



TO: Commissioners Schlossberg, Brown, Carlson, Barofsky and McRae  
FROM: Frank Lawson, CEO & General Manager  
DATE: October 21, 2021 (November 2, 2021, Board Meeting)  
SUBJECT: EWEB's Climate Change Policy, Board Policy SD15  
OBJECTIVE: Background Information

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### **Issue**

Commissioners have expressed interest in deliberating potential changes to EWEB's Climate Change Policy, Board Policy SD15.

### **Background**

EWEB's Climate Change Policy, SD15, was originally developed in 2007, was revised in 2018, and is attached for reference. Additionally, in support of the original policy, in 2010 EWEB developed a plan to reduce EWEB greenhouse gas (GHS) emissions from operations.

EWEB's first operations GHG inventory was completed in 2010 (reporting on 2009 data) to help better understand the source and quantity of the emissions produced from supplying power and water to our customers. In 2009, EWEB's operations emissions totaled approximately 22,150 metric tons of carbon dioxide equivalent (MT CO<sub>2</sub>e). As part of the plan, EWEB set emissions reduction targets at:

- ❖ 2020: achieve greenhouse gas levels 25% below 2009 levels in all EWEB operations
- ❖ 2030: reduce fossil fuel use by 50%
- ❖ 2050: operations will be carbon neutral (i.e., reduce net carbon emissions to zero)

Typically, in December EWEB management reports the utility's operational greenhouse gas inventory, along with progress towards the above goals to the Board.

### **Discussion**

The Board presently provides guidance to management using the recently revised (October 2021) 2018-2028 Strategic Plan, which includes the ongoing objective to cultivate customer confidence by *continuously improving our performance in Delivery, Safety & Security, Cost/Efficiency, Service/Responsiveness, and Environmental Responsibility – e.g., watershed recovery/protection, Board Policy SD15 (Climate Change Policy)*.

Additionally, the strategic plan reaffirms that *we value the prudent and sustainable stewardship of the environment and natural resources, including preserving our watershed, and our role in reducing the greenhouse gases (GHGs) contributing to Climate Change*. EWEB's "role" is further defined in SD15, and the most recent strategic plan revision provides a direct link to the setting of annual operational and strategic goals, milestones, and measurement metrics.

## EWEB SD15 Climate Change Policy

Through SD15, the Board recognizes that climate change presents ongoing environmental, economic, and social risk to EWEB, our customers, our community, and the world. There are four areas of which EWEB recognizes its role in combating climate change, and one acknowledging the climate's impacts on EWEB business. Accordingly, those areas are the following.

- ❖ **Power Generation:** The Board is committed to supporting an electric power portfolio utilizing low-carbon, renewable resources to the extent possible and practical without impacting safety or reliability.  
*Status: Presently, EWEB's electricity resource mix is approximately 90% carbon free, with a 5-year average carbon intensity of 0.025 MTCO<sub>2</sub>e/MWh*
- ❖ **Carbon Measures:** The Board authorizes, delegates, and directs the General Manager to participate in local, state, and regional efforts to encourage, develop and enact measures to mitigate carbon emissions in the energy sector that contribute to climate change.  
*Status: Over the past five years, EWEB has been one of the few public utilities voicing support for carbon and climate legislation, including State cap and trade legislation, residential Energy Tax Credit (RETC) reauthorization, wildfire mitigation standards and workshops, as well as an active participant on the Mayor's Climate Recovery Ordinance Ad Hoc Work Group and City of Eugene Climate Collaborative Partners group.*
- ❖ **EWEB Operations:** The Board further authorizes, delegates, and directs the General Manager to continue efforts to reduce the greenhouse gas emissions from EWEB's operations through the use of the Triple Bottom Line analytical framework, including impacts on the environment and climate.  
*Status: Between 2009 and 2019, EWEB's cumulative operations-based emissions have decreased by 4,457 metric tons of MTCO<sub>2</sub>e, or 39%, using location-based accounting for electricity. This decrease is primarily due to a 49% reduction in fossil fuel fleet emissions and a 33% reduction in electricity-based emissions. Year 2020 operational emissions will be reported in December.*
- ❖ **Customer Decarbonization:** The Board further authorizes, delegates, and directs the General Manager to assist customers with their carbon reductions through technical assistance and resources that support energy efficiency, alternative fuels, electric and water conservation, and smart electrification.  
*Status: EWEB offers over 40 different GreenPower™, energy efficiency and conservation products/programs, including limited income and rental qualifying programs, electric vehicle charging and heat pump hot water heater incentives, along with commercial programs for lighting, refrigeration, compressors, and other applications. Since 2010, EWEB programs have saved at least 600,000 MWhs (estimated, data is being analyzed) of energy representing 175,000 metric tons of carbon emissions reduction (using regional electricity blend), averaging 15,900 MTCO<sub>2</sub>e/Year during that period.*
- ❖ **Impacts on EWEB:** The Board directs the General Manager to evaluate and enact measures, as necessary and appropriate, to prepare for and minimize the effects of climate change that could impact EWEB's water and electric supply and infrastructure, damaging EWEB's resiliency and reliability.  
*Status: EWEB has and continues to develop plans to enhance resiliency and response to disruptive events, including those impacted by climate change, most recently a Wildfire Mitigation Plan, 2020 Eugene-Springfield Area Multi-Jurisdictional Natural Hazard*

