# WILLIAM D. RUCKELSHAUS CENTER

UNIVERSITY OF WASHINGTON

# **Year One Summary Report**



# **Beyond Net Zero Advisory Committee**

By the William D. Ruckelshaus Center

January 2023

WILLIAM D. RUCKELSHAUS CENTER Hulbert Hall, Room 121 P.O. Box 646248 Pullman, WA - and – 155 NE 100<sup>th</sup> St. #401 Seattle, WA 98125





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#### I. INTRODUCTION & OVERVIEW

In 2021, Washington State's largest utility,<sup>1</sup> Puget Sound Energy (PSE), set an aspirational goal of achieving net zero carbon emissions and beyond by 2045. PSE's new CEO, Mary Kipp, sought support from the William D. Ruckelshaus Center (the Center) to design and facilitate a collaborative and open process for obtaining broad stakeholder input into their Beyond Net Zero Carbon Initiative.

PSE was particularly interested in the Center's expertise in collaborative process methodology, because the Beyond Net Zero Carbon Initiative involves complex policy issues, divergent viewpoints, and potential impacts to diverse customers and communities. PSE asked the Center to design an approach that recognizes the urgency of the climate crisis, provides benefits and opportunities for frontline communities and populations, and enhances the state economy, while maintaining reliability, safety, and affordability.

The Center worked closely with PSE to identify and recruit representatives of key constituencies from diverse sectors, backgrounds, perspectives, and demographics to serve on an Advisory Committee to help shape and inform the initiative. In advance of the Committee's first meeting, the Center interviewed committee members to identify important issues, information needs, and to get input on constituencies to include on the Committee.

Beginning in February with a seminar-style workshop using virtual meeting technology, the 21-member Beyond Net Zero Carbon Advisory Committee held five full-day meetings in 2021. This report provides an at-a-glance overview of meeting topics, proceedings, and committee outputs, along with the Committee's draft work products: *Guiding Principles for the Clean Energy Transition*, an *Electric Call to Action*, and a *Gas Call to Action*.

<sup>&</sup>lt;sup>1</sup> PSE serves more than 1.5 million customers across 10 counties

# **Beyond Net Zero COMMITTEE ROSTER**

| Name                               | Affiliation(s)  |
|------------------------------------|---|
| Arnold, Deputy Mayor Jay           | City of Kirkland  |
| Becker-Dippmann, Angela            | Pacific Northwest National Labs                                     |
| Cho, Commissioner Sam              | Port of Seattle   |
| Clark, Garry                       | Economic Alliance, Snohomish County                                 |
| Collins, Shawn                     | The Energy Project  |
| Edmonds, Bill                      | Northwest Power & Planning Council                                  |
| Fleetwood, Mayor Seth              | City of Bellingham  |
| Gregoire, Christine – <b>CHAIR</b> | Challenge Seattle; Former Washington State Governor                 |
| Hartman, Neil                      | United Association of Plumbers & Pipefitters                        |
| Hines, Scott                       | IBEW Local 77   |
| Hirsh, Nancy                       | Northwest Energy Coalition  |
| Hubbard, Lynn                      | Community Member  |
| Kennedy, Marcus                    | Pacific Ridge / DR Horton   |
| Lekanoff, Rep. Debra               | Lekanoff LLC  |
| McLerran, Dennis                   | Cascadia Law Group  |
| Packard, Ben                       | UW Earth Lab  |
| Robinson, Bennetta                 | American Federation of Labor & Congress of Industrial Organizations |
| Schaffert, David                   | Thurston County Chamber of Commerce                                 |
| Shestag, Steve                     | Boeing <sup>2</sup>   |
| Suarez, Dennis                     | Washington Soldiers Home  |

| FACILITATORS     | WILLIAM D. RUCKELSHAUS CENTER                           |
|------------------|---|
| Ferrell, Tye     | Lead Facilitator  |
| Page, Chris      | Senior Facilitator for Projects & Strategic Initiatives |
| Shulman, Phyllis | Interim Director  |

