, which will result in a climate which has not existed on earth in the last 100,000 years and will not support life as we know it. PSE has the ability to stop using fossil fuels. No new fossil fuel infrastructure. Stop LNG. If the future of life on the planet is not compelling enough, it makes simple economic sense. To the extent this relates to the IRP, I'd like to comment on the following: This listening session was in response to TAG member concerns on PSE's tribal relationships and decarbonization. Climate change is outside of the IRP process. The reading of the Clean Energy Transformation Act reads that they must address the needs of climate change, and the legislature said the changes must be done with regulatory changes to meet the policy. It is clear PSE is meant to meet climate change goals in their IRP process. It is integral to it and we would like a response to this before the May 29 meeting.

24. Kate Maracas, Western Grid Group: Good evening, my name is Kate Maracas. I'm a consultant to the Energy Foundation. We work in clean energy policy and try to decarbonize the grid in the west. I'm a power system engineer with more years of experience than I really want to say. I also work with the Western Grid Group for all western interconnection. I'm a governing body member of the Scenario Development Committee which is doing a lot of work that is mirroring a lot of work that PSE is going through in this process. Mr. Mills I heard you speaking a couple weeks ago at CREPC in Salt Lake City. You mentioned the RFP process that you're in now. You've seen some bids for renewables that are head scratching. I took that to mean head-scratching low. We were talking about replacing high capacity fossil fuel resources and the renewable bids were low. I and my colleagues with the Energy Foundation have identified over 20 procurement processes in the western region across 7 states that have fully negotiated bids with renewable energy - public available prices, fully negotiated bids in power purchasing. I'll mirror what Court said, we're seeing wind prices with storage under \$21 per megawatt hour, solar under \$26.50 per megawatt hour with storage. We urge PSE to take into account these numbers, understanding bids are going down. I did want to mention that we had a good opportunity to meet with Irena, Phillip, and Michele last week to discuss their view of how IRP will have to pivot to adapt to new legislation. They gave us their view. When I asked current bid prices the answer was no, we cannot rely on that. Because of trade wars, we expect long term renewable prices will go up.

25. Brian Grunkenmeyer, Flex Charging and TAG member: As a member of the TAG, I've long advocated for your utility to change its fuel mix. I'm thrilled the legislature has set your incentives correctly to further the state's goals. Consider shifting to a marginal value of conservation. If you have more targeted conservation efforts, locational marginal value would help you figure out how much money your saving through specific conservation changes. DERs seem like they pose a huge economic threat to the current utility business model. However, there will always be a need to connect individual microgrids to regional markets. You will always have a place here. Everyone is simply looking for a change in the fuel mix. If there are concerns about compensation, we can tie those to service goals like outages and tree trimming. All of these are fixable. Three years ago, I asked Phillip what the company is doing on electric vehicle charging and he said "Nothing," so I built my own system. I'm happy to talk with you about that more sometime.

26. Dwight Rousu, PSE ratepayer: I wasn't planning on talking but I got a comment sheet. OK, I'm a 74-year resident of greater Seattle, 15-year resident of lesser Redmond, and a PSE customer with solar panels on my rooftop and have grandchildren. I'm concerned we're in a severe climate and pollution crises. In the energy field, we have pollution from mercury from global winds and we have pollution of the water table from leaking, from fracking for natural gas and oil. These hazards to pollution add to the hazards of the climate crises of greenhouse gas warming and carbon acidification of oceans. The oceans that support all life forms and feed a lot of humans and provide the oxygen our whole biosphere depends upon. The future will not be like the past and a lot of the planning has been on the assumption that things will stay the same. Climate change is accelerating. I appreciate that PSE planning in 2019 is an improvement from what we saw in 2017, but I don't think that process has gone fast enough. I fear the planning is too conservative and too slow. The targets stated should be minimum targets in what is needed in what is significantly more advanced. I saw the Seattle Town Hall talk, the "End of Ice" talk; the IPCC numbers are 10 years out of date. People [Dahr Jamail] conferred said that the crisis is imminent. As a final statement, you have to speed up the process and work together with government and at all levels and technology in order to make a quicker end to greenhouse gases.

27. Phil Ritter, 350 Eastside and PSE ratepayer: I live in Sammamish. I have two grandchildren who are not going to inherit a nice place. What we've left out of the dialogue so far is a tsunami of energy that's coming from young people. I really appreciate you taking the time to come here and listen. This clean energy bill will be history in no time. We will need to move twice as fast. I represent the 350 Eastside group. The North Seattle lateral upgrade is a stupid project you need to get out of. By the time it gets gas in it, instead of needing an 8-inch to 20-inch upgrade, there won't be anything connected to it because we won't need your gas.

28. Kristen Bryant, PSE ratepayer: My name is Kristen Bryant; I live a few streets down in Bellevue. I learned initially from having to come to a listening session, for PSE to listen to us, I had to listen to PSE. I learned they already have strong opinions, they draw conclusions, and they are not willing to consider change. Every point I listened to a PSE rep say [why] we couldn't switch to clean energy soon enough had a counterpoint that wasn't being considered. I also have spent holidays, days off, evenings working on clean energy and saving trees and never in the comfort of the Governor's office. When PSE has a natural gas explosion in Canada, they emailed me to turn off electrical appliances. I learned that natural gas wasn't reliable. It's not safe. Climate consequences are much more dangerous than the planning that PSE shows. It's just the fact that PSE is depending on taxes and shared atmosphere to clean up spills or fires. I know people don't want rates to go up. PSE needs to stop using its own PR to feed that fear. I have a personal story that demonstrates what I mean. Years ago, I lived in Pennsylvania, [energy company name] told local media that the clean energy plan would raise rates. The reporter just wanted me [as Sierra

Club rep] to say they had raised rates because the energy company's PR said they would drive up rates. Use your PR to save our planet.

29. Andrea Avni, PSE ratepayer: My name is Andrea Avni. I'm a fourth generation Puget Sound resident, and a citizen of our injured planet earth. My sixth-generation granddaughter will make an impact on our changed planet. I recycle and compost, and I am a vegetarian. I take public transit. I had an energy audit. My appliances are new. I hang my laundry outdoors. My garden is pesticide free. I vote. I avoid single-use plastics. I make donations to the Nature Conservancy and the PCC Farmland Trust. I also drive an electric vehicle. Even though my house has grid tied solar panels that generate 52% of our energy, if I charge my car at night the only power utility choice on Vashon is PSE. My all-electric car is powered by 70% coal or fracked natural gas, according to the fuel mix disclosure. As a human I'm doing all I can to reduce my impact. Is PSE making a similar effort fast enough? Is it directing money to renewables fast enough? Or is it all about profit disguised as greenwashing? Money won't matter when planet earth is reduced to a rock orbiting around the sun.

30. Ruth Sawyer, Sierra Club: I work with the Sierra Club and I'm from Duwamish land and I stand with the Puyallup tribe. I am actually working for a campaign with the Sierra Club called "Beyond Coal." I appreciate your commitment to follow the law and stop using ratepayer money for coal in 2035. I'm concerned your commitment doesn't go far enough in the spirit of what the law intends. We know the 100% legislation mandates a certain thing, not mandate that Colstrip is shut down. I'm here to ask PSE to make sure Colstrip gets shut down. What that means is that you do not sell to another company that would prolong the life of the plant and that also means that you also do your best to actually change the agreement that has you paying 175 million dollars in new capital expenses in 2022. Too many expenses will prop up the plant for future use. You need to phase out Colstrip funding immediately and stop putting shareholder money into propping up the plant.

31. William Kupinse, PSE ratepayer: I'm a resident, parent and educator from Tacoma. I'm here today because the LNG plant threatens the ancestral lands and treaty rights of the Puyallup Tribe. It threatens the lives of those at the detention center and threatens this planet. People have spoken so eloquently that it is difficult to come up here. I want to speak to the role PSE-sponsored corruption plays in our public policy. PSE corrupts the political process through campaign contributions in Tacoma. I don't think a regulated utility should be able to influence that process at all. I also brought up the regulatory process. PSE has brought the PSCAA Dennis McLerran onto Puget LNG, which is the shell corporation, which is outrageous. It is evident in the UTC approval of passing along 43% of the cost of which rate payers will benefit 2%. PSE corrupts the public understanding of science by standing behind a SEIS on self-reported data by the fossil fuel industry, which creates a false impression, which corrupts our ability as a public to participate. PSE should stop polluting the air and the process. We know what you are doing, you know what you are doing, and you need to do better.

32. Suzanne Greenberg, Baker Precinct Committee Officer: Hi, my name is Suzanne Greenberg, PCO on Vashon Island. I'm an elected official. I want to acknowledge I'm here on Duwamish land and also Vashon Island is on Coast Salish land. I'm also a PSE ratepayer. I came here today because I'm deeply concerned about climate change and the future of the planet. I'm opposed to investing in new fossil fuel infrastructures. Scientists have been clear we need to change our behavior quickly and absolutely. Today, I attended an event at work. We were doing a time capsule to stow away for 25 years. The woman leading it said, "I wonder what it will be like in 25 years, will the world be the same or change?" Will we be facing snowpack that is melting far too fast? Will summer fires be so intense that most children will be breathing with inhalers? Will we have more intense immigration policies as refugees from climate change flee; the decision

energy companies make now will affect us. David, you said reliability is your bottom line. A livable future is far more important than reliability. The ideas that go with that is immoral. I can live with times where power goes off temporarily; I cannot live in a future that is nightmare.

33. Katherine Leggett, 350 Seattle: I just tried to think of something new to say. I'm here tonight to show up to represent my 4-year-old and 6-year-old. Camille, the 4-year-old, will be 15 in 2030 and Claire will be 18. Since the IPCC report came out in October, I've committed to showing up to events like this. I want to show up to do what I can with this crisis. Personally, I'm doing whatever I can. I know that we are up against a political and financial system benefiting from a fossil fuel industry. I'm showing up with all of you and I'm inspired by all of you. I know that together we are more than ourselves. Thank you.

34. Stacy Oaks, 350 Seattle: Hello everybody. My name is Stacy Oaks. I'm an organizer with 350 Seattle. I'm a young grandmother. I also have comments signed by 1,800 people that I'll read part of today. The petition is for the Utilities Commission and PSE. I'm not going to bother to read the first part. We've already talked about how silly it is to pay 43% for something we barely use. The human cost of carbon must be given the same importance as the most valuable life; cost of living and working near the facility, breathing in emissions daily, as well. As for the health effects on relatives living near the fracking sites, values must be placed on quality of life. Fracking poisons millions of gallons of water near the wellhead. We must acknowledge complicity of man camps and missing and murdered indigenous women. We must count cultural wounds of environmental racism. Value must be placed on upholding treaty rights; informed consent for indigenous [people], worker safety, and possible effects on food supply. We have to give weight to how this project will contribute or mitigate climate change. The human cost of continuing to burn fossil fuel is nothing short of genocide for future generations. This is unacceptable. PSE is listed as a fossil fuel corporation. If you asked your elected official to sign the fossil free pledge, they cannot take money from a fossil fuel company. Ask your elected not to take their money.

35. Paul West, 350.org and PSE ratepayer: I live on Duwamish land. It was never ceded to the United States government. So many things have been said. One thing I want to touch on: with the carbon footprint of fracked gas, the best available science on that is still undecided. As another speaker said, the emission of free methane from fracking operations is greater than we previously understood, and methane is 34 times more potent than carbon dioxide. This must be measured and calculated. I want that to be in the record. I want that be explored as best as possible before a decision is made on a new plan. The other thing I want to touch on is that the goals of PSE are possibly not representing what the ratepayers want anymore. The goal of uncompromised reliability, the goal of consumer protection, those are good but originated in the 70s and 80s when the consumer was king, and our home life was considered sacred. That's all secondary when we're talking about a society that is falling apart from climate refugees and environmental destruction and potential scenarios we are facing with changing climate. They aren't unimportant goals, but they need to be put into perspective. Not all goals are equal, and the reduction of emissions is primary above all else.

36. Jessica Lee, 350 Seattle: A lot of things have been talked about and also I just received a text from my brother who is receiving chemo. I am a resident of Seattle and with 350 Seattle. I grew up in a small town in eastern Tennessee near a coal plant and nuclear plant. I can tell you what it's like to grow up [near a plant]. We kept gallons of water in the basement in case the plant blew. We knew the [well] water was contaminated but we drank it anyway, the fish we caught had phthalates but we ate them anyway, the deer my father hunted had to be scanned for radiation but we ate them anyway. When I stepped into old growth forest in Washington, I thought I had escaped the poison. As a farmer, my brother is going through chemo in his 30s. We may have left the poison, but the poison hasn't left us. Every morning, I wake up and have two thoughts: will my

brother see fireflies again or will they die first? We don't have time for poisonous fuel mandates. I ask PSE to take bolder steps; no new gas plants. We want a future that brings us life, not more death.

37. Neal Anderson, Sierra Club and PSE ratepayer: Just two weeks ago Governor Inslee spoke out against new gas projects including LNG, citing the accelerating threats of climate change and the impacts of natural gas. The science is becoming more clear. That same week, the United Nations released a report that 1 million species face near-term extinction. The only way to prevent this is to switch to carbon free. Instead of pushing that, PSE is pushing "it is ok if we substitute one fossil fuel for another." You said LNG will help by supplying ships with natural gas instead of oil, but that's a dangerous shell game when we should be implementing real solutions. The LNG intent was to muddy the waters about natural gas. Part of the science the Governor referred to is the EPA consistently underestimates leaks from fracking. PSE used lower estimates to make the project seem greener. Instead of using the latest warming potential from IPCC, the SEIS used a different report. We don't have time for these games and there is too much at stake. PSE needs to acknowledge the era of fossil fuel has ended, and we need to transition completely away from them. The illegal LNG construction must stop, and the next IRP needs to be a blueprint to completely clean energy.

38. Chris Chapin, Redmond PCA: I'm Chris Chapin, PSE ratepayer, Redmond resident. I want to talk about four things, big picture, local, IRP, and opportunity going forward. Big picture - headlines last week. We reached 450 parts per million carbon, the Arctic Circle reached 84 degrees F, 30 above average temperature. As Neil stated, a million species are set to go extinct. Just the other day, half the state was declared in drought, and we're not at the end of May yet. I'll stop there. This is just in the last week. Let's bring it down a little bit. That's global picture stuff; let's talk local. Ross Lake, Highway 20, Newhalem, Seattle City Light, hydroelectric power. Seattle City Light estimates Ross Lake will be below 25 feet average. Skagit Basin only received inches of precipitation, driest March since 1992 compared to the 30-year average of 16.5 inches. There's a whole article here talking about how pulses will have to be released to [provide] power the rest of summer. IRP, we got problems and any project moving forward that continues to invest in fossil fuel is morally bankrupt. We have got to stop. The opportunity for us is we live in a progressive state, the legislature is setting an example. PSE has the opportunity to get behind that and be a leader and be remembered as a company that started a trend and went in the right direction.

39. James Adcock, PSE ratepayer and TAG member: I'm an engineer, ratepayer and decade long TAG member. I had planned remarks. I said I need to address the opening comments of David Mills. The first thing I heard him say is PSE intends to fail the requirements of the new law. Failure is an option as long as PSE pays the penalties and not ratepayers. I ask everyone in the room to disenfranchise PSE if that happens. I heard David Mills say the law requires a 2% increase, the same as cost of living. The law says PSE can increase their revenue 2% on top of every other need, including cost of living, including the previous clean energy plan in order to meet requirements. That's 2%, then 4%, then 6%, then more than that because it is a multiplication factor, so there is no excuse. The other thing I heard is reliability is a paramount responsibility and a goal and requirement. In my experience, in my neighborhood, in an easy tree-free neighborhood in South Bellevue, we lose power all the time, no matter the season. We lost it two weeks ago for no reason. It blew out a UPS power supply of mine. I don't want PSE telling me reliability is one of their priorities because it isn't.

40. Carol Kindt, 350 Tacoma: My name is Carol, I'm a member of 350 Tacoma. I've heard a lot of things tonight. I heard the opening comments by David Mills. I want to say first off that we need to stop talking in terms of fracked gas being natural gas. Stop using the term natural gas. It is not.

As an attorney, I learned how to use concise language. Use it. As an attorney, I learned the premise of foreseeability. We have been talking about climate change, which is not climate crisis, for the past 40 years and I want to bring it off the attorney podium for second. I want to tell you my experience talking to my mentor, teacher Ramona Bennett at Tacoma City Council. When the Puyallup Bridge was renamed as Fishing Wars Memorial Bridge, it has taken 50 years of law to recognize an injustice. Don't quote law to me as the premise for which you're going to go forward. Because law and lawyers and courts are the last resort, not the first. This is a moral issue, not a legal issue. And before I explode, I'll get off this podium.

41. Eugene Takahashi, Sierra Club, Wallingford Indivisible and PSE ratepayer: I'm a PSE ratepayer from Seattle and a member of the Sierra Club and Wallingford Indivisible. I'm also a public health professional. Climate change is a public health crisis. I'll provide you with handouts from the American Public Health Association about how it affects your health. Carbon-based generation produces fine particulate matter that can go directly into the bloodstream. That can increase hospital visits by 5% and heart disease by 15%. Heart disease accounts for one in four deaths in the United States. Increased temperatures can lead to dehydration and aggravate cardiovascular issues. 7,415 deaths were related to excessive natural heat between 1999 and 2010. Climate change increases extreme weather. Over half of waterborne outbreaks follow extreme precipitation. Climate change increases the range of insects, which leads to increased Lyme disease, West Nile virus and Zika virus. Over 1,500 died of West Nile virus since 1999. In summary, I urge PSE to move away from carbon-based energy as soon as possible because it is creating a crisis for the public's health. Please remember we are all in this together.

42. Norm Hansen, IRP TAG: My name is Norm Hansen. I'm a ratepayer in Bellevue and I'm also on the IRP TAG. And I just have a couple of items I want to mention about process with the TAG. I'd like PSE to consider some process changes. I want to thank David Mills for being here tonight. I think it's a good idea to be able to meet and have a conversation with the policy makers at PSE. Currently, many of the policymakers at PSE are insulated from this conversation, from their customers and their stakeholders. I know it's been very frustrating for us in working with them. This wasn't always the case. I think this forum is very important to have them occasionally here because they are a private monopoly. The other issue I want to bring up is the transparency of the projects. Sometimes it is very difficult to get data. They just make statements and don't provide the supporting data. I think that is part of having an honest conversation. I think that needs to be done. I think there are security issues, we can respect that, but we can have individuals that get that security clearance. In closing, it's important for the community and other stakeholders to work together to best serve our interest and work in partnership with PSE.

43. John William, PSE ratepayer: I'm a ratepayer and a citizen concerned about global warming. Congratulations to PSE for the opportunity to move to a carbon-free future. The legislature has put you on a path and your coal is phasing out. What is your plan for phasing out fracked methane? You've been hearing a lot of detailed questions surrounding "does PSE agree that carbon dioxide and other gases need to be reduced?" If so, could PSE please state this? If so, because then we are on your side and we can help. If not, no is not an option because it isn't an acceptable answer. For the future of the planet we need to do this and work together to make the elimination of fracked gas and fossil fuels possible rather than having adversarial actions and points of view. I have to believe we all want the same thing: a planet our kids and grandkids and future generations can live on. We have 15 years maybe; we have to move to this right now. Thank you.

44. Steve Rubicz: My name is Steve Rubicz, I'm a ratepayer on Vashon Island. I live on Coast Salish land. I would like to quantify simple steps that can really change the PSE from a fossil fuel conglomerate to a renewable energy conglomerate. One simple 30% change in their energy mixture would simply be changing from the coal plants in Montana. Therefore, I'm making a request. I want to see PSE renew these contracts and close their plants and instead to procure electricity from renewable energy when these contracts expire. I ask that you clarify PSE's position on this request and provide a written response before the May 29 TAG meeting.

45. Kathie Ossenkop, PSE ratepayer: I am from the City of Renton. I live 80 feet from the PSE new high voltage power line that is expected to run 18 miles, bringing coal-fired power and an increased amount through the cities of Renton, Newcastle, Bellevue and Redmond. My condolences to the people in Tacoma and to those of you who live in the tide flats and are part of the tribal associations. I had no idea how serious your issues were as I have participated and seen the issues that face me daily within 80 feet of my home. This powerline easement was built in 1920s, and, in 1966, Olympic Pipeline added a jet fuel liquid transmission line along this same corridor. In the 1950s, it was discovered there is an earthquake fault along I-90 that traverses this power line easement. So now, we have lower voltage power lines and we are expected then, when the permits are granted from the four cities to PSE, we will have high-voltage power lines that are going to cause a corona, a noise, a humming sound in various areas of humidity and weather conditions, and all of the people along this 18 miles will have that to deal with. And along this 18 miles, some of these people will lose fantastic views because they will have these power lines increased, and then some people will have the problem of a jet fuel explosion, and you should hear the health issues people have already reported in the meetings I've attended. This is the health of the entire ecosystem. The Puget Sound ecosystem is in danger and the humans are in danger.

46. Brian DeMeerleer: My name is Brian DeMeerleer. I am a ratepayer in rural King County, Woodinville. I'm just here because of all of these amazing stories and people doing the hard work and it seems to be all like there's this giant dollar over here and all this beautiful stuff over here. I think about how we want to play in the sandbox. We want to care for each other. Don't take toys, be thoughtful, don't throw things in your eyes. Play well in the sandbox, PSE, that's my request. Let's evolve. We had to get off cigarettes; it took a lot of time and pain, but whatever.