*Mitigation Plan (Plan), and EWEB's Drinking Water Risk & Resiliency Assessment per the 2018 American Water Infrastructure Act.*

**Statutory Requirement(s) – Electricity Generation**

Besides EWEB's internal policies and standards, the two most impactful requirements guiding EWEB climate actions and/or decisions include Oregon's Renewable Portfolio Standard, and Oregon's GHG inventory reporting requirements.

EWEB is subject to Oregon's greenhouse gas reporting rules (OAR Chapter 340 Division 215) which is specifically related to electricity and does not address the GHG emissions related to utility operations. The rules require that consumer-owned utilities report the annual quantity of electricity in MWhs distributed to end users of electricity in Oregon from its owned facilities and any purchases from the Bonneville Power Administration (BPA) and other sellers. The official calculation of EWEB's annual GHG emissions is performed by the DEQ with results provided to utilities about a year later. In addition to the OR DEQ GHG report, EWEB voluntarily provides the same data to ODOE for their annual fuel mix report.

In 2007, Oregon enacted Senate Bill 838, the Oregon Renewable Energy Act (Act), which created an RPS that all Oregon electric utilities must follow. In 2021, Oregon passed House Bill 2021 further increasing the reduction targets for Oregon's largest two investor-owned utilities to 80 percent below baseline emissions levels by 2030, and 100 percent by 2040 and also prohibits the siting of new natural gas electricity generation in Oregon. The purpose of the 2007 RPS is to decrease Oregon utilities' reliance on fossil fuels for electric generation and increase their use of renewable energy sources. The exact percentage required and the year the compliance obligation begins differs for large and small electric utilities, and the obligation excludes legacy hydroelectric which is large part of EWEB's portfolio. Under these exemptions, EWEB has rarely had a compliance obligation.

**Table 1. Oregon RPS - Annual percentage target of qualifying electricity by year**

Utility Category	Utility Size	2011	2015	2020	2025	2040
Large IOU	3% or more			20%	27%	50%
Large Utilities (EWEB)	3% or more	5%	15%	20%	25%	
Smaller Utilities	From 1.5% to 3%				10%	
Smallest Utilities	Under 1.5%				5%	

**Emissions from EWEB Operations**

EWEB has been tracking operational (internal) GHG emissions since 2009. Sources of operational GHG emissions include natural gas, fleet fuel, electricity and fugitive releases of refrigerants and insulating gas (SF<sub>6</sub>). The Operational GHG inventory is captured in an annual report which is presented to the Board of Commissioners and posted on our website. The purpose of the annual GHG report has been to track progress toward EWEB's reduction goals for GHG emissions.

In 1999, EWEB signed a voluntary agreement with the US Environmental Protection Agency (USEPA) to join the SF<sub>6</sub> Emission Reduction Partnership for Electric Power Systems (see attached Memorandum of Understanding). The primary purpose of this partnership with the USEPA was to achieve environmental and economic benefits by reducing emissions of SF<sub>6</sub> during the operation and maintenance of equipment used in the transmission and distribution of electricity. In 1999, EWEB began to voluntarily track the inventory of SF<sub>6</sub> and report it to the DEQ per the MOU. The tracking of EWEB's SF<sub>6</sub> inventory continues but the annual reporting to the DEQ ceased in 2016. If EWEB were to accumulate SF<sub>6</sub> with an aggregate nameplate capacity over 17,820 lbs., then EWEB would be subject to the mandatory reporting requirements listed in 40 CFR Part 98. As of 2020, EWEB's

total nameplate capacity was just over 12,000 lbs. Staff continue to evaluate alternatives to the use of SF<sub>6</sub>.