<sup>&</sup>lt;sup>2</sup> Steve Shestag participated in his role as alternate for Sheila Remes



# FEBRUARY 10

- Welcome, Introductions
- Presentations
- Discuss committee goals & information gaps

#### APRIL 19

- Review of Committee Charter
- Discuss technical vs. adaptive challenges
- Presentations and discussion

#### **JULY 18**

- Energy resource adequacy in the Pacific NW
- Gas planning at PSE
- Deep decarb's implications for PSE gas system
- PSE gas decarb strategy and tactics

#### SEPTEMBER 22

- Clean Energy Transformation Act
- Climate
   Commitment Act
- Clean Fuel Standard
- Inflation Reduction Act

#### **NOVEMBER 10**

- Developing a targeted electrification strategy
- Policy priorities to decarbonize for 2023
- Who's impacted + how to equitably mitigate
- Guiding Principles
   & Call to Action

- Overview of Puget Sound Energy
- PSE's customer demographics, attitudes, & perceptions
- PSE's gas and electric operations
- Regulatory landscape facing gas and electric utilities
- PSE's goals and pathway to BNZ carbon

- Maintaining reliable energy supply & meeting peak demand
- Transmission constraints
- Role of distributed energy resources
- Building frameworks around equity
- Siting reform for renewables & transmission
- Incorporating carbon & equity costs into PSE bottom line
- Heat pumps
   & hydrogen
- Workforce development

- Desired outcomes and impacts of the Committee's work
- Crucial Qs about PSE's BNZ Carbon strategies & the plans to implement them
- PSE's near-term implementation priorities
- Policies needed to enable a successful transition

- Equitable implementation of policies
- Communications, messaging, & public awareness
- Gas rate base, siting, & permitting policy reforms
- Guiding Principles and Call to Action

- Committee understanding of PSE operational constraints, its BNZ strategy, & regulatory landscape
- Input on committee goals
- Identification of information needed

- Committee acceptance of Charter
- Targeted input on distributed energy resources
- Initial list of stakeholders impacted, potential impacts to each, and mitigation strategies
- Committee agreement on goal of full electrification, but with gas still needed to bridge transition for PSE
- Input on the transition to electrification & how to minimize negative impacts for stakeholders
- Draft set of desired Committee outcomes & impacts
- Input on PSE near-term BNZ implementation priorities & complimentary policies
- Input on potential partnerships for PSE to achieve its beyond net zero carbon goals
- Draft Guiding Principles (electrification, gas decarb)
- Draft Call to Action
- Suggested policy priorities at the state and federal levels to support PSE transition to BNZ carbon



# **Beyond Net Zero Carbon Advisory Committee**

# **Guiding Principles for the Clean Energy Transition**

## **PSE** commits to:

# 1) Lead with equity<sup>1</sup>

- a) Lead with equity across all aspects of the business, including but not limited to, resource planning, rate design, system planning, program design, communications, outreach, infrastructure investment, workforce training, pre-apprenticeships, and apprenticeships.
- b) Seek to mitigate impacts to named communities Highly Impacted Communities<sup>2</sup> and Vulnerable Populations<sup>3</sup> from the clean energy transition by working *with* not *on* the communities most impacted.
- c) Develop methodologies and metrics to evaluate the equity impacts of planning and operations.
- d) Actively pursue infrastructure investment in red-lined or traditionally marginalized communities in a way that improves service performance and increases local economic development opportunities.
- e) Provide tools for people to manage how much energy they are using at any given time.

# 2) Responsibly steward natural resources and living systems

a) Work with partners to build a resilient energy system that reduces environmental impacts and supports environmental restoration and regeneration.

### 3) Be accountable and transparent

- a) Prioritize transparency and stay open to input.
- b) Prepare and partner with the public for changes that are coming and demonstrate measurable progress along the way. Ensure that customers and the public understand why decarbonization is needed, the reasons for forecasted energy demand, how to conserve energy, what changes are being made to the energy system, why, and how those changes are expected to unfold.