47. Marilyn Mayers, 350 Eastside, Eastshore Unitarian Church and PSE ratepayer: I've been a 32-year resident of Bellevue, and all that time I've been a ratepayer. I'm also the parent of two young adults. I'm not sure I want to be a grandparent at this rate. I'm a member of Eastshore Unitarian in Bellevue and a member of the Eastside Interfaith Social Concerns Council. I thank you for listening to all these people who are desperate because we are facing an existential crisis. You may be kind and generous, but the disregard for the Puyallup has been stunning and some of the actions bordering criminal. The other thing I want to say is we are facing a situation that only compares in terms of World War 3. We need a mobilization on a massive scale, and I agree with a young man who said PSE has an opportunity to lead an effort that could serve as a model elsewhere. I'm not sure it can, because it is a fossil fuel company. The IRP is totally inadequate to the need we face. It goes beyond this. From 148th Avenue, which has trees removed in Bellevue, to the Puyallup in Tacoma. We are calling on you to assume a role which you may not be prepared to but you need to recognize. What will you say to your son? What did you do when you had this option? You need to think in terms of that. It is beyond reliability. Public utilities locally have higher reliability and lower cost, and that is because of the structure of PSE. So, I ask you to really give serious thought to what you can do and the particular role you have, which is technical and in a position of authority we don't have because we are desperate. Because it would be nice to be a grandparent. I would love that.

48. Mark Vossler, WA Physicians for Social Responsibility: My name is Mark Vossler, I'm a ratepayer. I live and practice medicine in Kirkland. I'm the president of Washington Physicians for Social Responsibility. I'm not going to repeat what's been said. I appreciate the opportunity to address you. At this listening session. I am pleased that you intend to put conservation first. We'll hold you to that. That's going to be the most cost-effective way to reduce emissions. I'm pleased that you are phasing out of Colstrip. I'm concerned about compliance with 2025 and the 6 people owning it, I wish to understand how that's going to play out. I hope in the end we don't get power from coal burning in Colstrip in Montana and nobody else is in 2025. My biggest concern is the concept of fracked gas as a bridge fuel. I'm concerned about the health effects of climate change and burning fossil fuels. If you look at methane, there are adverse human health impacts along the lifetime of the chain, from the wells to leakage rates which seem to be grossly underestimated; it will leak 86 times in the near-term 20 years. We can't afford that. Going to communities like Tacoma and the Puyallup Tribe and building infrastructure in their community is unacceptable. We can't go on using dirty fuel as a bridge.

49. Cynthia Linet, Tacoma activist and PSE ratepayer: I was one of the Tacoma Super Six. I went with the group that taught them direct action training. When I heard what they were doing, I signed on. I chained myself there when that facility was under construction, and now it is almost built. I cannot believe it and I cannot stand it. Climate change is not the word anymore. It is climate crisis. It is climate catastrophe. 90% of the fish are gone. They're gone. They are not coming back. How are we going to feed us? We have bomb cyclones. Bomb fires. Fire-nados. All the Midwestern floods – those farms are never coming back. They talk about two to three years, but they are never coming back. I have children and grandchildren and great-grandchildren. We have to stop. We have to stop now. I know all the people in here are fighters. I see their shirts. You have a problem on your hands. We don't like what you're doing. We want clean energy and we want it now. No more fossil fuel. No more coal. No more fracked gas. We need to have a chance to end this and have a decent future. Some say maybe we have two years to take action, not 12 or 15. We need to get out there now and we are going to oppose you every step of the way.

50. Bart Arenson, Vashon Island Climate Action Group: My name is Bart Arenson, ratepayer, member of Vashon Island Climate Action Group. PSE, thank you for allowing me to be heard. I have just three simple requests that PSE seriously consider to improve the IRP process. First, I'd like to take a minute for a bit of history and to say why I'm in solidarity with the Puyallup people and my friends and neighbors living on Duwamish land just across from Vashon. So, the history is from the history of the U.S. by Jill Lepore called "These Truths." This is why I've reinforced my support for those folks on the Duwamish land. "Long before shot were fired at Lexington and Concord, long before George Washington crossed the Delaware, long before American independence was thought of, or even thinkable, a revolutionary tradition was forged, not by the English in America, but by Indians waging wars and slaves waging rebellions. They revolted again and again and again. Their revolutions came in waves that lashed the land. They asked the same question, unrelentingly: *By what right are we ruled?*" We now have the constitution and due process, so I would like PSE to make the following IRP improvements: One, for every TAG recommendation, show how that recommendation has been incorporated into the IRP or why the recommendation was not incorporated. Two, provide enhanced public notice of IRP and TAG meetings. And three, produce, retain and distribute audio recordings of IRP meetings in addition to written notes. May I respectfully ask that you clarify your position on these three items and provide written response before the May 29 TAG meeting.

51. Gwyn Hanson, Citizens Climate Lobby and PSE ratepayer: I'm a ratepayer at work and home. I came up here – I was just listening happily, but I came up here because I became concerned about the decision-makers at PSE. I used to be an OBGYN resident. When anyone asked me what I did for a living, everyone would say, why do I stand this with the malpractice insurance. The day I quit was the best of my life. Now, everyone is telling you the same thing, and I think deep inside you know what you're doing. I'm in family practice now. When my patients are doing one thing, but deep inside they know they should do something else, and that causes problems. When they figure it out and change their actions, they feel better. You guys will feel fabulous when you realize the future you could have with clean energy making your ratepayers and stockholders happy. You'll feel fantastic, so go for it.

52. Don Marsh, CENSE: I'd like to thank the stalwart people who are willing to commit this much time to listening to all these great comments. My name is Don Marsh. I serve on the TAG, and I'm the president of the Coalition of Eastside Neighborhoods for Sensible Energy. Our members are encouraged that PSE is holding this listening session. Listening could be the first step to a collaborative relationship between PSE and the customers it serves. We have big challenges and big opportunities ahead of us. As we transition to cleaner energy and electrified transportation, our electric grid needs to become more reliable, more resistant to natural disasters, and less harmful to the environment. These changes are required by Washington's new Clean Energy Transformation Act, signed by the governor this month. We won't achieve these goals if PSE and communities continue to work at cross purposes. We must agree how to spend limited time and money. If we can't find a way, everyone loses. Environmental groups will lose the opportunity to reduce greenhouse gases, PSE investors will see rising expenses and controversial projects slowed to a crawl because of local opposition. Fortunately, a steady advance in technology offers solutions to PSE investors and is beneficial to customers and the environment. This is an opportunity we must seize now; the hour is late, and need is great. Looming climate change and loss of species cannot wait another decade. We need to address these challenges together. We can be another example for other communities across the country. We can demonstrate what true partnership looks like.

53. Martine Smets, Climate Action Lobby and PSE ratepayer: I live in Bellevue and I've been a customer of PSE for 18 years. I'm here as a mother. I think I get involved on climate issues because I'm a mother, and my children are my pride and biggest achievement. I'm concerned about the future. They don't want children because they hear from me that they are doomed if we don't change our ways. This is what makes me really concerned and depressed some days: that they won't have the same opportunities I have. I have many choices they won't have. They won't have the environment I have, and I've had a good life. This is not for me – it is for future generations. I'm disappointed I won't have grandchildren, but I understand. If I were them, I wouldn't either. It is time to do something now and not wait. Everyone has also mentioned how fracked gas is so bad for the environment. Canadian fracked gas comes from the boreal forest, one of the last long-lasting forests in the world. We should stop using that gas, and let's offer and try to fix the climate and not build these new facilities. Please don't build it. It isn't good for anyone.

54. Kim Danke, Sierra Club: Hello, my name is Kim Danke, I live in Olympia, I'm a PSE customer, parent of three teenagers. The only way I can look my girls in the eye is by doing my small part to ensure their children have a viable planet to live on. Isn't that the very least we can all do? I have downsized my house, switched to an electric vehicle and a vegetarian diet. I'm making personal decisions based on long terms impacts. I'm asking energy companies to do same. No building new gas facilities and shutting down Colstrip. Recent legislation says no new energy should be generated from coal by 2025, but PSE has not made real commitment to stop

it. Spending millions of dollars to prop it up, it's the biggest source of pollution west of the Mississippi. PSE stop propping up Colstrip and shut the plant down no later than 2025. Do not sell it to another owner that could keep it running. I was at a forum on sustainability in Olympia where a PSE rep was in outreach panel. The first audience member reamed program managers saying PSE had no place on panel. PSE's commitment to retire Colstrip and not build fracked gas facilities will be a sign of good faith to customers who are overwhelmingly telling you we want clean energy and position the company to be a leader in energy and environment in the future.

55. Warren Halverson, CENSE and TAG Member: It is seldom that I've gone to a meeting agreeing with basically everyone in the audience. My purpose tonight is to share some concerns of CENSE membership on transmission planning. PSE has spent millions of dollars promoting their transmission line projects, which are based on outdated forecasts and technology. Neither will measurably improve reliability, while destroying neighborhoods. Energize Eastside has been justified and based on a demand forecast that was optimistic and outdated. Current forecast questions go unanswered. Make no mistake, the millions of dollars of opportunity cost could be more meaningfully spent on technologies. However, the date of this review continues to be postponed for unexplained reasons. We are concerned feedback from WUTC has not been addressed or brought up with the TAG. This continues to be a concern of CENSE. I wonder whether an unregulated locally owned board of directors would approve these actions. Our hope would be that your board would meet with us to understand our customer concerns so we can find common ground. Listening and providing an answer is not two-way communication and it is not transparency. This is not about PSE employees; it is about corporate leadership vision and strategy. We look forward to meeting with you. Thank you.

56. Howard Harrison, TAG member: My name is Howard Harrison and I'm from Redmond. I acknowledge we are own Duwamish land. I am here as a ratepayer and am member of numerous environmental organizations. I come here today because we are in a climate crisis and our time is running out. I am here to talk about the proposed LNG facility. This facility must be stopped because:

1. It lacks required permits blatantly disregarding public process.
2. It is not safe; it is located on an earthquake fault line.
3. It is in violation of the Medicine Creek Treaty.
4. Outdated numbers were used in its application.
5. Numbers were used that do not meet the UN IPCC 12-year deadline.
6. The attorney general called portions of the supplemental EIS fictional.

We do not have time to be shortsighted. It is time for PSE to get on the right side of history, to stop being a big part of the problem in our climate crisis and start being part of the solution. The future of our civilization depends on it. PSE, stop this illegal LNG facility. There is a huge tank at their facility. PSE, take down this tank. Thank you for listening.

57. Rob Briggs, Vashon Climate Action Group and TAG member: On Monday I attended the Renewable Power to Fuels Symposium in Portland. PSE is a founding member of the Renewable Hydrogen Alliance. Thank you for your leadership on that. The primary sponsor was NW Natural Gas, Oregon's largest gas company. They released ambitions plans to decarbonize their gas grid. I hope you do as well and will share those with us soon. Regarding Tacoma LNG, it was clear from the symposium that the marine fuel of the future is not LNG, but renewably produced ammonia or other renewably produced energy carriers. If you want to increase the safety marine for gas supply, a zero-cost alternative is to not accept new gas customers. An equivalent of 12 Hiroshima bombs does not belong in Tacoma, or your neighborhood, either.

58. Marlene Meyer, PCA: Good evening, I am impressed with the amazing speakers and heartfelt talk that were given tonight; so many in this room. I'm Marlene Meyer. I'm a ratepayer in the Bellevue area. I am honored to be on Duwamish land and to respect it. I'm here to share something as an experience I had with PSE because all of my thoughts have been said tonight. I want to share with you an option for PSE to consider. I took up the opportunity of your kind offer of having a free assessment of my home as far as energy use. They told me there were a couple doors that needed padding underneath. Basically, we had done windows already with other options. I asked about solar panels for the home and they said sure, go to a private company. I said do you know if other neighbors are considering this, they said they don't know. I asked about other ideas that could be innovative as a group effort. The representative forwarded me other sources that I might be able to find. Could we take this large movement that we have now to go in a positive direction and get some kind of group effort in order to afford [renewable resources] so that many of us can go in a direction to save energy? Could we step away from the directions that we're all considering to be so harmful to each one of us and go in these positive ones? I ask you, let's turn off the lights that I didn't need to speak by in the hotel. Let's take off the Darth Vader mask and go towards something that we want as peace for all of us.

59. Hillary Sanders, 350 Seattle: I want to start by acknowledging that we are gathered on stolen Duwamish land. I won't add too much besides that I now work one block from the site of the Greenwood gas explosion. I live a few miles from the North Seattle upgrade. I stood on Puyallup land and watched the Tacoma tide flats. This one question keeps coming: what are we doing? Do you think we can continue to take and extract and exploit endlessly? I wonder if that's what PSE's policy, if that's what we want it to be: "We will do what we want until we are forced to stop." What about doing what is right when peoples' lives are at stake? I was raised with the motto, I was raised by a lawyer and a teacher, and they told me to "leave the world a better place than how you found it." Every morning I wake up with this thought in my head: "How can I leave the world a more kind, safe, healthy or beautiful place today?" I would pose the same question to PSE. What are you doing every day that is leaving the world a better place than you found it? Thank you.

60. Elyette Weinstein: My name is Elyette Weinstein, I'm a long time ratepayer of PSE and I do thank the dedicated employees. There're some really good employees at PSE who work very hard and people need to take account of that regardless of corporate philosophy. What I will say is before the hearings on the Senate Bill 5116 Energy Transformation Act, I read many studies by E3, the consulting group that the energy companies go to regarding liability, and depending on who paid for the study, E3 found that renewable energy could be reliable, or that it couldn't be reliable if Avista, a fossil fuel company, paid for the study. I hate to break this to you, but I'll tell you what we found. One example is that pump storage could not be used in times of low solar and low wind. But the National Grid study done by E3 showed it could be feasible and a study in Ukraine showed they'd be doing it since 1981. Depending on who pays for the study, you might want to look at that study carefully and not buy everything you hear. And yeah, I was lawyer in two states in this country, and the outcome of the study is dependent on who pays for the study.

61. Rachel Brombaugh, Executive Energy Policy and Partnerships Specialist for Dow Constantine, TAG member: King County represents 2.2 million residents, many of whom are ratepayers. Confronting climate change and a transition to a green energy economy is a top priority for the County. The Growth Management Planning Council, with 39 cities in King County, have shared targets to reduce emissions by 50% by 2030. The County's Strategic Climate Action Plan lays out targets and goals to achieve these, in coordination with city partners. We set a target of reducing our supply to 90% by 2030, and work with utilities to eliminate coal from our energy mix and eliminate the construction of new natural gas plants. The transition to energy is a

core focus of King County for four years. We testified in the legislature for accelerating the transition. The recent passing of the legislation creates the framework to move more quickly. I want to thank PSE for coming to a place of supporting that. The work turns to implementing this policy. How do we get there equitably and as quickly as possible? We want to accelerate the transition, make sure it is equitable, and that the costs of closing Colstrip are not unduly passed to ratepayers.

62. Jess Wallach, 350 Seattle: I live in occupied Duwamish territory otherwise known as Seattle. I'm a PSE ratepayer and in solidarity with the Puyallup tribe who has submitted a number of requests to PSE, Puget Sound Clean Air Agency, and other state agencies in review of the Tacoma LNG facility. They've called for a supplemental EIS and I add my voice to that call. I want to think about the conversation we've been having tonight way in the beginning of meeting. You talk a lot about reliability as being a core value as PSE moves forward in 20 years. Reliability means things we can count on. When it comes to the Tacoma LNG facility, it means getting locked into decades of climate emissions. What we can count on is lack of consultation with Puyallup tribe. What we can count on is health and safety violations that will put residents at risk. What we can count on is that million-gallon tank of fracked gas that might explode any minute because of the seismic [zone]. We've heard stories of a lot of people who've had cancer or family who've experienced it. I'm from a family of four, all of us have had cancer. When it comes to people versus profits, we need clean air and water to survive. In talking about the Tacoma LNG facility, it means asking what customers count on you for means. There's no way we can have Tacoma LNG be part of our clean energy future.

63. Ellen Booth, Seattle resident: I recognize we are on Duwamish land and they lived here far longer than my family. I want to thank you for the public comment option. It is important to dialogue. I studied sustainability and I'm quite interested in corporate accountability. That's not the word I'm looking for. Accountability is often used as a negative, but it can be used as a support structure as well. Building trust is critical to us as humans supporting each other and the things they believe in. I thought of a statistic recently: 9% of personal choices related to energy use only affects 9 % of the total energy use in the United States. The energy we use for public spaces or transportation or electricity was set aside into this other category like it wasn't our personal choice. Thank you for letting citizens who aren't in the power to make decisions to frack gas. We are in this together and everyone knows someone who knows someone. I've heard cancer mentioned repeatedly. It is the most read word in 70 different languages. We all know cancer affects everyone. Fracked gas and the energy choices we make can be collectively good and we are smart enough as a community locally and globally to look at what else we have as options.

64. Annemarie Dooley, WA Physicians for Social Responsibility: My name is Annemarie Dooley. I'm a kidney doctor in Bellevue. I am also a member of Washington Physicians for Social Responsibility. Our climate crisis is not something that's happening in Mozambique or Iowa. I am seeing it in Overlake hospital where I was at 2 a.m. this morning. Our recent heat this month started the phone calls from the ER. One was a 40-year-old woman who drank extra water. We had to admit her and monitor for brain swelling. Our summer wildfires will increase pollution in our air. Let me tell you there's no safe amount of particulate matter that you can inhale into the lungs. But PSE doesn't seem to be listening. In some way, PSE reminds me of some of my patients with kidney disease. When first told the diagnosis there is persistent denial that the disease exists. Even when signs and symptoms of the disease are obvious, there is an inability or an unwillingness to act either because it would require a lifestyle change, or it would cost too much. Let me talk about cost. I am the medical director of the dialysis unit in Bellevue. A few years ago, Christine Grégoire came through our dialysis units and asked if her budgeting would cause

people to die. We said yes. She said she couldn't live with that and changed her decision. I am saying the same to PSE: your decisions today and tomorrow will decide whether people live or die. We must cure ourselves of fossil fuels.

65. Jonathan Betz-Zall, Greenwood resident: Thanks for the opportunity to speak. I was excited to hear David Mills was an economist because I was for a number of years. When PSE's gas pipe exploded in my neighborhood, including my favorite coffee shop, I looked forward to meeting with PSE at a public meeting a couple of weeks later. Instead I went to Fred Meyer and they were there handing out trinkets to build goodwill. When I asked about the explosion they had nothing to say. People still remember this in my neighborhood. I've worked in public agencies for many years. I know what it is like to work in a bureaucracy. You have to do what the company wants. So, you have to cover your rear all the time and watch the boss for clues. You have to get away from controversy. I'm glad this session is being held. Thank you for being honest in that. It is a great opportunity to repair PSE's reputation if it is followed with action to carry out values. I work with a nonprofit and we work every day to make sure we live by our values. Our donors gave us money to carry them out. I'm going to stop there. Please carry on those values, or there may be things in the legislation you don't like next time.

66. Patsy Dahl: Hi, I want to thank both of you, David and Irena, for coming here and hearing us out. You've heard a lot of great suggestions. I know it's hard when you work in a big company that you kind of get in groove. When you first started, everything looked good. You were able to rack up the gas and do this and do that. Later on, you learned it was actually a bad thing. You get in the groove and it's hard to get out and to the right thing again. People here and those who already left have so many great ideas, but has anyone asked what can we do to help you? Do you need us to talk to your fundraisers or funders or whatever? Because this is actually putting you in a hard spot. Yeah, I saw some of your looks when people mentioned this. And it's not really, like somebody else said, if you do the right thing, you'll feel a lot better. Nobody has mentioned the earthquakes, somebody mentioned about, ok I missed it, that there's the fault line. So the fault line means that's going to be real easy for an earthquake to happen where all these, thanks for shaking your head Damon. Anyhow, it's hard to do the right thing but there's the cancer, there's all these other problems that are going on. I guess that's all I have to say. You can buy stuff and then close it down. Like the coal mine, this building, just close it down. And like that guy said, be the first one on the block to do the right thing, set a precedence, and we can help you with it. Just let us know.

67. Leipa Braciulyte, Cascadia Climate Action: I'm 21 years old and I worry about climate change every day. It is always in the back of my mind, and how could it not be? Just six months back a report from the UN says we have just under 12 years to drastically decrease our carbon emissions. How is that not traumatizing for anyone, young or old? Climate change reaches all of us on a personal level. For me, the dire situation means I will never be able to have children. I will never be able to bring someone into this world who will not see a wildfire summer. I don't want to bring someone into this world who will live in a climate emergency at all times. It means I do small things like eating vegetarian, even when it is obnoxious and not easy. I changed my degree to study environmental policy. I have limited power, but you at PSE have more power than I will ever have, and you have the choice to use that power for good. You can be a leader in this climate. I urge PSE to view climate change exactly as it is, the survival of ours and other species. People young and old must beg corporations to prioritize life. Here I am doing that because there is no other way out of this. Please listen to us, PSE. Thank you.

The meeting concluded at 8:30 p.m. with Diane thanking attendees for coming to the listening session and providing comment and thanking PSE for their time.

Appendix I

Written comments submitted electronically from May 22 through May 23. The sixteen comments are provided below.

Joe Carlson

Global warming fossil fuels must stay in the ground to save us from the 6th great mass extinction of life on earth! We must only use lower cost solar and wind energy in the future. We must plant new forests, switch to sustainable farming and restore estuaries that save carbon in the ground as well. This is urgent! See https://en.wikipedia.org/wiki/Permian%E2%80%93Triassic_extinction_event

Lael White, Greenlake Health Center

We must say NO to new natural gas projects. Maintaining existing projects for current capacity, for safety purposes and repairing leak potentials, is necessary but we cannot build for new capacity. We must transition away from use of natural gas and toward renewable, non-fossil-fuel energy sources.

Nancy Shimeall, PSE ratepayer

I am a ratepayer and the owner of a Douglas-fir farm on Upper Skagit tribal land.