Electricity Generation Carbon Intensity

In 2019, electricity delivered in Oregon had the carbon content (i.e., carbon intensity) as depicted in Table 2 below, according to the Oregon Department of Energy.

**Table 2. 2019 Average Annual Carbon Intensity**

Utility	Average Carbon Intensity (Lbs./kwh)	Average Carbon Intensity (MTCO <sub>2e</sub> /MWh)
Pacific Power <sup>1</sup>	1.521	0.690
Portland General Electric <sup>1</sup>	0.921	0.418
Idaho Power <sup>1</sup>	0.545	0.247
EWEB <sup>1</sup>	0.121	0.055 (0.025 5-Yr Avg.)
Other Consumer Owned Utilities <sup>1</sup>	0.066	0.030
Northwest Power Pool (Region)	0.644	0.292
National Average	0.960	0.435
Coal-Fired Electricity (Natl. Avg.)	2.21	0.92
Natural Gas-Fired Electricity (Natl. Avg.)	0.91	0.41

<sup>1</sup> Per Oregon Department of Energy in lbs./kwh

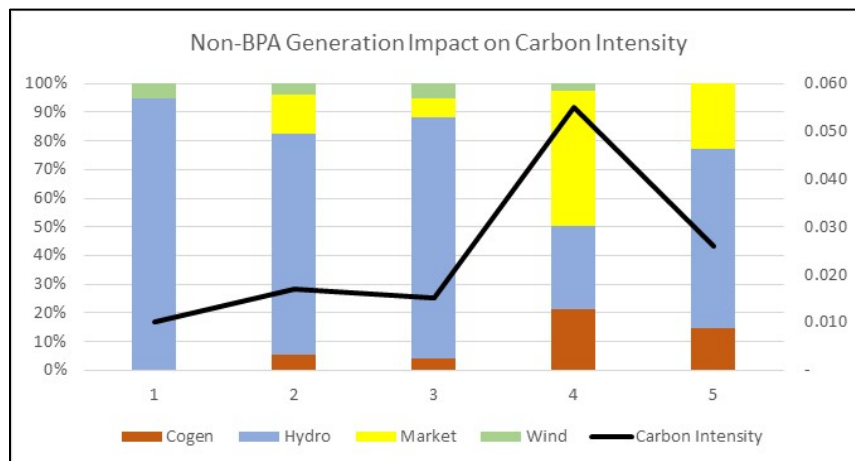
Although it varies each year based on hydro conditions and consumption, EWEB’s electricity mix generally compares to the mix of electricity used in Oregon as follows.

**Table 3. Annual Electricity Resource Mix**

Electricity Resource Mix	EWEB	Oregon (2020)
Hydro (incl. BPA)	77%	43%
Nuclear (via BPA)	7%	4%
Biomass	6%	0.5%
Wind	6%	5%
Coal (via market purchase mix)	2%	25%
Natural Gas	1%	21%
Solar	0.1%	1%

The carbon intensity of EWEB’s electricity resource mix varies with hydro conditions and operations. In 2018, with both Carmen-Smith and Leaburg fully operating, EWEB’s carbon intensity was 0.015MTCO<sub>2e</sub>/MWh. In 2019, Carmen-Smith was offline but returned to service in 2020. Leaburg production was shut down in mid-2019 and has not returned to service. Figure 1 below shows the relationship between non-BPA resources and annual average carbon intensity for EWEB’s electricity generation mix. Excluding 2019, EWEB’s average annual consumption of 2.4 million MWhs generates approximately 41,000 metric tonnes of CO<sub>2e</sub> annually if using EWEB’s resource mix. This number jumps to 700,000 metric tonnes if using the regional (NWPP) mix. In other words, the rest of the region needs to reduce emissions by 94% to reach the present carbon intensity of EWEB’s generation mix.

**Figure 1. EWEB’s Non-BPA Electricity Mix Impact on Average Annual Carbon Intensity**



Comparable Climate Goals

Other relevant entities or jurisdictions have stated climate goals, as follows.