<sup>&</sup>lt;sup>1</sup> PSE is working to ensure all customers benefit from the transition to clean energy, which requires a dedicated effort to consider the benefits and burdens to highly impacted and vulnerable populations. In this work, we embrace the principles of energy equity by addressing accessibility, affordability and accountability.

<sup>&</sup>lt;sup>2</sup> As defined by CETA, "a community designated by the department of health based on the cumulative impact analysis required by RCW 19.405.140 or a community-located in census tracts that are fully or partially on "Indian country," as defined in 18 U.S.C. Sec. 1151."

<sup>&</sup>lt;sup>3</sup> As defined by CETA, vulnerable populations means "communities that experience a disproportionate cumulative risk from environmental burdens due to: Adverse socioeconomic factors, including unemployment, high housing and transportation costs relative to income, access to food and health care, and linguistic isolation; and sensitivity factors, such as low birth weight and higher rates of hospitalization."



#### 4) Partner and collaborate

- a) Develop partnerships and collaborations with other utilities, labor, researchers, nonprofits, businesses, tribes, community-based organizations, and local, state, and federal governments to develop innovative solutions to:
  - Decarbonize PSE's energy supply and enable carbon emission reductions beyond PSE's own energy supply through strategies such as transportation electrification, development of new renewable resources, transmission capabilities, and roll out of other carbon reduction technologies, and
  - Minimize worker displacement and ensure adequate retraining.
- b) Collaborate with other utilities to develop shared goals for decarbonization and implement cost-effective and reliable carbon reduction programs and clean energy strategies where PSE has overlapping service boundaries.
- c) Engage with the state legislature, Utilities and Transportation Commission, local jurisdictions, and other partners to develop public policies and a regulatory framework that enables a clean energy transition to occur quickly and successfully. (Transmission and facility siting reforms will be part of those efforts as there is a foreseeable shortfall in clean, non-emitting energy resources.)
- d) Partner with customers to drive behavior change and foster community-led innovation.

# 5) Innovate, Adapt, Transform

- a) Engage in a continuous effort to monitor, evaluate, and adopt clean energy innovations and strategies developed by others.
- b) Develop new programs and approaches to address energy peaking issues and carbon emission reduction. This could include piloting and scaling up of successful programs such as time of use rates, vehicle to grid storage and energy management, battery storage, home and community solar programs, carbon capture and sequestration technologies and more.
- c) Promote organizational culture change at all levels that will enable PSE to successfully innovate, adapt to the challenges of the low-carbon transition, and transform its business model as necessary. This includes a commitment to:
  - Evolve away from separate gas and electric lines of business into a company with a singular focus on clean energy.
  - Embrace a learning culture that is willing to take informed risks when necessary to meet or exceed PSE's beyond net zero carbon goal.
- d) Anticipate and manage skills gaps and workforce training to transition the workforce to a decarbonized system and include workers from highly impacted areas and vulnerable populations within PSE's service area and beyond.

#### 6) Act with Urgency

- a) Engage with investors, policy makers, tribes, and other partners to accelerate decarbonization strategies in a way that does not further disadvantage vulnerable populations and highly-impacted communities.
- b) Identify near-term priorities and partnerships and implement them to build trust and credibility.



c) Leverage existing technologies to the extent possible to effect immediate carbon reductions.