On my 75 acres, there will be about 15,000 Douglas-fir trees, and if they all live, they will absorb 1.26 million pounds of CO2 per year.

However, the changing conditions caused by drought, fire, and heat, our state will lose 32%, a third, of the land that has the conditions needed for growing Douglas fir trees.** That means that today, native trees are already stressed. If you look around, and look up, you will see dying trees in our neighborhoods and along our highways.

There are more than 42 million acres of forestland in Washington state. We know that methane emissions from fracked gas is 86 times more potent over 20 years than carbon emissions.

When PSE's IRP is projecting into the next 20 years, you must include the cost to all of us the harm that building gas infrastructure will cause. How much of the 42 million acres of forest will survive? Over the next 20 years, I will be trying to keep my trees alive.

We need you to stop planning the extraction, shipping, pipelines, the refining, and the burning, of gas. In your IRP plan for the next 20 years, while we are trying to keep our trees alive, we ask that you plan and execute a transition to only renewable energy. Thank you.

** according to the University of Washington College of the Environment, with continued use of fossil fuels, including gas.

Dennis Vickers

Here you got two shot glasses empty.

The shot glass off the right is full of clean water.

The shot glass off the right that is frozen has risen somewhat pass line of tab some what.

And then The glass of ice off to the left side has a point on it for a reason.

Remember the last shot glass and the Line tab has going down the original line tab you can even see it.

And also the glass of ice water off the right hand side Frozen when you throw it it's sinks down the original line tab.

Now I got some pictures of Greenland take a look at them it looks like a bowl of vanilla ice cream. Any comments and shares will be deeply appreciate sincerely king Dennis of the world of climate change and technology.

Chris Chapin, Redmond People's Climate Action

Fracked gas is a step in the wrong direction. Any project that burns fossil fuels is a step in the wrong direction. We are in a climate crisis. PSE has a moral responsibility to supply clean energy going forward. Profits will disappear in the face of catastrophe. Please help mitigate the impending disaster. Please step up and be a leader. Please listen to the people who live in this community and not the corporate powers overseas.

Thank you.

Christina Proctor

I am opposed to the creation or expansion of infrastructure relating to fracked gas. I am happy to pay more to keep our energy green and currently participate in PSE's Green Power.

Mark Vossler MD, Chapter President, Washington Physicians for Social Responsibility

Thank you for the opportunity to comment on Puget Sound Energy's Integrated Resource Plan. As a PSE rate payer, practicing physician, public health advocate, and representative of Washington Physicians for Social Responsibility, I have serious concerns.

First and foremost is the planned continued reliance upon natural gas even as coal based electricity generation is phased out. The LNG plant in Tacoma and the pipeline expansion plans in Snohomish county reveal that rather than transition to renewable energy as quickly as possible you intend to extend our societal dependence on dangerous, dirty, unhealthy energy sources for as long as possible. Given that methane is 86 times as potent a greenhouse gas as CO₂ in the twenty-year time frame any leakage between the well and generating station is dangerous to the health of the entire global population. Furthermore the serious health risks posed to surrounding communities by fracking operations need to be considered. It is immoral for us to keep our lights on at the expense of the health of people living proximal to frack sites.

We are pleased that you plan to comply with state law and not charge rate payers for coal generated electricity after 2025 but your stated plans for the Colstrip plant seem quite nebulous. The climate impacts and the waste disposal issues of coal would mandate that nobody is getting their electricity from Colstrip after 2025.

PSE's planned infrastructure developments, including Energize Eastside, seem to be geared toward centralized power generation inherent in the old model of burning fossil fuels rather than the new model of distributed generation and clean energy.

We therefore request that your IRP be revised to include no expansion of the use of fracked gas, including the Tacoma LNG project, a more rapid transition to 100% renewable sources, and a revision of the infrastructure build out paid for by your ratepayers to more accurately reflect the needs of a modern renewable energy grid.

Kathy Carr, Eastside Climate Action

Thank you for listening. When rate payers have to pay 42% of a new energy infrastructure, we expect we will pay for the energy that other utilities in the NW have signed RFPs for - renewables- certainly not fracking and methane that increases the greenhouse gases by 30%. Further, as an investor in the new infrastructure, we expect a far greater return on our investment than 2%. Seems reasonable. WA is a clean energy state now- for us and for our children. We demand PSE step up to the challenge that we all face, not make it worse with methane. You've had a lazyboy business without innovating to meet our

future for decades, and yet you've known about global warming. Any other company would have had a competitor bury such business stagnation if PSE weren't a monopoly. Time for PSE to challenge itself and lead with it's customers in this fight for our future with renewables. Other utilities Can Do, so can PSE. Trust is an issue when PSE distorts pollution numbers using 2007 data instead of 2014 data, when PSE ignores treaties, ignores permits, and ignores the hazards of a LNG plant on a fault in tide flats. Public awareness will swell. Our investment must be for renewable energy.

Vicki Halbakken

No fracked gas infrastructure, no dirty coal. Put your resources Into Clean energy.

Steven Storms, BSChE, PE (retired)

PSE has manipulated the natural gas demand in order to insure there is a need for peak shaving that can only be met by the LNG plant. This fake requirement for peak shaving on the coldest winter days allows them to demand a \$133 million contribution from the residential customers for the LNG plant capital. The amount of LNG that will be required for the public usage has dropped to about 2%, but the public is still required to pay 43% of the capital project. This is mostly due to a guaranteed 6 million gallon reserve capacity in the 8 million gallon storage tank. PSE is free to use this capacity 8 or 9 months of the year as long as it is available during the coldest months of the year. As long as PSE can claim a need for peak shaving the \$133 million gift probably makes this the most profitable project they have ever done.

Somehow when the methanol plant was being proposed, PSE had no problem in providing enough natural gas to fill that huge demand. Currently, PSE just signed a contract with WestRock paper mill to increase their usage of natural gas to generate more electricity for sale in California. How PSE can find extra natural gas for industrial customers, but claim a need for peak shaving for their residential customers is impossible to understand. WestRock, in their proposal, has the ability to switch fuels in case they ever lose their natural gas supply. WestRock insured that they continued to maintain that ability in their new permit, even though they stated that they have never had to switch to oil in the last 10 years due to lost natural gas supply. WestRock received a permit to double their steam production to 173,268 lb/hr while burning natural gas. They could easily switch that total production to oil and free up the natural gas whenever peak shaving is required. The problem with that scenario is that PSE would lose their ability to claim as much need for peak shaving and they would not be entitled to the \$133 million contribution from the residential customers. If WestRock is going to get extra natural gas that is needed during peakshaving demand, it would appear they should pay their portion of the \$133 million that is required for the peak shaving capital. (I am sure the WestRock project could not stand a capital charge that would amount to 10s of millions of dollars to cover their peak shaving charge.) In fact any new industrial demand that increases the peak shaving requirements, should be included in a pro rata capital charge for a portion of the \$133 million.

I believe the peak shaving need is fictional and the illusion is maintained in order to get the public to pay for a large part of the LNG project. PSE is doing whatever is required to maintain their claim for a peak shaving demand. They are having a much harder time because they reduced the overall demand from 7% to 2% by reducing the need to only 10 years of the project life. Adding new industrial demand is just another way to insure that peak shaving is required. The WestRock paper mill could actually increase the supply of natural gas by asking them to switch fuels during high demand, but that would destroy the PSE myth about the need for peak shaving. That would also take away the free \$133 million from the public that makes this project so attractive.

Erika Nedderman

No fracked gas! Keep it in the ground. Climate crisis! Renewable energy now! We can do this! Thank you!

Radka Chapin

PSE has to transition to 100% renewable energy immediately. LNG is not a renewable resource but a very dangerous source of greenhouse gases and very destructive to our climate. PSE coal plant in Montana has to be shut down completely - not just switch to selling energy to another state. We cannot afford to burn any more fossil fuels. PSE, be a leader in solving the climate crisis!

Emily Hazelton

We need to move beyond gas fuel sources and to renewable energy. Our future is at stake, and the impacts of climate change hit poor communities first. We need serious change in our power infrastructure.

Devon Kellogg, Sierra Club, 350.org, Washington State Parent Teacher Association

Dear David Mills and Irena Netik,

Thank you for providing a chance for your customers to speak about the upcoming IRP. I am adding my comments now in lieu of speaking or submitting written comments at the May 22nd event.

I am a parent, teacher and asthma sufferer living in the Redmond area for over 26 years. I have grown increasingly concerned about the effects of climate change on our region and around the world and what affect this will have on my health and my children and students' futures. As I'm sure you are aware, many recent reports (IPCC SR15, NCA4, etc) tell us we need to act now or risk catastrophic climate consequences! We have already begun to see the effects such as fires, droughts, storms, floods, and sea level rise. The number one solution to this climate crisis is reducing our use of all fossil fuels.

I am excited about the new Energy Transformation bill that passed in the WA State Legislature (as well as others). I'm pleased to hear PSE worked to help make it happen. I hope that PSE will create the new IRP with the true intention of the bill in mind. Please do not prop up Coalstrip 3&4 or invest in "bridge to nowhere" natural/fracked gas options! We will not meet our regional or global targets to avoid climate catastrophe if you do! Have you considered wave and geothermal power options as well as wind and solar? These seem like much better long-term investments for everyone!

Can you also please add some incentives for homeowners like me to transition to energy-saving devices such as induction stoves, heat pumps, tankless water heaters, etc or to make upgrades to our insulation, venting systems and drafty doors/windows? This would be a great benefit to helping with grid reliability and reducing your customers' reliance on fossil fuels (especially gas). Many of us want to do this but don't know where to start or how to fund it.

Lastly, I respectfully request to be given a link or copy to the UTC letter that comes out after the new 2019 climate legislation has been taken into account.

Thank you again for listening. I hope you will take these comments to heart for the sake of us all.

Elana Kupor, LMHC

Dear Puget Sound Energy,

As one of your customers, I am completely opposed to your pursuing fracked gas. I am upset that you are building a liquefied natural gas (LNG) storage facility in Tacoma, despite the opposition of the Puyallup Tribe and many Washington residents. Washington state has just passed a 100% clean energy bill for our state. Fracking is destructive for our environment, climate, and health.

I urge you to stop pursuing fracked gas as an energy source, and to focus on clean, renewable energy.

Jay French, LMHC

To Puget Sound Energy:

As one of your customers, I am completely opposed to your use of or pursuit of fracked gas. I am angry that you are building a liquefied natural gas (LNG) storage facility in Tacoma, despite the opposition of the Puyallup Tribe and many Washington residents. This is an extremely short-sighted decision. Washington state has just passed a 100% clean energy bill for our state. Fracking is destructive for our environment, climate, and health.

I urge you to stop pursuing fracked gas as an energy source, and to focus on clean, renewable energy.

Appendix II

Written comments submitted at IRPAG Meeting #3

Submittals attached in the order of first name as provided below. The total count of pages in this appendix is 81 pages.

1. Adam
2. Andrea Avni
3. Annemarie Dooley MD
4. April Williams
5. Bob Dily
6. Court Olson
7. Daniel
8. David Morton
9. David Perk
10. Diane Shaughnessy
11. Don Marsh
12. Dwligh Rousu
13. Eddie Griffiths
14. Elyette Weinstein
15. Gene Olson
16. Gerald A Cufley MD
17. Harriet Platts
18. Hillary Sanders
19. Howard Harrison
20. Jennifer Kelly
21. John Rito
22. John Williams
23. Joy Paltiel
24. Julia Buck
25. Karen Hall
26. Karl Pauls
27. Kate Maracus
28. Kevin Jones
29. Lin Hagedorn
30. Lisa Chambers
31. Marlene Meyer
32. Mary Paterson
33. Nancy Johnson
34. Nancy Shimeall
35. Nikie Walters
36. No name 1
37. No name 2
38. No name 3
39. Noah Roselander
40. Norm Hansen
41. Pamela A Johnson
42. Rachel Molloy
43. Richard Voget
44. Sarah Richards
45. Steve Rubicz
46. Vandana Whitnery
47. Virginia Lohr
48. Warren Halverson

Hi my name is Adam, I'm an ~~educator~~ at the PSE ratepayer and an educator at the University of Washington which is ~~situated~~ located on the homeland of the Duwamish. ~~Every~~ I ~~help~~ study and teach about food systems and agriculture. Everyday I work with amazing young people who are deeply invested in sustaining our food supply, ^{preserving} ~~maintaining~~ biodiversity, and ~~great~~ contributing to social justice and equity. All of these goals are ~~being~~ threatened by ~~our~~ the climate crisis. I'm here today for those students and young people who will be living in the world we create. I'm deeply opposed to the Tacoma LNG plant, insolidarity with the Puget ally. strike, and in hope that PSE can lead the way in transitioning to fossil free energy as soon as possible.

Puget Sound Energy "Listening Session"

Bellevue, WA

Wednesday 22 May 2019

Dear Puget Sound Energy:

I'm a 4th generation Puget Sound Region resident and citizen of injured planet earth. My 6th generation granddaughter will likely continue to make her home here on a changed planet, long after I'm gone.

I recycle; I turn off lights; I compost food scraps in a worm bin; I'm a vegetarian; I take public transit; I changed out all my light bulbs; had an energy audit of my house; my appliances are "Energy Star"; I hang my laundry on an outdoor clothesline to dry in the breeze and sunshine April through September. My garden is pesticide-free; I vote; I avoid single-use plastics; I carry a reusable coffee mug and water bottle; I make donations to the Nature Conservancy and the PCC Farmland Trust as my carbon offsets when I travel.

I also drive an electric vehicle, a Nissan Leaf. But even though my house has grid-tied solar panels that generate 52% of our electricity throughout the year, if I charge my electric car at night when all my electricity comes from PSE--the only power utility choice on Vashon Island where I live--my all-electric car is actually powered by about 70% coal or fracked natural gas sources, according to the WA State Department of Commerce "Electric Power Fuel Mix Disclosure" of Sept 2017.

As an individual human being, I'm doing all I can to reduce my impact on planet earth and the life it sustains. Is PSE making a similar effort? Is it directing all its R&D to alternative energy? Or is PSE all about profits, disguised by greenwashing?

I'm here to channel Greta Thunberg, the teenage Swedish climate activist who could be my granddaughter. Why is PSE doing so little to avert climate catastrophe? The science is clear and easily available. The Intergovernmental Panel on Climate Change has sounded the alarm. Why does PSE care more about making money than stopping the climate damage it causes daily?

Money won't matter when planet earth is reduced to a barren rock endlessly orbiting the sun.

Sincerely,

Andrea Avni
Andrea Avni

11515 105th Place SW
Vashon Island, WA 98070
206.214.8195



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

- Transparency is important, both financial and technical.
- Sierra Club has received IRP modeling parameters from multiple utilities through a non-disclosure agreement. Sierra Club has made this same offer to PSE throughout the TAG meetings, in the name of transparency and integrity of the IRP process.
- **Request:** I ask PSE to sign a non-disclosure agreement with Sierra Club to allow confidential disclosure of your IRP modeling data in the name of transparency. I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

Name: *Andrea B. Avui*

Organization: *Ratepayer of Vashon Climate Action Group*

Phone number: *206.214.8195*

Email: *andrea.avui@gmail.com*

Re: Puget Sound Energy listening Session
Bellevue May 22nd 2019

My name is Annemarie Dooley. I'm a kidney doctor in Bellevue. I am also with Washington Physicians for Social responsibility. Our climate crisis is not something in Mozambique or Iowa. I am seeing the effects at Overlake hospital where I was at 2am this morning

Our recent heat this month started the phone calls from the ER. One was a 40 year old woman who drank extra water. We had to admit her and monitor for brain swelling. Our summer wildfires will increase pollution in our air. Let me tell you there is no safe amount of small particulate matter that you can inhale into the lungs

But Puget Sound energy is not listening. In some way, PSE reminds me of some of my patients with kidney disease. When first told the diagnosis there is persistent denial that the disease exists. Even when signs and symptoms of the disease are obvious, there is an inability or an unwillingness to act either because it would require a lifestyle change or it would cost too much.

Let me talk about cost.. I am medical director of the dialysis unit in Bellevue. A few years ago Gov Gregoire came through our dialysis units and asked if her budgeting would cause people to die. We said yes. She said I cannot live with that. I am saying the same to PSE: your decisions today and tomorrow will decide if people live or die.

We must cure ourselves of fossil fuels. Thank you

Annemarie Dooley MD
Washington Physicians for Social Responsibility

5/22/19

*During Vietnam War

I'm not from WA. I'm now a Tacoma resident. Luckily, my mother was a hippie in the 70s. Actually today is her birthday. She is quite happy I'm here today. She's an environmentalist and fought for a change within our Nation and our Government. Growing up, we watched the news together so I became aware at a very young age of climate change, of how humans impact our planet. Now, I'm a student in college for Environmental Science. All while being fully aware of so many individuals, all over the world, wanting to make a change for the better, I still remain in a ~~nation~~ country that ignores scientists' warnings. We've been warning officials and companies, since before my birth, of ~~so many~~ ^{the} negative impacts. ~~Humans will~~ ~~have on this planet.~~ ~~It's~~ ~~about~~ being able to prove with scientific data, of how increasing our carbon footprint, will harm more than help. France and other countries produce lower emission rates than the U.S. even in higher population zones. It is possible. Why is our government trying to reduce stringent California standards on clean air and emission rates? WA is not far behind. As we see here today, the consumer market and \$\$ seems to be the desirable factor. Our federal government is going against EPA policies, make a change for the better. Follow other  countries' practices.

Hilton
HOTELS & RESORTS

Today, we should acknowledge that we are going against the treaties we wrote decades ago; Same with EPA policies from the 70's. Older generations understood the damages so why are these Companies allowed to continue planning/Building these types of infrastructures? Human Health is an issue. This planet will outlive us. Geologic time says we've only been on this planet for the last 10,000 years. If we continue on this route, the Climate crisis will wipe us out. We will wipe ourselves out. These naive options should stop. Fracking ^{will} ~~is~~ only causing more future issues, already seen on the East Coast. 1) Man-made Earth Quakes. 2) Sink Holes etc. I oppose Fracking!

~ April Williams
(Miami Born)

My mother's Birthdate
was in the 50's FYI.
She's ashamed some days to
still be an American citizen.



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

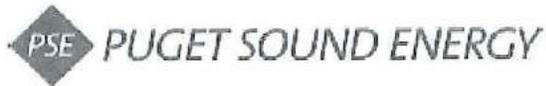
Global warming is the existential threat of our time. Yet last year we again added more CO₂ to the atmosphere than we did the previous year. That cannot continue. You know the harm fracking does, contaminating groundwater, polluting the air and heating our only earth. You know that there are readily available supplies of clean, renewable energy in this state. Use your position to finally wean us from our addiction to fossil fuels. Let Washington lead the way to a world of clean energy where our grandchildren can breathe and enjoy the gift nature has bestowed upon us.

Name: Bob Dily

Organization: Sierra Club

Phone number: 321 274 7223

Email: plgrd@yahoo.com



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

INCREASING ENERGY EFFICIENCY IN BUILDINGS WILL KEEP FUTURE ELECTRICITY DEMAND FLAT

Throughout the Northwest demand for electricity has stayed flat for the past decade even in areas where the population and economy have been growing substantially. Electrical demand should stay flat for the following reasons.

- I. 75 to 80 % of the current national electrical grid demand is from buildings.**

- II. New buildings are increasingly being designed and built with high energy efficiency outcomes.**
 - A. The Washington State Energy code is mandated to tighten every three years. In 2031 that code will require 70% less energy use in new buildings than was allowed in the 2006 code.

 - B. The Building Industry is increasingly trending to build beyond code minimum and toward "net zero"
 - 1) This trend is much like the LEED & "Green Building" market transformation that occurred in the first fifteen years of this century.
 - 2) Several local school districts are now building "net zero energy" or "zero ready" schools. Bellevue School District is one of these.
 - 3) National research by the New Buildings Institute (NBI) which is based in Portland shows more and more progressive owners are wanting low or near zero energy buildings. Market interest in high efficiency buildings is growing rapidly.

III. The trend toward deep efficiency in existing buildings is growing, too.

- A. Published reports by NBI and the U.S. Dept. of Energy have shown that there is a 50% average energy savings potential for existing buildings.
- B. Existing utility efficiency savings programs such as PSE's are typically only scratching the surface of the efficiency potential. These commonly have outcomes of only 10 to 15% energy savings.
 - 1) PSE is not incentivizing critical elements such as window replacements.
 - 2) PSE is not incentivizing fuel switching, e.g. changing from natural gas hot water heaters to heat pump hot water heaters.
 - 3) PSE is not promoting a wholistic total building energy savings incentive approach. Their program promotes isolated individual building component by component checklist incentives, rather than total performance savings outcomes.
 - 4) PSE's pilot "deep efficiency" program launched in 2018 was poorly conceived and very limited in value. The approach was not really a "deep efficiency" promotion. The applicants for the pilot program incentive had a very low efficiency improvement bar of only 15% savings to qualify. That is comparable to their traditional program outcomes and not promoting deep efficiency.
- C. New NBI research has shown that about 25% of the 600 high efficiency building projects last year were deep efficiency renovations of existing buildings.
- D. Progressive owners want the high efficiency because it increases occupant and tenant satisfaction, increases property value, and lowers operating costs.
- E. The green buildings legislation passed this year will push commercial buildings that are 50,000 sq. ft. or larger to be much more efficient.
- F. In other states new financing mechanisms are making deep efficiency more attractive for existing building owners –e.g. PACE.
 - 1) A PACE bill made it to the floor of the Washington House this year but time ran out to hold a vote on it. The Shift Zero organization is planning to get this legislation passed in 2020.