**City of Eugene:** The 2016 Climate Recovery Ordinance (CRO) sets a greenhouse gas goal of an average emissions reduction of 7.6% per year until 2100. Based on the community's 2017 emissions of approximately 1,000,000 MT CO<sub>2</sub>e, the CRO calls for a 2030 goal of about 360,000 MT CO<sub>2</sub>e.

**State of Oregon:** The Oregon Climate Action Plan requires large corporate polluters to reduce pollution over time. Governor Brown’s Executive Order (EO 20-04) updated Oregon's carbon emissions goals "to reflect current science" through a 30-year plan — setting a standard of 45 percent reduction from 1990 greenhouse gas levels by 2035, and an 80 percent reduction by 2050. The order also outlined ways that agencies could pursue those goals under existing state law.

**Other Utilities:**

Portland General Electric

Portland General Electric’s goals include 1) Reducing greenhouse gas emissions from the power we serve our customers by at least 80% by 2030, 2) Zero greenhouse gas emissions from the power we serve to our customers by 2040, 3) Net zero greenhouse gas emissions in our internal operations, and 4) Reducing greenhouse gas emissions in your energy choices. In 2019, PGE’s power portfolio was approximately 30% carbon free, but have since closed the Boardman coal generation site.

Pacific Power (PacifiCorp)

In 2020, Pacific Power’s average mix of energy sources supplying Pacific Power customers, was 51.44% coal, 19.47% natural gas, 11.32% wind, 5.13% hydro, 5.19% solar, 0.29% geothermal, 0.37% biomass, and 6.79% miscellaneous. The recent release of the utility’s Integrated Resource Plan (IRP) shows it will reduce its greenhouse gas emissions 74% by 2030 and 98% by 2050, compared with 2005 levels.

Seattle City Light (City of Seattle)

Operating as a department with the city, Seattle City Light’s Climate Policy states that the utility is committed to very high standards of environmental protection and adhere to a strict environmental policy based on the following priorities:

***Comply***

- Strive to exceed the requirements of all applicable environmental laws, regulations, and policies.
- Serve as a model for others in meeting our hydro license requirements.

***Conserve***

- Promote the efficient use of materials and resources, including water and electricity, across all phases of utility operations.

***Protect***

- Manage our business operations to avoid, minimize, or mitigate impacts to the ecosystems we affect.
- Enhance, protect, and preserve the environment in which we operate.

***Prevent***

Reduce the quantity and toxicity of materials used and waste generated from our facilities and operations through source reduction, reuse, or recycling.

***Improve***

- Set high environmental standards and evaluate our performance against them.
- Incorporate environmental costs, risk, and impacts when making decisions.
- Train all employees on this environmental policy and the key environmental impacts and responsibilities of their work.

***Lead***

- Collaborate with customers, agencies, tribes, and other organizations to promote sound science and achieve common objectives.
- Be proactive in identifying and addressing emerging environmental issues, including climate change impacts on natural resources.
- Be a model for others by minimizing and offsetting our greenhouse gas emissions to achieve greenhouse gas neutrality.

Utilities in Washington State now must meet the requirements of the Clean Energy Transformation Act (CETA) and the recently passed Cap and Trade law. Both are still in the rulemaking process. City Light today is between 91% to 99% carbon-free energy, with approximately 40% supplied by the Bonneville Power Administration (BPA).

Sacramento Municipal Utility District

Within the past year, Sacramento Municipal Utility District (SMUD) adopted a goal to eliminate 100% of our carbon emissions from our power supply by 2030. SMUD's 2030 Zero Carbon Plan is a road map with the flexibility needed to adjust to changing technology and customer preferences to completely eliminate the use of fossil fuels in our electricity production by 2030. With the clean energy technology in the power supply today, SMUD expects to be able to reduce carbon emissions by 90%, without compromising reliability or our low rates. Eliminating the last 10% will be more challenging and will require SMUD to take bold actions and pioneer new game-changing technologies.

To achieve zero carbon, according to SMUD, they are focused on the following areas:

- ***Natural gas generation repurposing.*** Eliminating greenhouse gas emissions from our power plants is essential to reach our goal of zero carbon. We're focused on reimagining our existing generation portfolio to eliminate greenhouse gas emissions through retirement, re-tooling and using renewable fuels.