#### **Electric Call to Action:**

- 1) Pursue targeted electrification as soon as and to the greatest extent possible with the recognition that in the long-term this requires development of new wind, solar, storage, and demand management resources, along with transmission corridors and prioritization of equity and reliability. Near term work includes identifying priorities for gas to electric conversion, updating PSE's decarbonization study, electrification pilots, and developing a targeted electrification strategy based on the pilot outcomes.
- 2) Develop incentive programs, including grants, that enhance the low-carbon transition, especially for low- and moderate-income customers.
- 3) Pursue legislative and regulatory outcomes to minimize the use as rapidly as practicable of carbon-based fuels, while minimizing impacts to ratepayers and communities.
- 4) Work in partnership with the heating, cooling, and home construction industries to inform consumers of opportunities to save energy and incentivize them to install heat pumps, hybrid heat pump technologies, and heat pump water heaters.
  - a. Target elimination of any remaining home oil or baseboard electric heating and ensure that all air conditioning installations have heat pump capability to allow winter heating efficiency gains. This includes making sure industry partners promote these technologies, develop servicing capabilities, and share in the benefits of incentive programs.
  - b. Promote the use of all-electric and hybrid heat pumps, where appropriate.
  - c. Develop opportunities for demand management, including as an option for customers to manage cost.
- 5) Incentivize home and commercial solar development along with utility-scale facilities. This may include battery storage capability, home-to-grid, and vehicle-to-grid technologies as they mature.
- 6) Develop partnerships with ports, the trucking industry, truck drivers, heavy-duty vehicle retailers, and others to create the infrastructure and incentives needed to transition heavy-duty transportation to battery electric and fuel cell technologies. In an interim transition period, there may also be targeted opportunities for partnerships around the use of lower carbon liquid and gaseous fuels, including renewable natural gas and renewable diesel. PSE will also prioritize partnerships with communities living along major transportation corridors to address their exposure to local air pollution.
- 7) Partner with others in the energy industry on siting reform and to develop new wind, solar, storage, demand response, and renewable electricity capacity, including transmission and distribution capacity. In addition, with all partners, identify policies and regulation that reduce or remove barriers to accelerated development of these technologies in a responsible way.



8) Partner with consumers, policymakers, and the public to decrease overall energy demand and peak energy demand in particular, for example, through demand management including direct load control, education, incentives, and real-time metering and cost information. Educate consumers and the public about the potential impacts of climate change, based on different scenarios of decarbonization and warming.

#### Gas Call to Action:

- 1) Decarbonize the existing system as rapidly as practicable including the use of supplemental renewable natural gas (RNG) and electrolytic hydrogen sources and ensure that they can be manufactured and delivered in a safe and sustainable manner that supports PSE's beyond net zero goals. Explore the future viability of other clean alternative fuels and examine the best uses for RNG and electrolytic hydrogen.
- 2) Reduce natural gas demand by offering incentives and potentially seeking policies to expedite heat pump and hybrid heat pump replacements, including heat pump water heaters. Accelerate energy efficiency, demand management, and storage investments to reduce current and anticipated winter capacity constraints.
- 3) Partner with energy intensive businesses to meet mutual decarbonization goals, including transition to renewable energy alternatives and strategic prioritization of natural gas.
- 4) Support upstream and downstream methane reduction initiatives, including stronger enforcement initiatives by regulatory agencies, with the goal of reducing emissions from methane leakage to zero as rapidly as possible.
- 5) Protect low-income customers from harmful cost increases and provide significant new incentives that make heating and other appliance transitions possible for them.
- 6) Identify policies and regulations that reduce or remove barriers to decarbonizing the gas system and ensure that it remains safe and reliable as throughput is reduced.
  - a. For example, work to change state law to allow utilities to incentivize fuel switching that reduces carbon emissions.

This is a living document, which PSE may adjust over time as conditions unfold, in consultation with the Beyond Net Zero Advisory Committee.

# **PSE Beyond Net Zero Carbon Advisory Committee**

# **Charter & Groundrules**

#### **Introduction:**

Puget Sound Energy, Inc. (PSE) has set an aspirational goal of being a Beyond Net Zero (BNZ) by 2045: we aim to reduce our own carbon emissions to net zero and go beyond by helping other sectors to enable carbon reduction across the state of Washington. As the state's largest energy provider, we provide essential electric and gas services to more than 1.5 million customers in the Puget Sound region. Our services are mandated [by?] to be lowest cost and reliable. While we believe complementary energy systems are necessary for reliability and affordability, we recognize there are different points of view about how to decarbonize. The transition to decarbonization is complicated and will require bold new policies and technological innovation.