IV. Technology advances are reducing demand and daily peak loads (which affect grid demand and infrastructure needs.)

- A. Distributed energy resources are increasingly being deployed due to rapidly dropping prices for solar and growing interest.
- B. Distributed battery storage products are on the market recently. Prices are expected to drop and there is increasing interest and use.
- C. Other building systems energy management technologies are getting increasingly sophisticated and cost competitive, so there is growing interest in the building market.
- D. Though PSE hasn't yet done so, the technology is available to build demand response control systems to help control peak loads. These technologies should be deployable in the near future. Once deployed, this will reduce daily peak loads which drive the sizing of electrical generating facilities and transmission lines.

V. Studies have shown that the potential energy savings from the Buildings Sector transition to high energy efficiency can easily stay ahead of and offset the demand growth expected from electrification of the Transportation Sector.

Name: R. Court Olson, BSCE, MSCM, LEED ap, bd+c

Organization: People for Climate Action, Shift Zero, and others

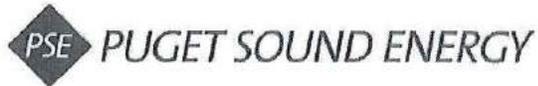
Phone number: 425-352-2777

Email: court.olson@yahoo.com

My name is Danned and I am a Cobbler. That means I fix shoes for a living. Every day I turn on the power at my shop so I can fix things for people. Recycle material. Keep waste out of the land fill. Please do not continue to taint my ability to do this as sustainably as possible by poisoning (further) my energy supply. Please do not take away ~~with~~ my and other workers' agency in making clean energy choices.

I am also a renter and a ratepayer. I try very hard to make purposeful and intentional choices in the foods I fill my home with. The "stuff" that I own/choose not to own. The way I travel to and from the place that I live. Please do not reduce my ability further in choosing to be comfortable in the place that I live - by heating my home with non-renewable energy.

Please Consider These Things



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

The IRP says it "must consider the cost of risks associated with environmental effects including emissions of CO2."

While PSE has analyzed its CO2 emissions, a thorough analysis of the amount of PSE's methane emissions is lacking.

It's not likely that scrupulous measures are taken to prevent, detect, and repair all methane leaks, starting from the well-

head, through the refineries and pipelines, and all the way to PSE's intended destinations, including power plants and

the Tacoma LNG facility. Reports show that the US natural gas industry is leaking way more methane than previously

thought. Solar and wind technologies are becoming price-competitive with fossil fuels much faster than predicted. The

IRP ignores the most recent improvements in the cost of renewable energy. The new 100% Clean Electricity legislation

requires PSE to come clean and make good on the promises of renewable electricity made by Green Direct and the

vague and misleading promises of the "Green Power" and "Solar Choice" marketing campaigns. PSE knows that their

current and future combustion of fossil fuels and leakage of methane to the atmosphere have been contributing and will

continue to contribute to dangerous global warming. PSE promotes renewable energy while at the same time planning

to sell more electricity generated by burning fracked natural gas. Through its combustion of fossil fuels and leakage of

methane, PSE has helped to create a severe public nuisance in which the public suffers injury, loss, or damage caused

by rising seas, flooding, wildfires, hurricanes, heat waves, and other impacts of climate change.

Please, no new fracked gas infrastructure.

Name: David Morton

Organization: Ratepayer

Phone number: 206-909-5680

Email: davidwardmorton@yahoo.com

PSE IRPAG #3

May 22, 2019

My name is David Perk. I'm commenting as a concerned citizen, observer of the IRP process and volunteer with 350 Seattle.

Mr. Mills, when you were in Bellingham for their Climate Action Plan Task Force in February you mentioned that you watch a lot of horror films with your four sons.

Have I got a book for you! It's called "Uninhabitable Earth". It describes what will happen if we fail to meet our Paris Accord targets, something that every country on Earth is currently doing.

Please read it, and when you're done, share it with your CEO and PSE's board.

Climate scientists tell us we need to reduce our greenhouse gas emissions at the rate of 10% a year.

Fracked gas won't help us do that. The social costs of fracked gas include colonization, man camps, missing and murdered Indigenous women, unhealthy air and poisoned water.

Gas conservation needs to become PSE's new top priority. It's not enough to rule out fracked gas in new construction. It's time to start transitioning existing gas customers to clean alternatives. And upstream emissions need to be defined for planning purposes in next year's legislative session.

Is there anyone from the UTC in the room?

There is no justification for the expansion of the North Seattle Lateral pipeline. A 5% increase in statewide greenhouse gases is unacceptable. The dissenting FERC commissioner said that greenhouse gas review processes were not followed at the federal level. And Snohomish County is completely unprepared to do a greenhouse gas evaluation. The regulatory loopholes that allow small projects with big methane footprints need to be closed. PSE needs you to do that for them.

Thank you, Mr. Mills. Please read this book.



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

Global warming is real as multiple scientists and simple observation confirms. Fossil fuels contribute to GW in addition to other environmental damage. Why is PSE still investing in fossil fuels? Investment needs to be in non fossil fuels that are truly renewable. Help decrease the rate of GW and all of the devastating results of it.

Name: Diane Shaughnessy

Organization: 350 Tacoma

Phone number: 253-282-8485

Email: dshaw@aol.com



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

My name is Don Marsh, president of CENSE, the Coalition of Eastside Neighborhoods for Sensible Energy. Our members are encouraged that PSE is holding this “listening session.” Listening could be the first step towards a more cooperative and collaborative relationship between PSE and the customers it serves.

We have big challenges and big opportunities ahead of us. As we transition to cleaner energy and electrified transportation, our electric grid needs to become more reliable, more resistant to natural disasters, and less harmful to the environment. These changes are required by Washington’s new Clean Energy Transformation Act, signed by the governor this month.

However, we won’t achieve these goals if PSE and communities continue to work at cross purposes. We must agree on how to spend our limited time and money. If we can’t find a way, everyone loses. Environmental groups will lose an opportunity to reduce greenhouse gases before it’s too late, and PSE’s investors will see rising expenses and controversial projects slowed to a crawl by local opposition.

Fortunately, the steady advance of technology enables innovative solutions that will be profitable for PSE’s investors and beneficial to customers and the environment.

This is an opportunity that we must seize now, because the hour is late and the need is great. The looming threat of climate change and the possible loss of many species cannot wait for another decade. We need to address these challenges together. Let’s provide an example for other communities and utilities across the country. We can demonstrate what true partnership looks like.

Name: Don Marsh

Organization: CENSE (Coalition of Eastside Neighborhoods for Sensible Energy)

Phone number: 425-749-2791

Email: donmarsh@cense.org



IRP Comment Form
IRPAG Meeting #3
May 22, 2019

Please provide your comments below.

I am Dwight Rousu. I am a 75 year resident of greater Seattle, ~~and~~ a 15 year resident of lesser Redmond, and a PSE customer with home solar panels.

+2 GC

I am concerned that we are in a ^{severe} climate crisis, along with a pollution crisis. Pollution from mercury distributed by global winds, from coal pollution of the water table from fracking for natural gas and oil, add hazards to the climate crisis of greenhouse gas warming, and carbon acidification of the oceans that threatens life forms and oxygen generation that support ^a planetary life.

The future will not be like the past. Climate change is accelerating. I appreciate that PSE planning in 2019 is ^{for} more rapid change than in 2017, but fear it is still too conservative and slow. The targets stated should be minimum targets.

Dahr

Stasis is the serious condition we are in. Change has a current velocity as carbon in the atmosphere increases. With non-linear effects from captured methane there is a strong chance of accelerated velocity of change. With unknowns, jerks in the acceleration may destroy the planet. Please plan for faster reduction of greenhouse gasses, working with government changes.

Name: Dwight Rousu
Organization:
Phone number:
Email: Rousu@Frontier.com

PS. Listen to Court Olsen

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

I appreciate PSE is concerned enough about the urgency of the climate crisis that is providing this forum

- 1) I stand in resolute solidarity with the Puget Sound Tribe & the Medicine Creek Treaty. They were never consulted nor did they consent to the unpermitted construction of the LNG tank farm.
- 2) It is unconscionable that sharp EIS ignored the direct blast effects which would decimate the Port, the Reservation, the downtown ~~area~~ core, I-5, hospital, schools & our Salish Sea.
- 3) As a ratepayer I resent funding fossil fuel infrastructure for private profit which benefits me not at all. This pertains to LNG Tank farm, Kalama Methane & all pipelines & export terminals. Each of these deter us as a society from rapidly transitioning — as we must — to solely green, sustainable technologies
- 4) Our biosphere is @ extreme risk with all of civilization on life support. I encourage PSE to collaborate diligently with concerned citizens/customers to EXPEDITE viable solutions. Protect ALL that you love.

Name: Eddie Griffiths
Organization: 350 Seattle
Phone number: 206-898-5168
Email: eddiearwon@gmail.com

5000 Orvas Ct. SE, Olympia, WA

May 22, 2019

Steven W. Hooper, Chairperson
Puget Energy and Puget Sound Energy Boards of Directors
Customer Care
PO Box 97034
Bellevue, WA 97304

RE: Opposition to Tacoma LNG Facility
Written Testimony for May 22, 2019 Listening Session

Dear Chairperson Hooper and Board Members:

My name is Elyette Weinstein and I am a Puget Sound Energy Rate Payer. I stand with the Puyallup Tribe in opposition to the Tacoma LNG facility.

The LNG facility has not been properly evaluated and permitted. Assistant Attorney General, Counsel for the Environmental Protection Unit Bill Sherman sent a letter to the City of Tacoma in April. The letter points out that there have been substantial changes to the project since the original environmental review and he encourages the City to address them. All agencies involved in approving this project must go back to the drawing board to address what has changed in the project proposal. PSE is building without substantial review and without all the permits, blatantly disregarding public process and in violation of the Medicine Creek Treaty.

Shockingly, ratepayers will pay 43% of the costs for 2% use of the facility, using public dollars for private gain. This project would lock us into decades of climate destructive fossil fuel use. The facility would create health & safety problems for local residents and those living at the site of the gas extraction..

This project would have rate payers pay to put Native Americans at risk for the sake of corporate profit. People should not be expendable. I feel a moral obligation to speak out against genocide, even though it is gradual and subtle, hidden by technological terms and corporate process.

Sincerely,



Elyette M. Weinstein

My name is Gene Olson

I am a PSE customer and live in Redmond Washington

The May 27th issue of Time Magazine featured Greta Thunberg on its cover as one of the next generation's most influential leaders. She is a 16-year old climate change activist from Sweden and was the leader of the recent worldwide student strikes intended to wake up the adult world about necessary actions to reverse climate change.

When she talks, she likes to tap the microphone and say "Can you hear me?" What she really means is "Are you listening?"

With the 100% clean energy bill in place, now is the time to fully implement it and not try to find ways to circumvent it.

Retire Colstrip - no money into Colstrip after 2025

IRP accountability - social cost of carbon must be in the "base case"

Implement 100% legislation - IRP should provide blueprint for carbon free

Support rulemaking on upstream methane from wellhead to end use

No new gas. Phase out existing gas. Don't use ratepayers to fund LNG exports.

Thank you for listening.

Puget Sound Energy,

I am a PSE rate payer, concerned citizen, and a physician member on the Climate Change and Health task force of WPSR. Natural gas, especially, fracked natural gas, threatens the health and safety of our communities. We physicians are concerned by PSE's continued construction of a Liquid Natural Gas facility on the Tacoma tide flats. This facility, along with associated pipeline infrastructure would lead not only to increased risk of fire and explosion but also to increased human health risks associated with the extraction, processing, transport and usage of natural gas. Additionally, leakage of natural gas from the well head to end user, so called fugitive gas, adds to the atmospheric burden of greenhouse gases such that the natural gas CO2 emission equivalent is hardly better than burning coal.

The PSCAA (Puget Sound Clean Air Agency) has found that the LNG facility would emit significant amounts of VOCs and P.M. 2.5. P.M. 2.5 pollution has been linked to increase cancer risk, heart attack, stroke, birth defects, and nervous system disorders. VOCs (benzene, xylene, toluene, ethyl benzene) also increase cancer risk and nervous system disorders. Both P.M. 2.5 and VOCs have been linked to pulmonary development, neurological disorders in infants and children and to negative health consequences in pregnant mothers. The health consequences of the fracking process are particularly troublesome. A toxic mix of heavy metals, radon, and unrevealed proprietary ingredients are left on the surface, ground water can be contaminated leading to a wide array of health consequences. Pregnant women living within a few kilometers of fracking wells have been well documented to have lower birth weight children with increased risk of developmental abnormalities.

Sadly, the greatest burden of fossil fuel pollution falls on the most socioeconomically disadvantaged of our society. The activities of PSE which include the development of a LNG facility appear only to aggravate this disparity.

There is no debate that the energy derived from fossil fuels has resulted in an unprecedented standard of living, all be it, uneven, the world over. But there has been a cost, a largely invisible cost, for which the bill is now coming due. My generation will not bear the brunt of this looming burden, rather it will be borne by all of the grandchildren, including, of course, my own.

Gerald A Cufley, M.D.

16630 168th Place NE

Woodinville, Washington

Member Climate Change and Health Task Force

Washington Physicians for Social Responsibility



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

I'm here today as a rate-payer, and
a person of faith. Listen "to" your heart!
Listen "with" your heart. God asks us
to "Love Your Neighbor." I invite you to
consider - "LOVING YOUR NEIGHBOR,"
The Land, The Water, The Peoples.

Thank you!

Name: HARRIET PLATTIS

Organization:

Phone number: 206 227 0107

Email: SEEKER@SKANET

Hello,

My name is Hillary Sanders.
I want to acknowledge first that
we are gathering here on stolen
Duwamish land.

I don't have much to add to
what has already been said,
except that

I work one block from the site
of the Greenwood gas explosion.
I live a few miles from the
proposed North Seattle Lateral
Upgrade project.

I've stood on Puyallup land
and watched what's happening
on the Tacoma tideflats.

I see all of this happening and
I have to ask

"What are we doing?"

Do we think we can continue to take?
To extract?
To exploit?

Is that PSE's policy? "We'll do
what we ~~want~~ until we are
forced to stop?" - What about
doing what's right?



I was raised being told by my parents — a lawyer and a teacher — to leave the world better than I found it.

And so, I wake up every morning with this thought in the back of my mind.

How can I leave the world — a more kind, safe, just, & more beautiful place?

I ask the same question of PSE!

How will you leave the world a better place?

Thank you.

Dear PSE,

My name is Hillary Sanders. I am here today to say enough is enough. The people of Tacoma have been getting misled for years on the LNG plant that is being built without the consent of the Puyallup Tribe. No more games. No more excuses. It is long past time to act on reducing our GHG emissions in Washington. We are out of time. Please do not gamble with our planet; do not risk the health and wellbeing of ordinary people to make a profit. We need to take action that reflects the urgency of the time we are in. As has been made clear by the people testifying here today, we will not pay for the destruction that this LNG facility will bring. It's not right.

- Hillary

I was raised being told by my parents — a lawyer and a teacher — to leave the world better than I found it.

And so, I wake up every morning with this thought in the back of my mind.

How can I leave the world — a more kind, safe, just, & more beautiful place?

I ask the same question of PSE!

How will you leave the world a better place?

Thank you

PSE Listening Session, May 22, 2019

Hello, my name is Howard Harrison and I'm from Redmond. I want to acknowledge we are guests today on Duwamish land. I am here as a ratepayer and a member of numerous environmental organizations.

I came here today because we are in a climate crisis and our time is running out.

I am here to talk about the proposed LNG facility. The facility must be stopped because:

- It lacks required permits, blatantly disregarding public process.
- It is not safe. It is located on an earthquake fault line.
- It is in violation of the Medicine Creek Treaty.
- Outdated numbers were used in its application.
- Numbers were used that do not meet the UN IPCC 12-year deadline.
- The Attorney General called portions of the supplemental EIS "Fictional".

We do not have time to be shortsighted. It is time for PSE to get on the right side of history, to stop being a big part of the problem in our climate crisis and start being part of the solution. The future of our civilization depends on it.

PSE - Stop this illegal LNG facility. PSE - Take down this tank!

Thank you for listening.

Howard Harrison
17719 NE 110th Way
Redmond, WA 98052





IRP Comment Form

IRPAG Meeting #3

#29

May 22, 2019

Please provide your comments below.

My name is Jennifer Keller. I live in Bellevue and I want to acknowledge we are guests to day on Duwamish land. I am here as a ratepayer and someone who is concerned about the climate legacy we are leaving for young people. I came here today because now is the time to actively move into a just transition to clean energy. I believe that Washington's Clean Energy Transformation Act brings us all forward into a time when it's clear: we are shifting all of our energy sources and our efficiency practices to clean energy + efficiency. Washington State has made it clear that it's time to do that as quickly as we can. I came here to let PSE know that I care and I, for one, will be watching and listening to hear how PSE is pressing rapidly forward into a clean energy future. Now is the time to actively transition to clean energy. PSE's 20-year IRP and the Clean Energy Action Plan will pretty much lay out how we'll get to the 2030 goal for 80% clean energy. This means that the plans must not propose the construction of any new gas infrastructure, including stopping two proposals currently moving forward in PSE's resource solicitation.

No new gas plants, and in the long term phase-out of existing gas plants. Now is the time to actively transition to clean energy. I hear that PSE is committed to their customers - customers who deserve a livable future, deserve to breathe clean air in the midst of summer, when we've been breathing wildfire smoke in recent summers.

Name:

Jennifer Keller

Organization:

Phone number:

Email: jankeller3@gmail.com

I'm sure that to the extent that PSE is committed to their customers, PSE is committed to moving quickly to 100% clean energy for all customers. Thank you.

IRP Comment Form
IRPAG Meeting #3
May 22, 2019

Please provide your comments below.

The requirement for 100% non-emitting energy sources sets the outer bound at 2045 a responsible business will immediately cease to ~~create~~ sink more assets into fossil fuel (methane, coal, etc) resources. The new plan should remove all planned or in-process projects ~~that~~ related to fossil fuel energy sources

Name: John Bito
Organization: Extinction Rebellion Seattle
Phone number: 206 792 5932
Email: jwbpse@ballardview.com

Two Percent Cost Cap

Puget Sound Energy, we are putting you on notice: Do not manipulate compliance with the new 100% Clean Electricity legislation (SB 5116).

Of all the issues that can undermine the landmark law, exceeding the "cost cap" on compliance is the most subject to manipulation.

By 2030, utilities must be 80 percent clean electricity: no coal and no gas. The biggest excuse for not complying will be if costs of clean electricity are too high. Here is the concern.

Puget Sound Energy (PSE) must be 80 percent clean by 2030. They currently are 33 percent coal and 22 percent gas, plus they buy about a third of their resources – approximately 1,600 megawatts – on the open market. PSE must eliminate all of its coal by 2025, reduce some its gas by 2030, and replace about 3,000 megawatts of electricity by 2030.

If the cost of this 3,000 megawatts is "2 percent" more than the alternative (new or existing gas power plants), then PSE will exceed the "cost cap" and not have to comply. This 2-percent cap is additive. More specifically, the 2 percent cost cap starts in 2022, and 2 percent is added each year, so in 2023 the cost cap is 4 percent. By 2030, it is 18 percent.

The cost cap is the difference between the cost of clean energy like new wind turbines or solar farms and the cost of a new gas power plant. These differences are easier to measure. And wind and solar are likely cheaper than new and existing gas so this is not the biggest concern.

The bigger problem is all the other costs that PSE may try to classify as compliance costs. For example, between now and 2030, even without this new law, we would expect PSE to increase their level of investments in energy efficiency programs which is the historic trend. These normal increases are "business as usual" and should not be considered the "cost of compliance" with the new law.

These examples abound. We should expect increases in demand response programs (programs design to shift the timing of peak demand in electricity) and increases in transmission and distribution grid efficiency. We should expect increases in rooftop solar and weatherization programs. These normal increases in business expenses should not be considered "cost of compliance."

PSE must be put on notice now. We will not accept PSE simply relabeling normal increases in expenses as "cost of compliance." You already are expected to increase your investments in clean energy programs and you cannot simply re-classify these normal increases as cost of compliance.

We will never achieve 100 percent clean electricity unless we meet the near-term benchmark in 2030. The starts now with CLEAR AND TRANSPARENT plans.

John Williams jmw.vashon@gmail.com (206) 463-1272
org: vashonclimateaction.org ratepayer

Colstrip is a rip-off for Puget Sound Energy customers

Puget Sound Energy, Avista Utilities and Pacific Power in Washington own half of the largest two and remaining units of the Colstrip coal plant in Montana.

Washington just passed the 100% clean electricity legislation (SB 5116) that mandates no more coal for electricity in Washington by the end of 2025. PSE spends tens of millions each year on Colstrip Operations & Maintenance (O&M) just to keep propping up this dirty, aging and expensive plant.

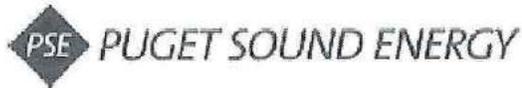
PSE and the Colstrip owners are spending \$175 million in new capital expenses (CapEx) on Colstrip now through 2022.

Too many of these on-going expenses will prop up the plant beyond 2025 for no benefit for PSE customers. PSE needs to phase out Colstrip funding starting immediately.

PSE is falsely asserting that the Colstrip ownership contract will require their shareholders to keep paying into Colstrip even after state law cuts off ratepayer money in 2025. This is not accurate – and more importantly – it is not a ratepayer problem.

PSE keeps pouring money into this dirty and expensive plant. That's like paying for a new roof you will never use. There is no value in Colstrip upgrades because the plant has hundreds of millions (if not billions) in "negative value." PSE customers are getting ripped off. Funding to prop up this plant must stop.