- ***Proven clean technologies***, which are carbon-free technologies available today, including solar, wind and geothermal energy and battery storage. We'll significantly expand our investments in these technologies and adjust our plan as we progress in the other three areas.
- ***New technologies and business models***, which are technologies that are either currently unknown or are not ready for large-scale adoption due to price, reliability, or other factors. We'll launch pilot projects and programs to test and prove new and emerging technologies and develop paths for prioritizing technology adoption and scaling.
- ***Financial impact and options***. We're focused on making sure achieving our zero-carbon goal is possible at a reasonable cost that minimizes rate increases for our customers. We'll do that by identifying savings and pursuing partnerships and grants that support the Plan.

### **Recommendation**

In reference to EWEB's SD15 Climate Change Policy, collaborate toward alignment that provides direction and clarification, along with other Triple Bottom Line (TBL) priorities and/or processes related to EWEB's environmental responsibility.

### **Action**

No Action is scheduled for this meeting. Identify priorities and create a path for Board-driven revisions and enhancements to SD15 or provide management with guidance regarding revisions and enhancements to EWEB's Climate Change Policy, SD15.



Strategic Direction Policies (SD Policies)

SD15                      Climate Change Policy  
Effective Date            July 10, 2018

The Board recognizes that climate change presents ongoing environmental, economic and social risk to EWEB, our customers, our community and the world. The primary potential direct impacts to EWEB operations from climate change include changes in streamflow –quantity and timing- affecting hydroelectric generation, impacts to water quality and watershed health, changes in consumption patterns, and increasing threats from weather events. The Board also recognizes that EWEB, as a water and electric utility, impacts our climate through electric generation resource choices, business practices and the operation and maintenance of our lands, buildings and transportation fleet.

Accordingly,

- The Board is committed to supporting an ***electric power portfolio utilizing low-carbon, renewable resources*** to the extent possible and practical without impacting safety or reliability.
- The Board authorizes, delegates and directs the General Manager to participate in local, state, and regional efforts to encourage, develop and ***enact measures to mitigate carbon emissions in the energy sector*** that contribute to climate change.
- The Board further authorizes, delegates and directs the General Manager to continue efforts to ***reduce the greenhouse gas emissions from EWEB's operations*** through the use of the Triple Bottom Line analytical framework, including impacts on the environment and climate.
- The Board further authorizes, delegates and directs the General Manager to ***assist customers with their carbon reductions*** through technical assistance and resources that support energy efficiency, alternative fuels, electric and water conservation, and smart electrification.
- The Board directs the General Manager to evaluate and enact measures, as necessary and appropriate, to prepare for and ***minimize the effects of climate change that could impact EWEB's*** water and electric supply and infrastructure, damaging EWEB's resiliency and reliability.

**DISCUSSION:** Climate change is the greatest environmental threat we have faced, and its impacts affect everyone. Greenhouse gas emissions from human activity are known to be the primary cause of climate change. It is widely recognized that a sustained societal reduction of greenhouse gas emissions is necessary to slow and stabilize ongoing climate change.

The energy, industrial, agricultural and transportation sectors are generally identified as the primary sources of carbon dioxide and other greenhouse gas emissions in the United States. EWEB's energy portfolio is composed almost entirely of carbon-free resources. However, not all energy sources in the Pacific Northwest are carbon-free. EWEB will seek to decrease greenhouse gas emissions through a concept known as smart electrification- the use of electricity to replace other energy sources in ways that increase energy efficiency, decrease carbon emissions and decrease costs to customers and society. Through partnerships with others in the region, EWEB





will seek to decrease the energy sector's regional carbon footprint. Through local partnerships, EWEB will seek to aid and assist the mitigation of climate impacts from the industrial and transportation sectors in our community.

It is also important that EWEB, as a public water and electric utility, understands the impacts of climate change to our operations, and commits to do our part to minimize the impacts from our operations. EWEB, as a generator and purchaser of electricity, has a role and an obligation to participate in local and regional efforts to reduce carbon emissions from the electric power sector. Similarly, as an energy provider to homes, industry and business within our service territory, EWEB has a role and obligation to help our community reach its carbon reduction targets. In order to address the climate impacts of our own decisions and operations, EWEB will include climate impacts in future Triple Bottom Line (TBL) evaluations completed for items brought to the Board. So that our actions are visible to our community, at least annually EWEB will compile and report climate change mitigation activity, including a greenhouse gas inventory, and will calculate and publish the carbon intensity of our energy portfolio.

**Source:** Steve Newcomb, Environmental Manager, Approved 09/18/07; Revised 07/10/18, Resolution No. 1820.