For example, Washington State has the largest federal hydropower system in the U.S., but PSE has very limited access to this supply, making access to clean electric power more costly. Similarly, natural gas decarbonization will likely require some combination of substantial upgrades, transition to cleaner fuels, and replacement of customer-owned equipment. This could raise difficult issues of equity and affordability.

PSE does not yet have all the answers, but we know we will need new products, partnerships, and public policies that reflect our shared interest in a healthy and sustainable future. Specifically, we need changes to our existing regulatory framework, creative problem solving, and rapid innovation to ensure we can meet energy demand with a decarbonized grid and net zero carbon gas sales.

#### Purpose:

The Beyond Net Zero (BNZ) Advisory Committee will provide advice and recommendations to support PSE in its journey to a clean energy future and ensure the company's energy resources help Washington State, its customers, and communities reduce their carbon impacts. Members will engage in a collaborative process to evaluate and problem-solve approaches that recognize the urgency of climate change, provide benefits and opportunities for frontline communities and populations, and grow the state's clean energy economy—all while maintaining the reliability, safety, and affordability that our customers expect and on which our communities rely.

#### Committee Role:

Serve as an advisory group to PSE's leadership team to:

- Provide guidance on strategies and tactics that enable the BNZ pledge
- Inspire bold ideas and actions that help accelerate and catalyze outcomes

- Connect people and organizations with PSE to enable collaboration to pursue initiatives that can accelerate and scale GHG reductions
- Hold PSE accountable to its customers and communities in working to achieve an equitable and sustainable clean energy future
- Share best practices
- Bring diverse perspectives and creative solutions
- Serve as advocates for PSE's climate ambitions

### Membership:

The Advisory Committee is intended to represent the ratepayers, constituencies, and key parties interested in and affected by PSE and its transition to BNZ. Members include:

- 1. Christine Gregoire, Former WA State Governor
- 2. Deputy Mayor Jay Arnold, City of Kirkland
- 3. Angela Becker-Dippmann, Pacific NW National Lab Council
- 4. Commissioner Sam Cho, Port of Seattle
- 5. Garry Clark, Economic Alliance of Snohomish County
- 6. Shawn Collins, The Energy Project
- 7. Bill Edmonds, Northwest Power and Planning Conservation Council
- 8. Mayor Seth Fleetwood, City of Bellingham
- 9. Neil Hartman, United Association of Plumbers and Pipefitters
- 10. Scott Hines, International Brotherhood of Electrical Workers
- 11. Nancy Hirsh, NW Energy
- 12. Lynn Hubbard, Community Member
- 13. Marcus Kennedy, Pacific Ridge/DR Horton
- 14. Representative Debra Lekanaoff, Lekanoff LLC
- 15. Dennis McLerran, Cascadia Law Group
- 16. Ben Packard, UW Earth Lab Executive Director
- 17. Sheila Remes, Boeing
- 18. Bennetta Robinson, American Federation of Labor & Congress of Industrial Organizations
- 19. David Schaffert, Thurston County Chamber of Commerce
- 20. Debra Smith, Seattle City Light
- 21. Dennis Suarez, PSE Equity Advisory Group

### Organizing Principles for the Work of PSE and the Committee:

• **Grounding in science, equity, and impact.** We will continually ground our work in the best available science and international and nationally accepted standards and will seek input from others that further promotes our understanding of climate challenges and helps ensure we are contributing to solutions that promote diversity, inclusion, and equal opportunity while ensuring uncompromised reliability, safety, and affordability for PSE customers and the communities we serve.