John Williams jmw.vashon@gmail.com (206)463-1272
arg: Vashon climateaction & ratepayer



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

- SB 5116 states "Absent significant and swift reductions in greenhouse gas emissions, climate change poses immediate significant threats to our economy, health, safety and national security".
- The IPCC report states that we must take immediate and unprecedented greenhouse gas emission reductions to avoid seeing catastrophic climate events as soon as 2030.
- On Monday, May 6, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) reported that "We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide." Around 1 million species face extinction, many within decades. The #3 cause – climate change.
- **Request:** Given the critical nature of timely atmospheric carbon reduction, will PSE commit to not replace coal-based electricity with some other fossil-fuel-based electricity? I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

Name:

John Williams

Organization:

Vashon climate action 3rd rate payer

Phone number:

206 463-1272

Email:

jmw.vashon@gmail.com

Please do the right thing
ARE you Really listening?

Please provide your comments below.

What you are doing is wrong.

Wrong on so many levels.

You know the arguments -
we don't need the power lines.

It is a money grab -

It is dangerous. The amount of power you
plan to run through the power lines is
dangerous. Considering that it crosses the
fault line. It is dangerous because
of the underground jet fuel running
underground. It is planned to cross over
a school.

It makes houses near the power poles
unmortgageable -

It is an eyesore. A huge eyesore.

Name: Joy PACTIER

Organization: CENSE.

Phone number: 425-641-1739.

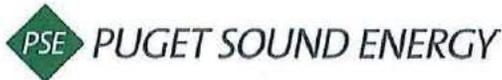
Email: JoyMillerPACTIER@HOTMAIL.COM

For these and so many more reasons.

IT IS WRONG.

SIMPLY WRONG

AND YOU KNOW IT



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

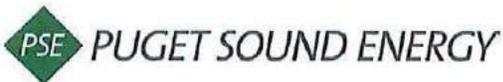
As a consumer, it is hard not to see that the profit motive is inhibiting efficiency, environmental livability and the common good. The CEO of PSE is paid almost 100 times the CEO of Seattle City Light, and the difference is accounted for by PSE relying on fossil fuel extraction and export, which is of greater concern to them than the people of Western Washington. ~~They~~ have little confidence that progress will be made toward 100% clean energy for our community when it requires significant capital outlays and the owners have little equity since the 2008 takeover. This is not to disparage the efforts of individual PSE employees, who live here and will suffer ^{the} ecological devastation, while the ^{foreign} capital can simply withdraw its original investment and keep the profits from rate hikes. ~~The~~ ^{PSE employees} deserve better, and public utilities deserve to be in public hands, not those of foreign investors.

Name: Julia Buck

Organization: 350 Seattle

Phone number: 617-501-2170

Email: julia.buck@alumni.tufts.edu



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

THE QUESTION ISN'T WHAT IS THE COST OF MOVING TO
CLEAN ENERGY, BUT WHAT IS THE COST IF WE DON'T.
IT IS CLEAR THE COST WILL BE THE END OF HUMAN
CIVILIZATION & LIFE ON THIS PLANET AS WE KNOW IT.
CLEAN ENERGY IS CHEAP IN COMPARISON.

Name: KAREN HALL

Organization:

Phone number: 425-739-0781

Email: KLHALL@YMAIL.COM



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

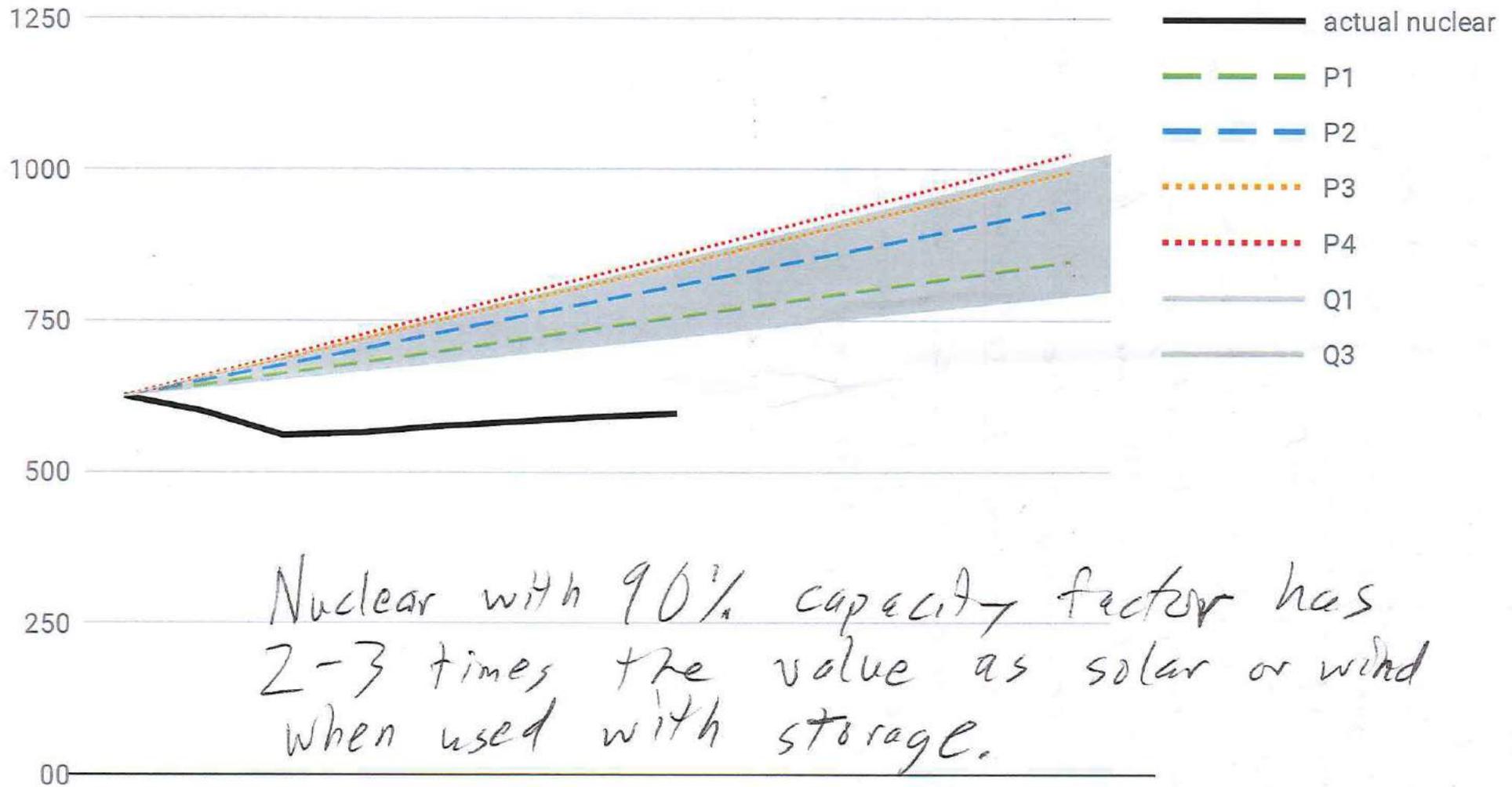
Please provide your comments below.

(Attached current 2010-2016 data
relating to IPCC SR15 pathways)
comments on front & back of Nuclear Energy
production

Name: Karl Pauls
Organization: Seattle Friends of Fission
Phone number: 509 979 1997
Email: karl.alex.pauls@gmail.com

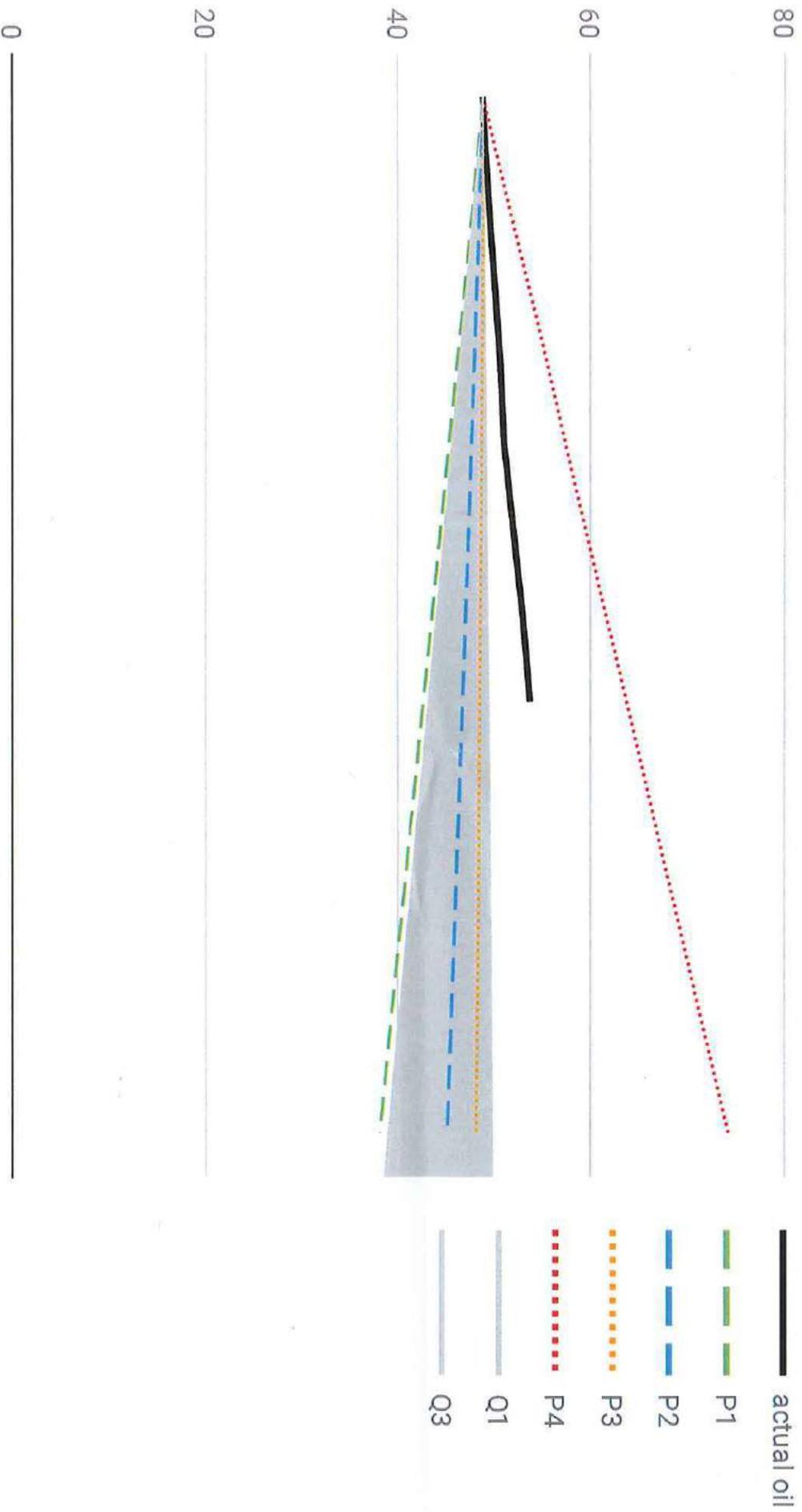
~~Comments~~ on back
Notes

Nuclear Energy Production SR1.5 Pathways 2010-2022

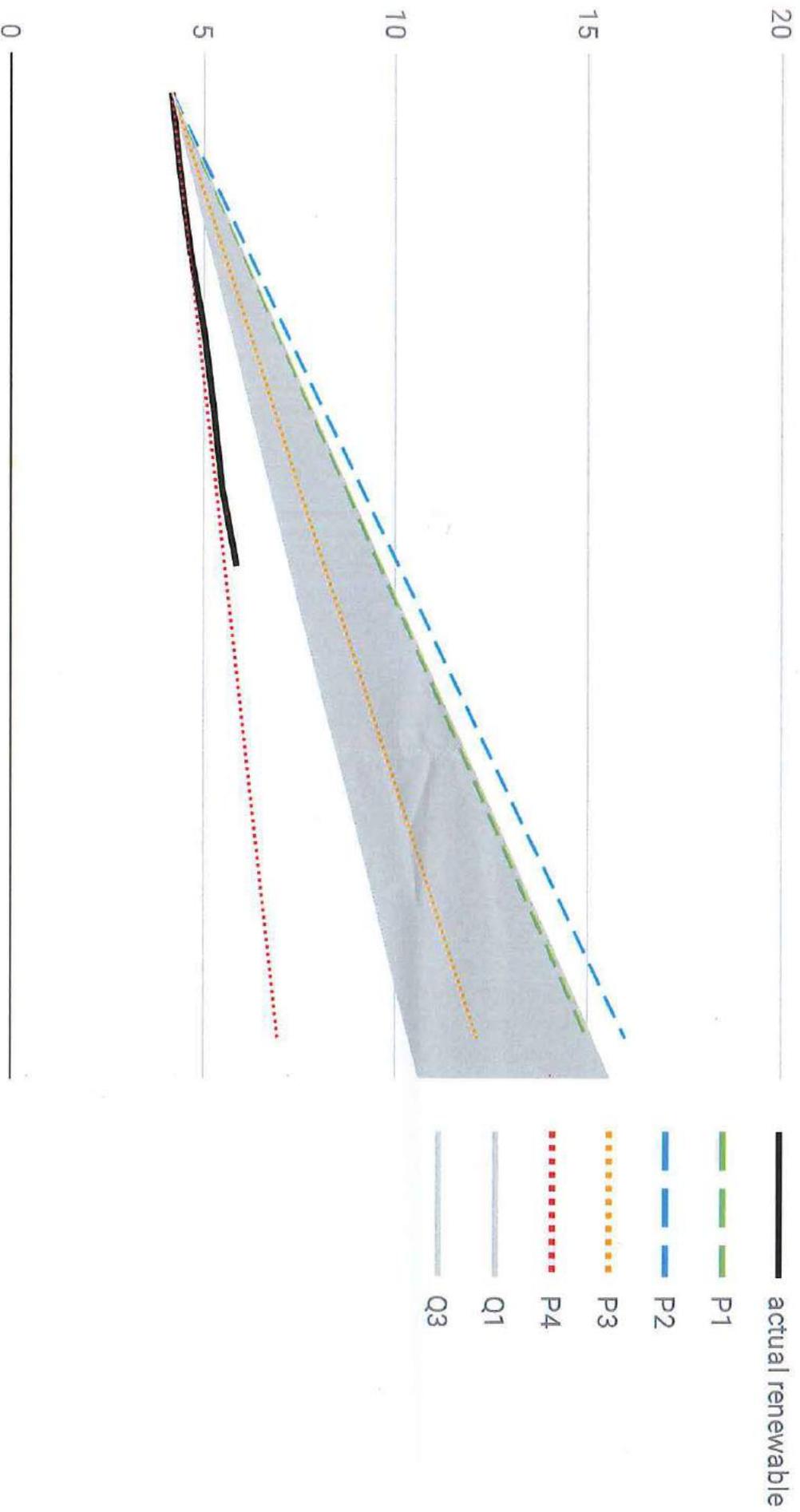


Nuclear with 90% capacity factor has
2-3 times the value as solar or wind
when used with storage.

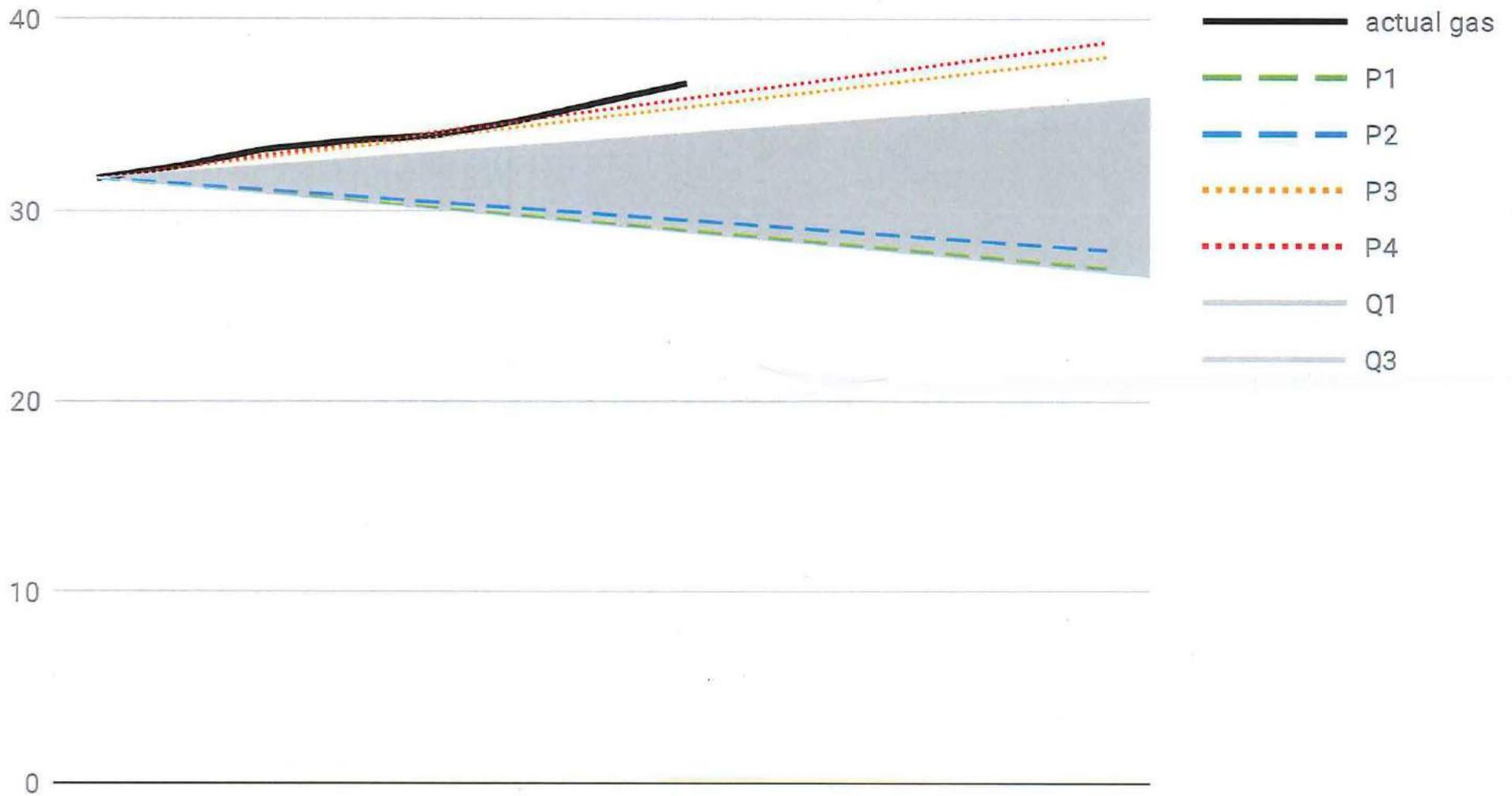
Oil Energy Production SR1.5 Pathways 2010-2022



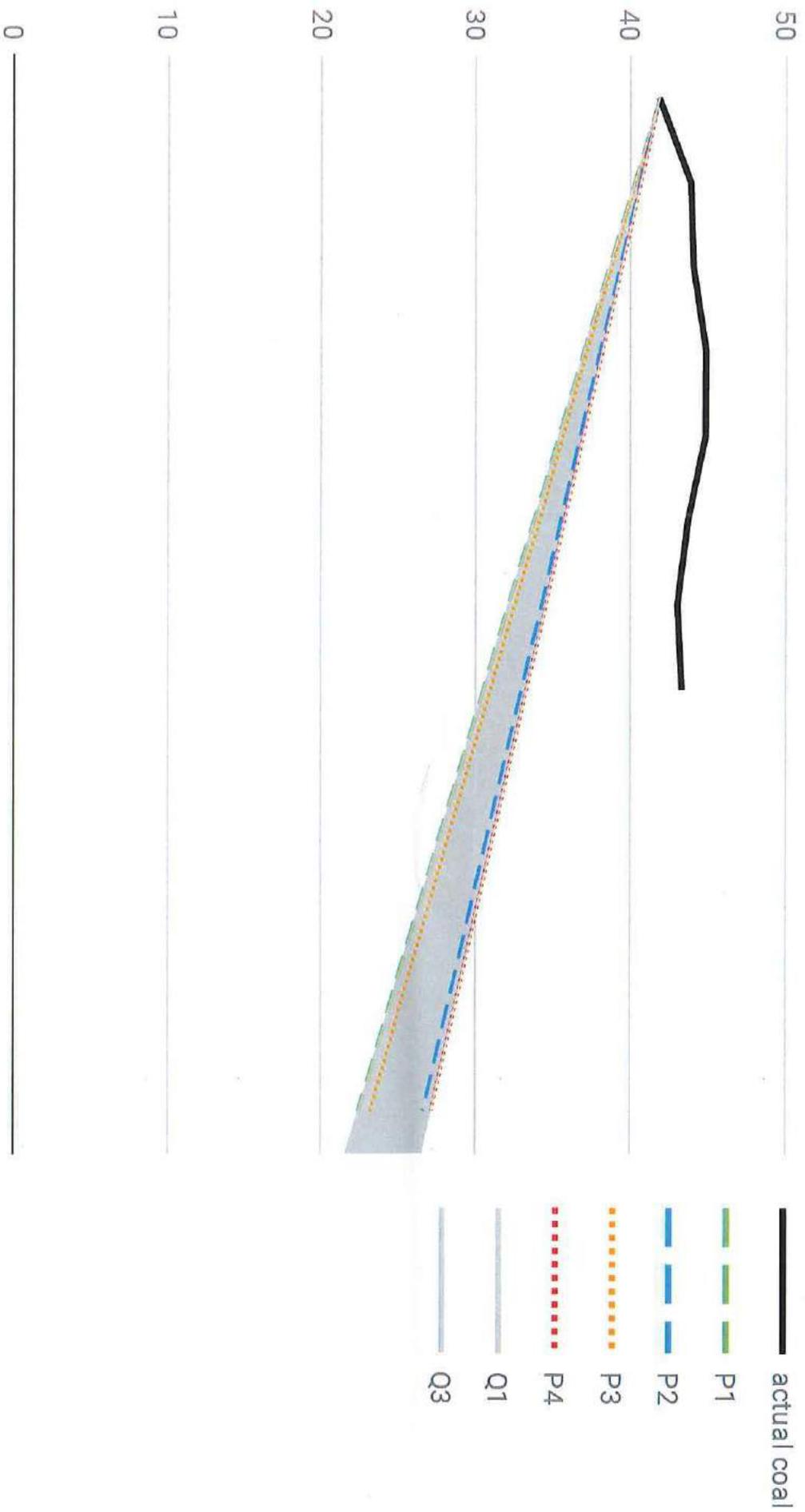
Renewable Energy Production SR1.5 Pathways 2010-2022



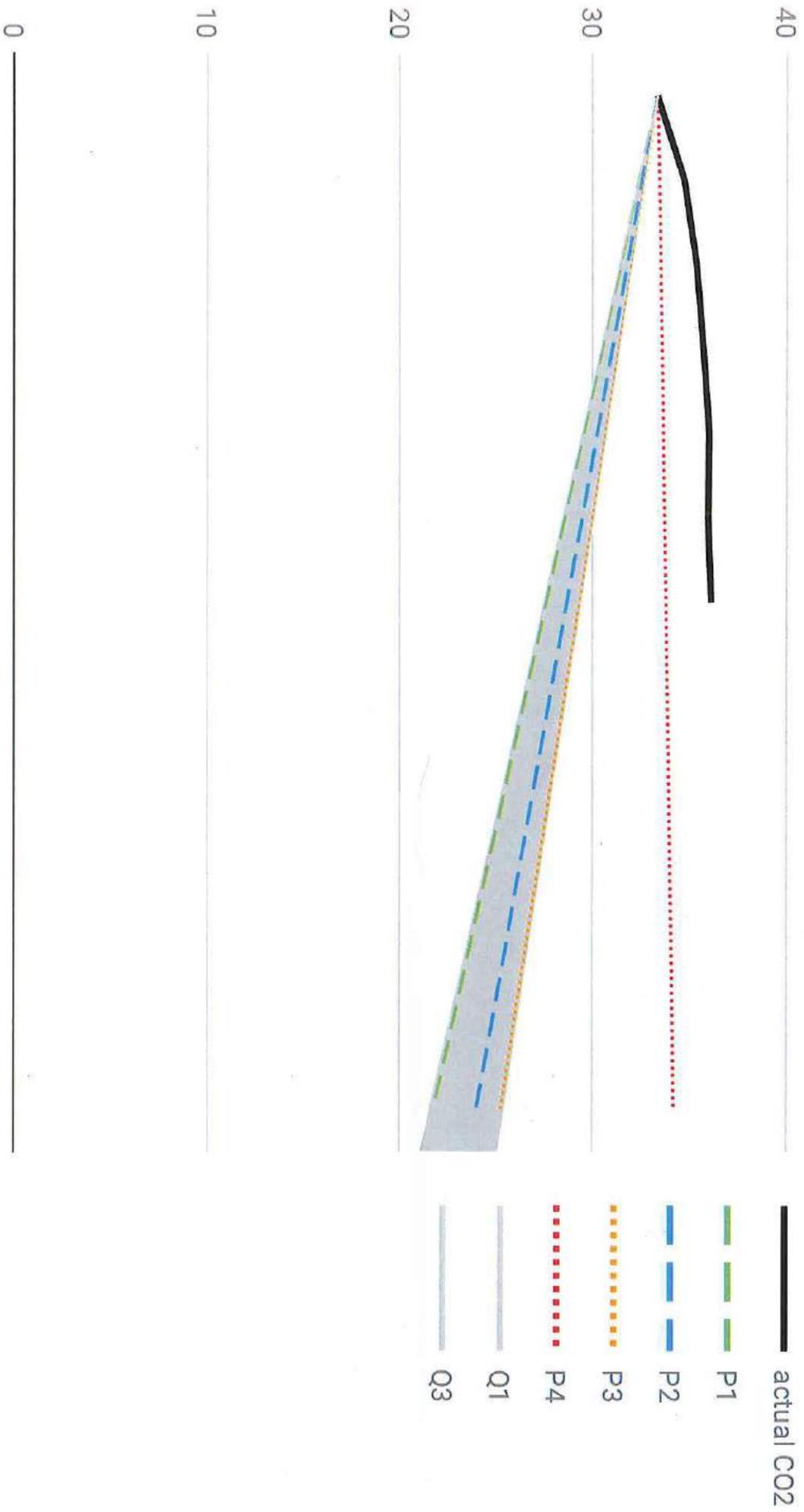
Gas Energy Production SR1.5 Pathways 2010-2022



Coal Energy Production SR1.5 Pathways 2010-2022



World CO2 Emissions SR1.5 Pathways 2010-2022



KP customer on Cap Hill

This is IPCC SR15, it accounts of new science and soc. Prof.
p16 shows what we need. I did the math on my notes is
our CO2 progress ^(shel down) and here is our zero emission nuclear progress
it should be up so I'll first propose that the IRP follow
this science and that the ^{IRP} TAG is negligent in statute and
science if you do not solicit an RFP from

Nuscale, TerraPower, USNC, and Terrestrial noting
that Jay Zinslee is on the same page here

Second I'd recommend that the cost of LNG facility
born by the customer is reflected in cost barriers
and not simple rent seeking. when it comes time
to decide on our future energy use be careful
of this corp lobbying vs PUD's



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

Accurate IRP analysis modeling - Renewable energy system cost and cost risk

Introduction and expertise

My name is Kate Maracas, and I'm the Managing Director of Western Grid Group, a public interest organization whose mission is to ensure a clean, affordable, and reliable electricity grid throughout the Western Interconnection. I'm also a Governing Body Member of the Western Electricity Coordinating Council's (WECC) Scenario Development Committee, as well as a power system engineer with many years of experience in the utility sector.

Comments:

- I and other TAG members urge PSE to use the most current and relevant input variables available for capital expansion and production cost modeling in this IRP process. Chief among those variables are forward cost projections for both fossil-fueled and carbon-free renewable resources.
- We understand that PSE has an ongoing all-source RFP that has resulted in very low bid prices for renewable resources.
- Our own research of publicly available bid prices for solar and wind resources over the last 18 months, across seven states in the West has found actual, negotiated bids that have resulted in signed PPAs for as low as under \$21/MWh for wind with storage, and under \$26.50/MWh for solar with storage.
- In response to PSE concerns that the current US / China trade dispute will cause price increases for renewable energy systems, WECC's planning consultants expect trade dispute effects on solar resources to be minimal and temporary – 3 years at most. They also report that wind supply chain components and OEMs are almost all in the US and therefore not impacted by the trade dispute.

Request: I want PSE to use its current bid prices to inform your forward cost projections in this IRP cycle. I also want PSE to either cite references that justify your stated belief that pricing for renewables will increase over the planning horizon or confirm that is not a concern. I want you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

Respectfully submitted by:

Name: Kate Maracas

Organization: Managing Director, Western Grid Group

Phone number: (360) 688-1105

Email: kate@westerngrid.net



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

- Accurate IRP analysis modeling - Social cost of carbon (SCC):

- SB5116 says "An electric utility must incorporate the social cost of greenhouse gas emissions as a cost adder when ... Developing integrated resource plans ...; and ... Evaluating and selecting intermediate term and long-term resource options"
- **Request:** I ask PSE to incorporate three changes into your 2019 IRP:
 - o Change #1 - Social cost of carbon, at the 2.5% discount rate, must be included in the PSE IRP analysis "base case".
 - o Change #2 - Social cost of carbon, at the 2.5% discount rate, must be included in all analysis scenarios used for resource acquisition planning.
 - o Change #3 – PSE must allow the social cost of carbon value to increase, annually, per the Interagency Working Group (IAWG) document cited in SB 5116 or increase annually with inflation if defined by rulemaking:
 - From the IAWG: "Because the present value of economic damages associated with CO2 emissions change over time, a separate set of estimates is presented for each emissions year through 2050, which is sufficient to cover the time frame addressed in most current regulatory impact analyses" (emphasis added)
- I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

- Accurate IRP analysis modeling – High impact social cost of carbon (SCC):

- The Interagency Working Group document, cited in SB 5116, says "...there is extensive evidence in the scientific and economic literature on the potential for lower-probability, but higher-impact outcomes from climate change, which would be particularly harmful to society and thus relevant to the public and policymakers. The fourth value is thus included to represent the marginal damages associated with these lower-probability, higher-impact outcomes." (emphasis added)
- The "fourth value" is the "High Impact" social cost of carbon value included in Table ES-1 on page 4 of the Interagency Working Group document.
- **Request:** I ask PSE to use the High Impact social cost of carbon value from the IAWG report in at least some of the IRP analyses to assure the Utilities and Transportation Commission (UTC) and Public Counsel Unit (PCU) can perform their legally mandated

public protection and planning policy charters as the authors of the IAWG intended. I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

- **Accurate IRP analysis modeling - Renewable energy system cost and cost risk:**

- I and other TAG members urge PSE to use the most current and relevant input variables available for capital expansion and production cost modeling in this IRP process. Chief among those variables are forward cost projections for both fossil-fueled and carbon-free renewable resources.
- We understand that PSE has an ongoing all-source RFP that has resulted in very low bid prices for renewable resources.
- Our own research of publicly available bid prices for solar and wind resources over the last 18 months, across seven states in the Western Interconnection has found actual, negotiated bids that have resulted in signed PPAs for as low as under \$21/MWh for wind with storage, and under \$26.50/MWh for solar with storage.
- In response to PSE concerns that the current US / China trade dispute will cause price increases for renewable energy systems, WECC's planning consultants and the American Wind Energy Association expect trade dispute effects on solar resources to be minimal and temporary – 3 years at most. They also report that wind supply chain components and OEMs are almost all in the US and therefore not impacted by the trade dispute.
- **Request:** I want PSE to use your current bid prices to inform your forward cost projections in this IRP cycle. I also want PSE to either cite references that justify your stated belief that pricing for renewables will increase over the planning horizon or confirm that is not a concern. I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

- **Accurate IRP analysis modeling - Transmission Capacity:**

- PSE has spent millions of dollars promoting and litigating the Energize Eastside and Lake Hills / Phantom Lake new transmission line projects. Both of these projects are based on outdated projections and outmoded technology. Neither will measurably improve reliability, but will cost ratepayers hundreds of millions of dollars.
- PSE has other infrastructure projects that are being built in response to extreme operational cases. Notably the Tacoma LNG facility, which VP David Mills states was commissioned in response to three freezing cold December days in 2009. Overdesign of energy systems only hurts one group – the ratepayers who have to foot the bill. Energize Eastside is even worse - removing thousands of trees and putting unneeded power lines in the back yards of residential homes.
- These investments are not prudent.

- PSE staff are already raising concerns about the amount of new transmission lines needed to comply with the 100% Clean Electricity legislation. They have gone so far as to suggest the existing transmission lines from Colstrip Montana are not adequate to bring Montana wind-based electricity to Puget Sound, even though those lines currently deliver all of your electricity from Colstrip, Montana, over 20% of your total production.
 - **Request:** I ask PSE to assure the IRP process does not overbuild transmission capacity based on extreme operational cases. I want you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.
- **IRP Transparency - The IRP process must encourage PSE / TAG technical exchange:**
- The IRP is an important, legally mandated process for utilities to develop energy solutions that comply with state legislative goals. PSE has developed a process which includes public input and technical input from a group of Technical Advisory Group members.
 - This process can and should be further improved.
 - **Request:** I want PSE make the following IRP process improvements:
 - o For every TAG recommendation, show how the recommendation has been incorporated or document why the recommendation was not incorporated.
 - o Provide enhanced public notice of IRP and TAG meetings.
 - o Produce, retain and distribute audio recordings of IRP meetings in addition to written notes.
 - I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.
- **IRP Transparency - The IRP process must encourage transparency:**
- Transparency is important, both financial and technical.
 - Sierra Club has received IRP modeling parameters from multiple utilities through a non-disclosure agreement. Sierra Club has made this same offer to PSE throughout the TAG meetings, in the name of transparency and integrity of the IRP process.
 - **Request:** I ask PSE to sign a non-disclosure agreement with Sierra Club to allow confidential disclosure of your IRP modeling data in the name of transparency. I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.
- **IRP Objectives - The IRP process must create a blueprint to carbon free energy:**
- The state has declared that “utilities in the state have an important role to play in this transition ... to a clean energy economy”.

- PSE customers at IRP hearings and during IRP and TAG meetings, almost to a person, have asked you to remove carbon from your electricity.
 - TAG members have asked that the 2019 IRP create a blueprint to carbon free energy.
 - **Request:** I want PSE to develop a 2019 IRP that creates the blueprint to carbon free electricity, including the carbon reduction “curve shape”, in twenty years. I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.
- **IRP Objectives - The IRP process must divest from coal contracts immediately:**
- Your 2017 Greenhouse Gas Inventory shows that 31% of your total electricity is from coal, about 1/3 of that from firm contracts and 2/3 from your own coal plants. That data says you should be able to cut 32% of your coal-based electricity at no additional cost just by renewing these contracts with renewable energy electricity providers.
 - **Request:** I want PSE to renew these contracts to procure electricity from renewable energy when these contracts expire. I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.
- **IRP Objectives - Alignment with Washington State decarbonization goals - Climate change and decarbonization:**
- In the IRP_TAG_Meeting_2_Notes_FINAL PSE stated:
 - o “the purpose of a listening session is to address questions outside of the IRP process”
 - In the DRAFT IRP_07_26_TAG Meeting_Summary PSE indicates:
 - o This listening session was offered by PSE in response to Integrated Resource Plan (IRP) Technical Advisory Group member concerns about “PSE’s response to climate change, tribal relationships and decarbonization”.
 - These PSE statements indicate that PSE believes that climate change and decarbonization are “outside of the IRP process”
 - However, SB 5116, in paragraph (1) of new section 1 states:
 - o “The legislature finds that Washington must address the impacts of climate change by leading the transition to a clean energy economy.”
 - SB 5116, paragraph (5) of new section 1 states:
 - o “The legislature declares that utilities in the state have an important role to play in this transition, and must be fully empowered, through regulatory tools and incentives, to achieve the goals of this policy.”
 - **Request:** Since the goals of this policy are to address the impacts of climate change, to what extent is PSE now obliged to include climate change and decarbonization objectives in the IRP process? I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

- **IRP Objectives - Ability to decarbonize faster than required by statute:**
 - SB 5116 states “Absent significant and swift reductions in greenhouse gas emissions, climate change poses immediate significant threats to our economy, health, safety and national security”.
 - The IPCC report states that we must take immediate and unprecedented greenhouse gas emission reductions to avoid seeing catastrophic climate events as soon as 2030.
 - On Monday, May 6, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) reported that “We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide.” Around 1 million species face extinction, many within decades. The #3 cause – climate change.
 - **Request:** Given the critical nature of timely atmospheric carbon reduction, will PSE commit to not replace coal-based electricity with some other fossil-fuel-based electricity? I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

Name: Kevin Jones

Organization: Vashon Climate Action Group

Phone number: 206-463-1766

Email: kevinjonvash@gmail.com

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

The planet is warming because of natural planetary warming cycles AND human activity. If we are going to have a liveable planet for our + future generations we need to switch to renewable energy now. And this transition must be a just transition for those on the margin / most heavily impacted.

This is going to be the generation that experiences the biggest energy transition - ever - and the sooner we transition the better for everyone and every living creature + living plants.

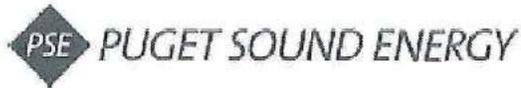
You know what to do + how to do it. Please act now and switch to 100% renewables

Name: Lin Hagedorn

Organization: 350 Eastside

Phone number: 206.310.6203

Email: mountaincumber4@gmail.com



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

- In the IRP_TAG_Meeting_2_Notes_FINAL PSE stated:
 - o "the purpose of a listening session is to address questions outside of the IRP process"
- In the DRAFT IRP_07_26_TAG Meeting_Summary PSE indicates:
 - o This listening session was offered by PSE in response to Integrated Resource Plan (IRP) Technical Advisory Group member concerns about "PSE's response to climate change, tribal relationships and decarbonization".
- These PSE statements indicate that PSE believes that climate change and decarbonization are "outside of the IRP process".
- However, SB 5116, in paragraph (1) of new section 1 states:
 - o "The legislature finds that Washington must address the impacts of climate change by leading the transition to a clean energy economy."
- SB 5116, paragraph (5) of new section 1 states:
 - o "The legislature declares that utilities in the state have an important role to play in this transition, and must be fully empowered, through regulatory tools and incentives, to achieve the goals of this policy."
- **Request:** Since the goals of this policy are to address the impacts of climate change, to what extent is PSE now obliged to include climate change and decarbonization objectives in the IRP process? I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

Name: Lisa Chambers

Organization: Vashon Climate Action Group

Phone number: (206) 463-7756

Email: wishin@rockfarm@gmail.com

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

I am Marlene Meyer a rate payer
and I also acknowledge I am ~~to~~
on Duwamish land.

I am here to share a personal experience
and ask a few questions.

My experience: I had PSE come to
my home for your kind offer of a
free energy assessment.

I was told to cover leakage under doors.
When I asked about solar panels and other
options, I was told to go to private companies.
Why weren't they PSE reps, coordinating panels,
neighborhoods for Renewables such as solar to reduce
costs? Why aren't you helping buildings know cities to use solar?

My
questions

We do not need a PG&E we need more city
and local neighborhoods cooperating to install
inexpensive Renewable resources to give us energy.

Name: Marlene Meyer
Organization: PCA, 350. 8th
Phone number: 425-891-5864
Email: mjmeyer@gmail.com

I'm glad to help
organize this action.
Thank you,
Marlene Meyer

I am happy to
volunteer to start
organizing neighborhoods if
PSE is willing to show
due diligence for a better direction.

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

I am very concerned that PSE's plan includes natural gas / CH₄ / methane. I am concerned because methane in the atmosphere is 86x more powerful as a GHG than CO₂ when measured over a 20 year period. The next 20 years are crucial in the survival of human life on earth. The next 10 years are crucial (IPCC report and federal report), and CH₄ is exponentially more powerful as a GHG than the 86x rate for 20 years.

* Does methane leak at the point of extraction and during pipeline transportation? NOAA and the Methane Project at Cornell University say it does, at well above the 3% leakage rate where methane gas is as bad as coal in its impact on climate (see "chasing methane" with Mark Bitman of the NY Times) on youtube. I have seen no evidence that gas fracked in British Columbia involves leak rates below 3%.

Do you UNDERSTAND THE EMERGENCY WE ARE IN? If you did, I think the PSE speaker tonight would not be talking about "a balanced approach" and making no sacrifices in reliability of service. We are all going to have sacrifice.

Name:

MARY PATERSON

Organization:

350 Seattle

Phone number:

Email:

marycpaterson@gmail

See also Solutionary Rail: renewables can be made ready in a very short time.

Nancy Johnson

9411 216th St SW

Edmonds, WA 98020

206-371-5499 PSE Ratepayer

As a retired RN, I'm very concerned about health issues related to fossil fuel use. Recent research shows more effect on health than previously known. In addition, recent research has also shown that the climate crisis is advancing ^{much} more quickly than previously thought.

WE DO NOT HAVE TIME for PSE to ignore the current research. PSE must stop promoting LNG. STOP the Tacoma LNG plant & the North Seattle Lateral Pipeline Upgrade.

Thank you for the opportunity to comment. Please act now!

Hello, my name is Nancy Shimeall and I am from Redmond/Duwamish land, I want to acknowledge we are guests today on Duwamish land.

I came here today as a ratepayer, and as the owner of a Douglas-fir farm on Upper Skagit tribal land.

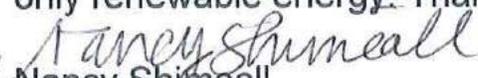
On my 75 acres, there will be about 15,000 Douglas-fir trees, and if they all live, they will absorb 1.26 million pounds of CO2 per year.

However, the changing conditions caused by drought, fire, and heat, our state will lose 32%, a third, of the land that has the conditions needed for growing Douglas fir trees.** That means that today, native trees are already stressed. If you look around, and look up, you will see dying trees in our neighborhoods and along our highways.

There are more than 42 million acres of forestland in Washington state. We know that methane emissions from fracked gas is 86 times more potent over 20 years than carbon emissions.

When PSE's IRP is projecting into the next 20 years, you must include the cost to all of us the harm that building gas infrastructure will cause. How much of the 42 million acres of forest will survive? Over the next 20 years, I will be trying to keep my trees alive.

We need you to stop planning the extraction, shipping, pipelines, the refining, and the burning, of gas. In your IRP plan for the next 20 years, while we are trying to keep our trees alive, we ask that you plan and execute a transition to only renewable energy. Thank you.


Nancy Shimeall
6634 159th Ave NE
Redmond, 98052

** according to the University of Washington College of the Environment, with continued use of fossil fuels, including gas.

SECTION 7

How Will Climate Change Affect Forests in Washington?

Climate change is expected to transform Washington's forests over the long term by affecting the establishment, growth, and distribution of forest plant species, and by increasing disturbances such as fire, insect outbreaks, and disease.^[1] While direct impacts of climate change on tree species (e.g., productivity, distribution) are important, the large projected increases in fire suggest that indirect impacts of climate change through disturbance are likely to be greater and more immediate agents of change for Washington forests. Recent research has provided projected impacts on several Washington forest species and types, as well as on disturbances, particularly fire and insect outbreaks.