- Taking responsibility for our carbon footprint. We are taking responsibility for reducing all PSE emissions across our operations, electric supply, and gas sales, and will seek implementation strategies that ensure we are considering any and all emissions sources, their impacts, and efforts to mitigate those impacts.
- **Enabling open and transparent communications.** Our ability to work effectively with external advisors will need to be facilitated through open, honest, and transparent communications.
- *Identifying carbon-related policies to accelerate GHG reductions.* We want thoughtful discussion of forward-thinking regulations and public policy that support GHG emissions reductions, equity, reliability, affordability, and collaboration with regional utilities while accelerating a path to beyond net zero carbon emissions by 2045.
- Embracing diversity, inclusion, and equity. We recognize that addressing complex
  multiscale issues like climate change requires engaging people from all backgrounds and
  sectors of society in developing solutions. We are committed to ensuring that our advisory
  committee reflects the diversity of our communities, is broadly inclusive of different
  viewpoints and people of different backgrounds and sectors, and supports PSE's focus on
  equity and affordability.
- *Empowering our customers and communities.* We will leverage the company's energy resources, innovation and influence to help Washington State, our customers and communities equitably reduce their carbon impacts.
- **Enlisting our employees.** We recognize that our employees are our biggest asset in advancing innovation and will create opportunities to enable them to contribute to our efforts.
- Leveraging transformative partnerships. Cross-sector and multi-stakeholder partnerships
  are critical to meeting and scaling the necessary ambition of PSE's climate agenda. We will
  work collaboratively with others to explore new technologies to close any emissions gaps,
  including carbon negative emission technologies, and to advance critical
  policies/regulations that accelerate our path to a sustainable future.

#### Commitment:

- Minimum commitment of one year; preferably two years
- Prioritize attending and actively participate in meetings: PSE anticipates five full-day meetings each year for 2022 and 2023, but meetings may occur more frequently depending upon needs
- Set aside time to prepare for meetings
- Work collaboratively with others
- Honor and uphold PSE values of honesty, responsibility, and integrity
- Honor confidentiality

- Maintain discretion due to sensitive nature of materials and information
- Agree not to post material from or about meetings on social media
- Federal security prohibits sharing of certain information
- No Surprises: Members agree to keep all fellow members appraised of relevant information for the duration of the Advisory Committee. Relevant information may include, but is not limited to:
  - Discussions and meetings with the public, agencies, and elected officials
  - Changes in personnel or other circumstances that may affect the Advisory Committee
  - o Anticipated legislative proposals relevant to the work of the Advisory Committee
- Bring concerns and perspectives from your experience to the process to inform PSE and fellow Committee members
- Act as a thought partner for PSE, contributing to improving the utility's Beyond Net Zero strategies and actions and raising considerations, opportunities, potential challenges or barriers, and ideas for solutions to address challenges

#### **Meeting Guidelines**

- Participate fully, honestly, and fairly, commenting constructively
- Generate and explore all options on their merits, with an open mind, and in the interest of understanding other points of view and their underlying interests
- Work cooperatively and creatively to seek solutions

#### Be Respectful

- One person speaks at a time; listen when others are speaking, avoid interrupting and side conversations.
- Keep comments brief so everyone gets a chance to share their thoughts. Avoid dominating the discussion.
- Hear and respect all opinions.
- Silence cell phones and refrain for using laptops during the meeting, except to take notes.
- No use of social media during Committee meetings or to communicate about Committee business

#### **Be Constructive**

- Acknowledge that all participants bring with them legitimate purposes, goals, concerns and interests, whether or not you are in agreement with them.
- Openly explore issues.
- Act in "good faith," seeking to resolve conflicts and identify solutions. Come with the presumption that this is a gathering of bright minds working toward a common goal.
- State concerns and interests clearly, listen carefully to and assume the best in others. Leave negative assumptions and attitudes at the door.

- It is OK to disagree; it is not OK to make personal attacks.
- Minimize the use of jargon and acronyms, define and explain when used.
- Ask for clarification when uncertain of what another person is saying. Ask questions rather than make assumptions.

#### Be Productive

- Begin and end meetings on time.
- Respect time constraints.
- Adhere to the agenda as much as possible, focusing on the subject at hand.
- Indicate to the facilitator/s when they wish to make a comment and be acknowledged before speaking.

# Role of the Chair

The Advisory Committee will have a Chair, whose role includes:

- Reviewing meeting agendas before sending to Committee members in advance of meetings
- Meeting with the facilitation team between meetings (as needed) to plan meetings, problem-solve, and attend to other needs in support of the Committee process
- Convening meetings and making any desired opening remarks (with the option to make closing remarks)