- 1. The spatial distribution of suitable climate for many ecologically and economically important tree species in Washington may change considerably by the end of the 21st century, and some vegetation types, such as subalpine forests, may become very limited in their ranges.^{[A][1]}**
 - *Area of climatic suitability for Douglas-fir is projected to decline.* Climate is projected to become unfavorable for Douglas-fir over 32% of its current range in Washington by the 2060s, relative to 1961-1990, under a medium greenhouse gas scenario.^[B] Areas of climatic suitability for Douglas-fir are projected to decline most noticeably at lower elevations, especially in the Okanogan Highlands and the south Puget Sound/southern Olympics.^{[C][2]}
 - *Area of climatic suitability for pine species are projected to decline.* Only 15% of the area currently suitable for three pine species in Washington (ponderosa pine, lodgepole pine, and whitebark pine) is projected to remain suitable for all three by the 2060s, relative to 1961-1990, under a medium greenhouse gas scenario, while 85% of their current range is projected to become climatically unsuitable for one or more of the three species (Figure 7-1).^{[C][2]}
 - *Area of climatic suitability for subalpine forest is projected to decline.* Suitable climate

^A Much of the material in this document is derived or directly quoted from *Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*^[1] and Littell et al. 2010.^[2] Impacts on specific species and ecosystems described in this document represent examples rather than an exhaustive list of potential regional impacts. In describing potential impacts, we have used the term "projected" where future impacts have been estimated quantitatively (e.g., using models or experiments) and explicitly incorporate climate models and greenhouse gas scenarios (which we report in associated footnotes), and the term "may" where future impacts have been inferred from available biological information and projected climatic changes.

^B Greenhouse gas scenarios were developed by climate modeling centers for use in modeling global and regional climate impacts. These are described in the text as follows: "very low" refers to RCP 2.6; "low" refers to RCP 4.5 or SRES B1; "medium" refers to RCP 6.0 or SRES A1B; and "high" refers to RCP 8.5, SRES A2, or SRES A1F1 – descriptors are based on cumulative emissions by 2100 for each scenario. See Section 3 for more details.

^C Using results from two global climate models (HadCM3GGa1 and CGCM2) under a scenario that assumes a 1%/year increase in greenhouse gas emissions. This scenario closely resembles the current medium greenhouse gas scenario (RCP 6.0), with the exception that its late 21st century emissions are higher.

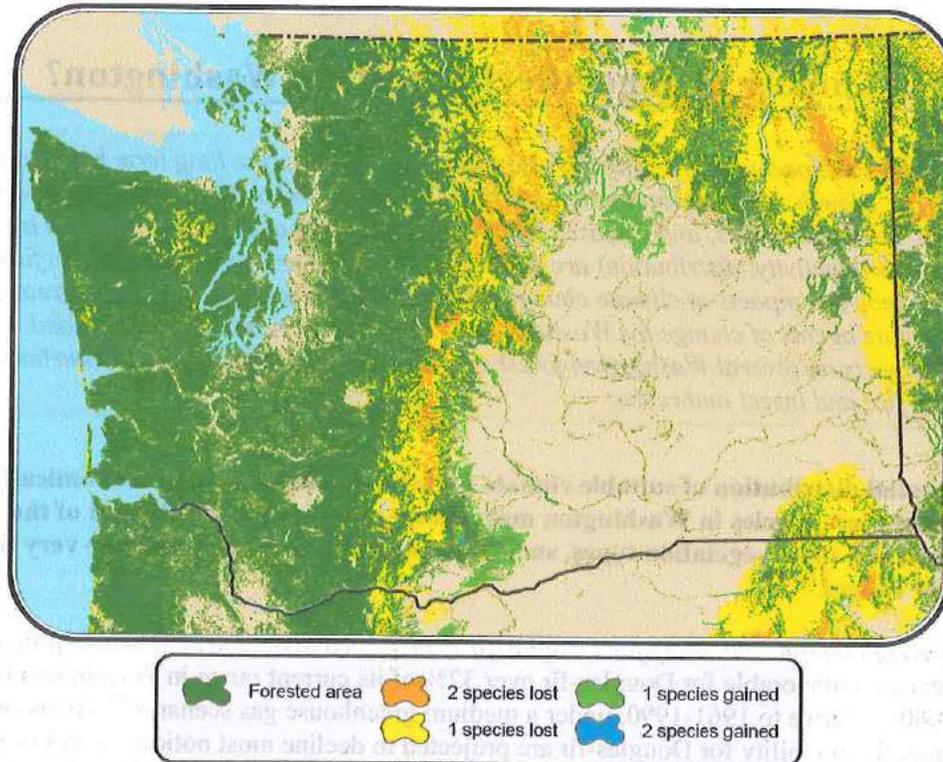


Figure 7-1. Projected changes in climatic suitability for three Washington pine species (ponderosa pine, lodgepole pine, and whitebark pine) by the 2060s relative to 1961-1990, under a medium greenhouse gas scenario.^{[B][C]} Decreases indicate places where climate will be no longer suitable for some species, whereas increases indicate places where climate is currently unsuitable for some species but may be suitable in the 2060s. Reproduced from Littell et al. (2010).^[2]

for subalpine forest in Washington is projected to decline substantially in area under a high greenhouse gas scenario.^{[D][3]} Areas of climatic suitability may decline for high-elevation populations of whitebark pine, Brewer spruce, Engelmann spruce, and subalpine fir in the Pacific Northwest.^[1]

- *Further research is needed concerning additional species and vegetation types. Most existing research has focused on economically important species such as Douglas-fir and vulnerable vegetation types such as subalpine forest. Additional projections are needed for a wider range of tree species and forest types.*

2. Changes in forest structure and composition will be driven primarily by disturbance.
Because forests take many years to regenerate, stand-replacing disturbances caused by fire,

^D Changes from historical (1971–2000) to future (2070–2099) modeled using MC1 vegetation model projections based on three global climate models (CSIRO-Mk3, Hadley CM3, and MIROC 3.2 medres) under a high (A2) greenhouse gas scenario.

insects, and disease will result in more rapid changes to forests than suggested by projections of future species range shifts.^[1]

3. **Climate change may affect the productivity of Washington forests.** Given projections of warmer, possibly drier summers in Washington, tree growth may increase where trees are currently energy-limited (e.g., higher elevations) and decrease where trees are currently water-limited (e.g., drier areas).^[1]
4. **Washington forests are likely to become increasingly water-limited, with episodes of drought increasing in area and intensity.** This is likely to lower forest productivity in some areas, while also increasing vulnerability to disturbance (e.g., fire, insects, pathogens).
 - *Area of severely water-limited forest is projected to increase.* Under a medium greenhouse gas scenario, the area of Washington forest where tree growth is limited by water availability is projected to increase (relative to 1970-1999) by +32% in the 2020s, with an additional +12% increase in both the 2040s and 2080s. Severely water-limited forests are projected to occur on the east side of the Cascade Range and in the northeastern part of the state.^{[E][2]}
5. **Drier, warmer conditions are likely to increase the annual area burned by forest fires.^[F]** This is because projected decreases in summer precipitation and increases in summer temperatures would reduce moisture of existing fuels, facilitating fire, while earlier snowmelt should lead to earlier onset of the fire season.^[2]
 - *Annual area burned is projected to increase.* Compared to the median annual area burned in the Northwest during 1916-2006 (0.5 million acres), one set of fire models projects an increase to 0.8 million acres in the 2020s, 1.1 million acres in the 2040s, and 2 million acres in the 2080s, under a medium greenhouse gas scenario.^{[G][2]} Another set of models projects +76% to +310% increases in annual area burned for the Northwest from 1971-2000 to 2070-2099 under a high greenhouse gas scenario.^{[D][3]}
 - *Increases in area burned are projected to vary across the region.* For example, in forested ecosystems (Western and Eastern Cascades, Okanogan Highlands, and Blue Mountains), annual area burned is projected to increase by about a factor of 4 by the 2040s, compared to 1980-2006, under a medium greenhouse gas scenario. In non-forested areas (Columbia Basin and Palouse Prairie), annual area burned is projected to increase on average by about a factor of 2.^{[G][2]}

^E Based on hydrologic simulations of annual precipitation and summer potential evapotranspiration, which were averaged over 20 global climate models and a low (B1) and medium (A1B) greenhouse gas scenario. Energy-limited forests were defined as those where annual precipitation exceeds summer evapotranspiration, and water-limited forests were defined as those where summer potential evapotranspiration exceeds annual precipitation.

^F Compared to area burned, there is much less quantitative information about the likely consequences of climate change for forest fire frequency, severity, and intensity (Littell et al. 2013).^[1]

^G Average of area burned calculated separately for climate simulated by two global climate models (CGCM3 and ECHAM5) under a medium (A1B) greenhouse gas scenario.

- *Fires may occur in areas where they have been rare in the past.* While it is difficult to project future fire risk for wetter regions (e.g., Puget Trough, Olympic Mountains) with low historical annual area burned, it is expected that rising summer temperatures, lower soil moisture, and higher evaporation rates could result in more area burned in western Washington forests that have not traditionally been considered fire-prone.^[2] One set of projections estimates that annual area burned for Northwest forests west of the Cascade Range crest will be about +150% to +1000% higher in 2070-2099 compared to 1971-2000, under a high greenhouse gas scenario.^{[D][3]}
 - *Further research is needed.* In particular, models are needed that account for climate-fire severity relationships and provide projections of future fire severity as a function of climate change.
- 6. Insect outbreaks are likely to change in frequency and affected area, as forests become more susceptible due to climatic stressors (e.g., drought), and areas climatically suitable for outbreaks shift.**
- *The area of forest susceptible to mountain pine beetle outbreaks is projected to first increase then decrease.* Under a medium greenhouse gas scenario, area susceptible to mountain pine beetle outbreak is projected to first increase (+27% higher in 2001-2030 compared to 1961-1990) as warming exposes higher elevation forests to the pine beetle, but then decrease (-49 to -58% lower by 2071-2100) as temperatures exceed the beetle's thermal optimum.^{[H][4]}
 - *Ranges of other bark beetles may also decrease.* Ranges of some bark beetles (e.g., pine engraver beetle) may decrease due to climatic conditions less favorable for outbreaks.^[1]
 - *Further research is needed into how other insects may respond to climate change.* Anticipating future impacts will require better understanding the role of climate in other insects' (e.g., spruce and fir beetles or defoliators) life cycles and host vulnerabilities.
- 7. Climate change is likely to influence forest disease outbreaks, but because climatic influences are likely to be species- and host-specific, generalizations are difficult to make.^[5]**
- *Climate change is projected to increase Northwest forests' susceptibility to several diseases.* With warmer future temperatures, risk of forest damage from yellow-cedar decline and Cytospora canker of alder may be high if annual precipitation decreases, while risk of forest damage from dwarf mistletoes and *Armillaria* root disease may be high whether precipitation increases or decreases.^[5] Several studies have suggested that future increases in temperature and precipitation may lead to increased risk of sudden oak

^H Historical (1961-1990) temperatures were used to predict current climatic suitability for outbreaks. Future (2001-2030, 2071-2100) temperature suitability estimated for one future climate scenario (CRCM) assuming a high (A2) greenhouse gas scenario.

death in the Northwest.^{[5][6]} In addition, swiss needle cast is projected to have increased capacity to affect Douglas-fir in Northwest forests by 2050, under a low greenhouse gas scenario.^{[1][7]}

8. Climate change may affect the ability of Washington’s forests to sequester carbon by increasing disturbances such as fire, which may alter the amount of carbon stored in soils and vegetation.^[1]

- *Increased annual area burned is projected to lower the amount of carbon stored in Washington forests.* By 2040, increasing burn area in Washington is projected to reduce the amount of carbon stored by forests by 17 to 37%.^{[1][8]}
- *Changes in carbon stores may vary regionally.* Forests of the western Cascades are projected to be more sensitive to climate-driven increases in fire, and thus projected changes in carbon dynamics, than forests of the eastern Cascades.^{[1][8]}

9. Due to recent research, scientific understanding of impacts has advanced and the specificity and quality of projections has increased. Almost all of the impacts described in this document have been quantified since 2010, and include finer spatial and temporal resolution than previous analyses, as well as additional detail on impacts to particular species.

- *New information for Washington and the Northwest includes the following:*
 - Projected changes in areas of climatic suitability for forest species (e.g., Douglas fir), and forest types (e.g., subalpine forest).
 - Projected changes in annual area burned.
 - Projected changes in ability of forests to store carbon.
- *Available studies are still limited to a relatively small proportion of Washington forest species and disturbance processes.* Projections for a wider variety of tree species and forest types are needed, as well as more sophisticated models of fire and disease.

10. Many Washington communities, government agencies, and organizations are preparing for the impacts of climate change on forests. Most are in the initial stages of assessing impacts and developing response plans; some are implementing adaptive responses. For example:

- *Science-management partnerships have been established to approach adaptation to climate change.^[1]* For example, the *North Cascadia Adaptation Partnership* is a Forest

¹ Projection based on continuing winter temperature increases for the Pacific Northwest of approximately 0.72°F/decade through 2050 (for a total increase of 3.6°F, which is near the average projected warming for mid-century in the Pacific Northwest, assuming a low greenhouse gas scenario).

² Based on estimates of historical and future carbon carrying capacity of forest types based on potential productivity, maximum carbon storage, historical fire regimes, and projections of 21st century area burned from Littell et al. 2010.^[2]

Service - National Park Service collaboration that joined with city, state, tribal, and federal partners to increase awareness of climate change, assess the vulnerability of cultural and natural resources, and incorporate climate change adaptation into current management of federal lands in the North Cascades region. More information is available at Northcascadia.org.

- A guidebook has been developed to assist with developing adaptation options for national forests, including those in Washington. [Responding To Climate Change In National Forests: A Guidebook for Developing Adaptation Options](#) includes both strategies and approaches to strategy development.^[9]
- Climate adaptation strategies have been or are being developed for specific national forests. A completed example is: [Adapting to Climate Change at Olympic National Forest and Olympic National Park](#).^[10]

Additional Resources for Evaluating Changes in Forests

The following resources provide local information about hydrologic conditions and water availability and demand to support assessment of climate impacts on forested ecosystems, and on forest management and forest uses.

- **Climate and hydrologic scenarios.** The Climate Impacts Group provides historical data and future projections of temperature, precipitation, snowpack, streamflow, flooding, minimum flows, plant water demand, and other important hydrologic variables for all watersheds and 112 specific streamflow locations in Washington State, as well as for locations throughout the Columbia River basin and the western US. <http://warm.atmos.washington.edu/2860>,^[11] <http://cses.washington.edu/cig/>
- **Data Basin**, a science-based mapping and analysis platform that aggregates, describes and shares datasets, maps and galleries of information of relevance to forest and disturbance change in the Pacific Northwest. <http://databasin.org/>

^[1] Littell, J. S. et al., 2013. Forest Ecosystems: Vegetation, Disturbance, and Economics. Chapter 5 in M.M. Dalton, P.W. Mote, and A.K. Snover (eds.) *Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities*. Washington, D.C.: Island Press.

^[2] Littell, J.S. et al., 2010. Forest ecosystems, disturbance, and climatic change in Washington State, USA. *Climatic Change* 102: 129-158, doi: 10.1007/s10584-010-9858-x.

^[3] Rogers, B. M. et al., 2011. Impacts of climate change on fire regimes and carbon stocks of the U.S. Pacific Northwest. *Journal of Geophysical Research* 116: G03037, doi:10.1029/2011JG001695.

^[4] Bentz, B. J., Régnière, J., Fettig, C. J., Hansen, E. M., Hayes, J. L., Hicke, J. A., Kelsey, R. G., Negrón, J. F., and S. J. Seybold. 2010. Climate change and bark beetles of the western United States and Canada: direct and indirect effects. *BioScience* 60:602-613.

-
- [5] Kliejunas, J. T., 2011. A risk assessment of climate change and the impact of forest diseases on forest ecosystems in the Western United States and Canada. Gen. Tech. Rep. PSW-GTR-236. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 70 p.
- [6] Sturrock, R. N. et al., 2011. Climate change and forest diseases. *Plant Pathology* 60: 133–149. doi: 10.1111/j.1365-3059.2010.02406.x
- [7] Stone J. K. et al., 2008. Predicting effects of climate change on Swiss needle cast disease severity in Pacific Northwest forests. *Canadian Journal of Plant Pathology* 30:169-176.
- [8] Raymond, C. and J. A. McKenzie, 2012. Carbon dynamics of forests in Washington, USA: 21st century projections based on climate-driven changes in fire regimes. *Ecological Applications* 22:1589–1611.
- [9] Peterson, D. L. et al. 2011. Responding to climate change in national forests: a guidebook for developing adaptation options. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.
- [10] Halofsky et al. 2011. Adapting to Climate Change at Olympic National Forest and Olympic National Park. United States Department of Agriculture.
- [11] Hamlet, A.F. et al., 2013. An overview of the Columbia Basin Climate Change Scenarios Project: Approach, methods, and summary of key results. *Atmosphere-Ocean* 51(4): 392-415.

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

I couldn't help but notice the respect being given at the IRP meeting today for Tribal representation. Unfortunately, PSE has not extended this same type of courtesy in engaging in a consultation process w/ The Puyallup Tribe in regards to their LNG Refinery that's being illegally built on the Tribes Medicine Creek Treaty Territory. This PROPOSED LNG Refinery is almost done being built in violation without a construction permit per the PSCAA and in ~~violation~~ Federal Violation for not engaging in consultation with the tribe. This is extremely disrespectful to afford recognition at this IRP meeting but not on a government to government and Agency to government consultation.

Attorney Bob Ferguson announced last week Name: "Effective Immediately" consultation MUST commence! This refinery project has so much wrong, immorally, Scientific, culturally, humanly, legally....

Consult with the Puyallup Tribe Now! Prior Knowledge & consent

Nikie Walters
Tacoma Resident
nikiewalters@gmail.com

To: WA Utilities & Transportation Commission, Gov. Jay Inslee, AG Bob Ferguson, WA Council for the Environment - Bill Sherman, WA Dept. of Ecology, Puget Sound Clean Air Agency, Army Corps of Engineers

Regarding: Puget Sound Energy's proposed LNG facility currently being built on Medicine Creek Treaty Territory, just outside the Puyallup Reservation.

Public money should not be spent unless it will benefit the public good. As currently outlined, Puget Sound Energy (PSE) has been authorized to pass on 43% of the monetary construction costs to residential rate-paying customers even though they are only scheduled to receive less than 2% of the projects use. This 43% cost to ratepayers for less than 2% use is simply unfair. The majority of this fracked gas refinery & storage facility will be used to sell the gas for a profit to industrial and maritime customers while residential ratepayers will be provided backup power for a few of the coldest days of the year known as peak shaving. Although the lease for this project is 40 years, the peak shaving will only happen for 10 years before ratepayers are not a part of the project at all. The disparity of the monetary burden appears not just wrong but fraudulent from a public standpoint. This alone is completely unacceptable. However, when we ask ourselves if a project will benefit the public good, we must look at more than just the price tag.

The "Human Cost of Carbon" must start to be given the same level of importance as upfront monetary costs. Costs such as the health effects of living or working near the facility and breathing in the benzene, xylene, toluene and other carcinogens daily as well as the health effects on our relatives living near the fracking sites. Value must be placed on the fresh water any project would consume. Water is Life. Fracking poisons millions of gallons of water at each well head, with no known way to make that water safe again. When we consider using fossil fuels, we must acknowledge our complicity in man camps, the instability and harm they cause to local communities, and the role this male dominant, transient workforce plays in the epidemic of Missing and Murdered Indigenous Women. We must count the cultural wounds of environmental racism. Value must be placed on upholding treaty rights and ensuring true free prior and informed consent for Indigenous people. We must consider worker safety, public safety, the possible effects for other local species, possible effects on food supply, and the habitat lost to make way for the project. We have to give weight to how a project will contribute to or mitigate climate change.

The human cost of continuing to burn fossil fuels and building new fossil fuel infrastructure is nothing short of genocide for future generations. The Intergovernmental Panel on Climate Change recently released a report that warns we likely have only 12 years to make drastic changes if we want to avoid thresholds that cannot be uncrossed, that will cause chain reactions that push our planet away from being habitable by the human species. Global scientists agree that we must leave remaining fossil fuels in the ground if we are to have any hope of keeping warming to between 1.5 and 2 degrees celsius above pre-industrial temperatures. Already we see effects such as increasingly severe storms and wildfires, draughts, flooding, famine, deaths from extreme temperatures, deaths related to poor air quality, coral bleaching, algae blooms and the beginning of the 6th mass extinction. These conditions will only get worse as global temperatures rise. Building new fossil fuel infrastructure locks us into decades of future use when we need to be investing in renewable energy now. When we are listening to best available science, investing in any new or expanded fossil fuel infrastructure cannot possibly be deemed to be in the best interest of the public.

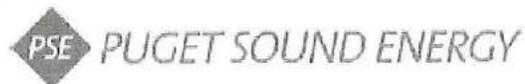
No public funds should be spent on Puget Sound Energy's proposed LNG project as it is clearly not in our best interest, funds including approved rate-payer increases, tax breaks, subsidies, or other monetary incentives. These human costs should also be considerations transparently discussed when considering all future projects that seek to receive public funds.

~~We should~~ your website and
FaceBook gave conflicting
information on time stamps
for this event. I had to call
the coordinator.

Dear PSE,

"Play well in the
sandbox"

Thanks,
PSE rate payers



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

Hi, my name is Noah Roselander, and I am here as a PSE ratepayer, a member of the Vashon Climate Action Group/350, and a member of the Technical Advisory Group.

I think we're all familiar with the data on climate change. We are facing a Climate Crisis. Unless we make immediate and substantial changes, we are on track to surpass an increase of 1.5 degrees Celsius from pre-industrial levels, which will result in a climate that has not existed on earth in the last several hundred thousand years, and will not support life as we know it, if at all.

We as individuals are doing what we can, but you, PSE, have the real power, the power to stop burning fossil fuels. We are asking you to make a clear and rapid plan to transition to renewable energy. If the future of life on the planet is not compelling enough, replacing fossil fuels with renewables also makes simple economic sense, and overwhelming economic sense when you consider the cost to the economy of widespread environmental destruction, i.e. the Social Cost of Carbon.

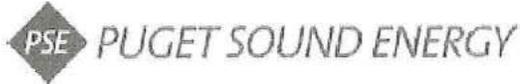
So on that point, and to the extent that my comments are to be in the context of the IRP process, SB5116 states "An electric utility must incorporate the social cost of greenhouse gas emissions as a cost adder when ... developing integrated resource plans ... and ... evaluating and selecting intermediate term and long-term resource options"

Therefore, I am asking that PSE incorporate three changes into your 2019 IRP:

1. Social cost of carbon, at the 2.5% discount rate, must be included in the PSE IRP analysis "base case".
2. Social cost of carbon, at the 2.5% discount rate, must be included in all analysis scenarios used for resource acquisition planning.
3. PSE must allow the social cost of carbon value to increase, annually, per the Interagency Working Group (IAWG) document cited in SB 5116 or increase annually with inflation if defined by rulemaking.

Please provide a written response to this request before the May 29 TAG meeting.

Noah Roselander
Vashon Climate Action Group/350/TAG Member
269 218 0501
noah.roselander@gmail.com



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

Hi, my name is Noah Roselander, and I am here as a PSE ratepayer, a member of the Vashon Climate Action Group/350, and a member of the Technical Advisory Group.

I think we're all familiar with the data on climate change. We are facing a Climate Crisis. Unless we make immediate and substantial changes, we are on track to surpass an increase of 1.5 degrees Celsius from pre-industrial levels, which will result in a climate that has not existed on earth in the last several hundred thousand years, and will not support life as we know it, if at all.

PSE has the power to stop burning fossil fuels. We are asking you to make a clear and rapid plan to transition to 100% renewable energy. If the future of life on the planet is not compelling enough, replacing fossil fuels with renewables also makes simple economic sense. *no new fossil fuel infrastructure. Stop the LNG plant in Tacoma.*

To the extent that my comments are to be in the context of the IRP process I would like to comment on the following.

In the IRP TAG Meeting ²Notes PSE stated:

- "the purpose of this listening session is to address questions outside of the IRP process", and in the meeting summary states "This listening session was offered by PSE in response to Integrated Resource Plan (IRP) Technical Advisory Group member concerns about "PSE's response to climate change, tribal relationships and decarbonization".

These statements indicate that PSE believes that climate change and decarbonization are "outside of the IRP process". A reading of SB 5116 shows that they clearly are not. Paragraph (1) of section 1 states:

- "The legislature finds that Washington must address the impacts of climate change by leading the transition to a clean energy economy.", and "The legislature declares that utilities in the state have an important role to play in this transition, and must be fully empowered, through regulatory tools and incentives, to achieve the goals of this policy."

It is clear that PSE is obligated to include climate change and decarbonization objectives in the IRP process. I am glad to have this listening session an opportunity to provide feedback, but reject your attempt to claim that it is outside of the IRP process. It is integral to it. Please acknowledge this fact and provide a written response before the May 29 TAG meeting.

Noah Roselander
Vashon Climate Action Group/350/TAG Member
269 218 0501
noah.roselander@gmail.com



IRP Comment Form

IRPAG Meeting #3
May 22, 2019

Please provide your comments below.

Hi, my name is Noah Roselander, and I am here as a PSE ratepayer, a member of the Vashon Climate Action Group/350, and a member of the Technical Advisory Group.

I think we're all familiar with the data on climate change. We are facing a Climate Crisis. Unless we make immediate and substantial changes, we are on track to surpass an increase of 1.5 degrees Celsius from pre-industrial levels, which will result in a climate that has not existed on earth in the last several hundred thousand years, and will not support life as we know it, if at all.

We as individuals are doing what we can, but you, PSE, have the real power, the power to stop burning fossil fuels. We are asking you to make a clear and rapid plan to transition to renewable energy. If the future of life on the planet is not compelling enough, replacing fossil fuels with renewables also makes simple economic sense, and overwhelming economic sense when you consider the cost to the economy of widespread environmental destruction, i.e. the Social Cost of Carbon.

To the extent that my comments are to be in the context of the IRP process I would like to comment on the following:

The IRP is an important, legally mandated process for utilities to develop energy solutions that comply with state legislative goals. PSE has developed a process which includes public input and technical input from a group of Technical Advisory Group members. In order for this effort to be meaningful, some improvements are necessary.

1. For every TAG recommendation, PSE must show how the recommendation has been incorporated, or document why the recommendation was not incorporated.
2. PSE must provide enhanced public notice of IRP and TAG meetings to ensure that the technical advisors and the general public have ample opportunity to attend and make their voices heard.
3. PSE must produce, retain and distribute audio recordings of IRP meetings in addition to written notes.

I am asking PSE to provide a written response to this request before the May 29 TAG meeting.

Noah Roselander
Vashon Climate Action Group/350/TAG Member
269 218 0501
noah.roselander@gmail.com

To: David Mills PSE Senior Vice President Policy and Energy Supply

Subject: Puget Sound Energy IRPAG Listening Session With David Mills May 22, 2019

I am serving as a Technical Advisory Member on PSE's Integrated Resource Plan, past Community Advisory Group Member for PSE's Energize Eastside Transmission Line Project and Bellevue's Annual Reliability Workshop Review.

As an electrical engineer representing the 9500 Bellevue Bridle Trails residents, we continue to be interested in seeking to obtain reliability improvement and equitable electrical power infrastructure in Bellevue.

I am recommending two process issues for PSE consideration:

Customer/Stakeholder Participation with PSE Policy Personnel

Meet more frequently with PSE policy personnel.

Currently many policy making personnel are insulated from conversation with customer/stakeholders. This was not always the case. This forum is important especially for a private monopoly.

Project Transparency;

My experience as a customer and electrical engineer leaves unanswered questions. PSE needs to be more transparent in providing data to justify projects especially transmission line projects. PSE forecasts also seem to be skewed when compared to other similar utilities in order to justify a project.

It is important that the community and other stakeholders work together to best serve all interests.

Norm Hansen, 3851 136th Ave.NE Bellevue WA.98005

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

It is evident that we cannot proceed with LNG plant that sits on Native Ryallup Land and that holds Fracked gas that has been drawn from our sacred aquifers on this continent.

There are millions of people who are drinking contaminated water that you the PSE have collected without considering the pain and suffering of those with cancers and physical reactions.

If we look at our hearts that live in our center, we must look at the disaster that the current approach is and will cause harm on every level.

It is time now to choose solar wind energy sources that are fully available and that are calling to us, to our hearts for a future.

Name: Pamela A. Johnson Silvermoon

Organization: Earth Repair

Phone number: 425 222 4118

Email: silvermoondeva@gmail.com

5/22/19
Executive Listening Session

My name is Rachel Molloy and I am from the Redmond, WA on Duwamish lands. I am here as a deeply concerned Mother's Clean Air Force parent, as a solar net-metering ratepayer, and as a Marketing Professional.

I want to voice strong objection to replacing an infrastructure system of COAL-derived greenhouse gas...with COAL SEAM-derived greenhouse gas. It might be cleaner coming out on delivery side, but at the equally harmful expense of communities, children, water supplies, health, and methane emissions on the supply side. We MUST take into account the full end-to-end realities and costs of our fuels and our infrastructure impact. We can not deck chair shuffle our way off the Titanic, and we can not greenhouse gas shuffle our way off of a catastrophically warming planet headed toward +4C.

The NCA4 National Climate Assessment and UN IPCC SR15 warnings on methane are clear. Methane and CO2 rates are surging. US and Canadian methane and carbon mapping satellite missions moving closer to providing the public real-time, utility-level checks on end-to-end emission, leak, and flaring rates. There will be an accounting. Taxpayers are footing the full cost on climate damages, climate risks, and localized pollution impacts for private industry profit margins. You must accurately take our future, our health, and full costs into account in planning our infrastructure. The window of opportunity for half-measures, bridge fuels, and inadequately addressing emissions is over. We must leap towards full electrification, renewables, conservation, and efficiency efforts...not work to expand and extend, off-shore and export the fossil fuel industry.

Thank you for listening. Again, I ask that PSE (like all of us) take a long hard look at the realities of climate change, and our responsibilities and negligence on the part of realizing actualized emissions reductions today. Our future literally depends on us getting this right.

Rachel Molloy
18308 NE 107th Street
Redmond, WA 98052

Returning Colstrip Doug

Colstrip is a rip-off for Puget Sound Energy customers

Puget Sound Energy, Avista Utilities and Pacific Power in Washington own half of the largest two and remaining units of the Colstrip coal plant in Montana.

Washington just passed the 100% clean electricity legislation (SB 5116) that mandates no more coal for electricity in Washington by the end of 2025. PSE spends tens of millions each year on Colstrip Operations & Maintenance (O&M) just to keep propping up this dirty, aging and expensive plant.

PSE and the Colstrip owners are spending \$175 million in new capital expenses (CapEx) on Colstrip now through 2022.

Too many of these on-going expenses will prop up the plant beyond 2025 for no benefit for PSE customers. PSE needs to phase out Colstrip funding starting immediately.

PSE is falsely asserting that the Colstrip ownership contract will require their shareholders to keep paying into Colstrip even after state law cuts off ratepayer money in 2025. This is not accurate – and more importantly – it is not a ratepayer problem.

PSE keeps pouring money into this dirty and expensive plant. That's like paying for a new roof you will never use. There is no value in Colstrip upgrades because the plant has hundreds of millions (if not billions) in "negative value." PSE customers are getting ripped off. Funding to prop up this plant must stop.

Richard Vogel DDS
Seattle 98103
PSE rate payer

100% legislation Doug

Two Percent Cost Cap

Puget Sound Energy, we are putting you on notice: Do not manipulate compliance with the new 100% Clean Electricity legislation (SB 5116).

Of all the issues that can undermine the landmark law, exceeding the "cost cap" on compliance is the most subject to manipulation.

By 2030, utilities must be 80 percent clean electricity: no coal and no gas. The biggest excuse for not complying will be if costs of clean electricity are too high. Here is the concern.

Puget Sound Energy (PSE) must be 80 percent clean by 2030. They currently are 33 percent coal and 22 percent gas, plus they buy about a third of their resources – approximately 1,600 megawatts – on the open market. PSE must eliminate all of its coal by 2025, reduce some its gas by 2030, and replace about 3,000 megawatts of electricity by 2030.

If the cost of this 3,000 megawatts is "2 percent" more than the alternative (new or existing gas power plants), then PSE will exceed the "cost cap" and not have to comply. This 2-percent cap is additive. More specifically, the 2 percent cost cap starts in 2022, and 2 percent is added each year, so in 2023 the cost cap is 4 percent. By 2030, it is 18 percent.

The cost cap is the difference between the cost of clean energy like new wind turbines or solar farms and the cost of a new gas power plant. These differences are easier to measure. And wind and solar are likely cheaper than new and existing gas so this is not the biggest concern.

The bigger problem is all the other costs that PSE may try to classify as compliance costs. For example, between now and 2030, even without this new law, we would expect PSE to increase their level of investments in energy efficiency programs which is the historic trend. These normal increases are "business as usual" and should not be considered the "cost of compliance" with the new law.

These examples abound. We should expect increases in demand response programs (programs design to shift the timing of peak demand in electricity) and increases in transmission and distribution grid efficiency. We should expect increases in rooftop solar and weatherization programs. These normal increases in business expenses should not be considered "cost of compliance."

PSE must be put on notice now. We will not accept PSE simply relabeling normal increases in expenses as "cost of compliance." You already are expected to increase your investments in clean energy programs and you cannot simply re-classify these normal increases as cost of compliance.

We will never achieve 100 percent clean electricity unless we meet the near-term benchmark in 2030. The starts now with CLEAR AND TRANSPARENT plans.

Richard Voget DDS
Seattle
PSE rate payer

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

I first became aware of climate change in the 1990's as an environmental engineer in consulting. I was alarmed, but comforted by the fact that we had decades to gradually wean our economy away from fossil fuels. We had time, knowledge, and economic opportunity.

It's 25 years later. I have a beautiful 16-year old son. And now we're facing a full-blown crisis. Drought, floods, coral reefs dying, a "smoke season", and daily unprecedented weather events. ^{I know the science} This is just the beginning. I ~~volunteer~~ ^{worry} every day about my son suffering in the world he has been handed. It breaks my heart, but it motivates me to volunteer every day to try to reduce our GHG emissions. I expect you PSE to do your part.

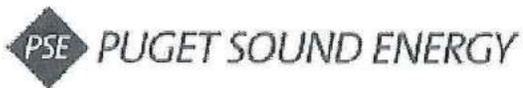
I'm guessing most who read this have children and/or grandchildren. If you care about them you will stop building the LWT plant. * Embrace the opportunity in clean energy. You may even step better at night.

Name: Sarah Richards

Organization: Indivisible Kirkland, People for Climate Change

Phone number:

Email: sarahlei@comcast.net



IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

- Your 2017 Greenhouse Gas Inventory shows that 31% of your total electricity is from coal, about $\frac{1}{3}$ of that from firm contracts and $\frac{2}{3}$ from your own coal plants. That data says you should be able to cut 32% of your coal-based electricity at no additional cost just by renewing these contracts with renewable energy electricity providers.
- **Request:** I want PSE to renew these contracts to procure electricity from renewable energy when these contracts expire. I ask you to clarify the PSE position on this request and provide a written response before the May 29 TAG meeting.

Name:

Steve Rubicz

Organization:

Rate Payer / Washon Indivisible

Phone number:

206-567-5193

Email:

srirubicz@gmail.com

IRP Comment Form

IRPAG Meeting #3

May 22, 2019

Please provide your comments below.

The Integrated Resource (IRP) is the 20 year plan that utilities must submit every 2 years, and it must be a blueprint for going carbon free. As such, PSE must stop making the problem worse through construction of new gas infrastructure. This includes no LNG, no pipelines expansions, and no new gas plants - including the two proposals moving forward in PSE resource solicitation.

In addition, PSE needs to acknowledge that long range climate plans call for the phase out of gas.

In order to stop climate change, we need to end our dependence on fossil fuels like coal, oil & gas.

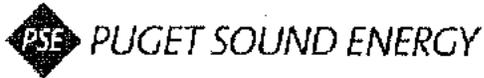
Name: Vandana Whitney

Organization: Sierra Club

Phone number: 425-485-6446

Email: wvandana@live.com

Vandana Whitney



IRP Comment Form
IRPAG Meeting #3
May 22, 2019

#32

Please provide your comments below.

I am Virginia Lohr, a PSE **rate-payer** and a **volunteer member** of your IRP TAG.

Vice President Mills, I want to begin by acknowledging that we are on the **ancestral lands of the Duwamish people**. I also want to thank you for listening to us.

PSE commitments are great, but didn't include a liveable future.

Early in this process, a member of your IRP team explained to me during a break that **this process was about "threading the needle"** to get Utility Commission approval of the plan. This person did not say was about getting the best 20-year plan for PSE's or humanity's future.

At a subsequent Advisory Group meeting, a **frustrated member of the public** asked what it would take for PSE to move to a fossil fuel free future; she was told **the law** needed to change. Now that has happened ~~It~~ is clear that PSE is expected to **eliminate its carbon footprint on the electricity side**, and given what we know about climate change, PSE will also need to work on **ending its use of fossil gas** on the gas side as well.

I don't mean to be disrespectful, but I feel that

Please direct your IRP team to **stop playing games** with the Technical Advisory Group to **deflect our input**. The TAG is a group of **talented people who are volunteering** their time to help PSE move toward the future without stranded assets.

Please have your IRP Team **work honestly and openly** with us to move toward a livable future for all.

Name: Virginia Lohr
Organization: PSE IRP TAG
Phone number: 5097157957
Email: lohr@turbonet.com

PSE – DAVID MILLS LISTENING SESSION 5/22/2019

MY NAME IS WARREN HALVERSON. I AM A RETIRED US WEST EXECUTIVE. I HAVE AN MBA IN ECONOMICS AND MARKETING; LIVED AND RAISED OUR FAMILY IN BELLEVUE OVER THE PAST 40 YEARS. I AM A BOARD MEMBER OF CENSE AND A TECHNICAL ADVISOR TO PSE'S IRP PROCESS.

MY PURPOSE TONIGHT IS TO SHARE A FEW CONCERNS OF THE CENSE MEMBERSHIP REGARDING TRANSMISSION PLANNING. THE COALITION OF EASTSIDE NEIGHBORHOODS FOR SENSIBLE ENERGY NUMBERS SEVERAL HUNDRED EASTSIDE RATEPAYERS -- ALL VOLUNTEERS LIKE MYSELF.

DUE TO TIME CONSTRAINTS, I WILL LIMIT THESE REMARKS TO THE IRP PROCESS.

PSE HAS SPENT MILLIONS OF DOLLARS PROMOTING AND LITIGATING THE ENERGIZE EASTSIDE AND LAKE HILLS/PHANTOM LAKE TRANSMISSION LINE PROJECTS. HOWEVER, BOTH OF THESE PROJECTS ARE BASED ON OUTDATED FORECASTS AND OUTMODED TECHNOLOGY. NEITHER WILL MEASUREABLY IMPROVE RELIABILITY, BUT WILL COST RATEPAYERS HUNDREDS OF MILLIONS OF DOLLARS, DESTROYING NEIGHBORHOODS.

WE ARE DEEPLY CONCERNED WITH PSE'S PEAK LOAD MODELING AND OVERLY OPTIMISTIC FORECASTS. THE RESULT OF THIS CAN ONLY LEAD TO OVERBUILDING OF INFRASTRUCTURE COSTING RATEPAYERS MILLIONS OF DOLLARS. FOR OVER FIVE YEARS, ENERGIZE EASTSIDE HAS BEEN JUSTIFIED AND BASED UPON AN "EASTSIDE CUSTOMER DEMAND FORECAST". THE VERY OPTIMISTIC AND OUTDATED 2.4% (TODAY 1.3% -- STILL OPTIMISTIC) PEAK LOAD GROWTH RATE CONTINUES TO BE USED IN EIS AND PERMITTING DOCUMENTS. QUESTIONS AND REVIEW OF ACTUALS, ASSUMPTIONS AND CURRENT FORECASTS GO UNANSWERED.

MAKE NO MISTAKE ABOUT HOW IMPORTANT THIS IS TO RATEPAYERS. THE MILLIONS OF DOLLARS OF OPPORTUNITY COSTS LOST HERE COULD BE MORE MEANINGFULLY SPENT TO IMPLEMENT MODERN TECHNOLOGIES.

WE APPRECIATE THAT TRANSMISSION PLANNING IS NOW INCORPORATED INTO THE IRP PROCESS. AFTER SEVERAL YEARS WE HAVE BEEN PROMISED THAT THE ADVISORY GROUP WOULD PROVIDE INPUT INTO THESE PLANS. THE DATE OF THIS REVIEW CONTINUES TO BE POSTPONED FOR UNEXPLAINABLE REASONS. ONE SIMPLY HAS TO WONDER IF THE DELAY IS TO DELAY THIS ANALYSIS UNTIL AFTER PERMITTING BY EASTSIDE CITIES.

WE ARE CONCERNED THAT TRANSMISSION ISSUES BROUGHT UP BY THE WUTC STAFF AND INCORPORATED IN THEIR 2017ACKNOWLEDGEMENT LETTER HAVE NOT BEEN ADDRESSED AND DISCUSSED WITH THE IRP ADVISORY COMMITTEE.

IT IS OFTEN STATED IN OUR IRP DISCUSSIONS THAT A TEST OF PRUCENCY MIGHT BE TO ASK WHETHER AN UNREGULATED BOARD OF DIRECTORS WOULD APPROVE THIS ACTION.

THE ENERGIZE EASTSIDE PROJECT HAS BEEN AROUND IN ONE FORM OR ANOTHER FORM FOR ABOUT 19 YEARS. WOW!! THINK OF ALL THE SIGNIFICANT CHANGES IN THE MARKETPLACE WITH NEW TECHNOLOGIES INCLUDING SOLAR, WIND, DEMAND RESPONSE, BATTERIES, SMART GRIDS TO NAME A FEW. A VETTING AND REVIEW OF CURRENT TRANSMISSION PLANS CONTINUES A MAJOR CONCERN OF CENSE MEMEBERS.

SO, THAT' IT FOR NOW. LISTENING AND THEN PROVIDING AN ANSWER – IS NOT OPEN AND TWO WAY COMMUNICATION - TRANSPARENCY. THIS IS NOT ABOUT PSE EMPLOYEES. IT IS ABOUT CORPORATE LEADERSHIP, VALUES AND STRATEGIES.

OUR HOPE -- REQUEST THEN -- IS YOU AND BOARD MEMBERS WILL MEET WITH US AND OTHERS IN SMALLER GROUP SEESIONS TO FULLY UNDERSTAND YOUR CUSTOMER CONCERNS SO WE CAN FIND COMMON GROUNG AND TURN THEM INTO POSITIVE ACTIONS.

THANK YOU. WE LOOK FORWARD TO YOUR RESPONSE.

**Warren E. Halverson
13701 NE 32nd Pl, Bellevue Washington 98005**

425-883-0568