



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD



TO: Commissioners Carlson, Barofsky, McRae, Schlossberg, and Brown  
FROM: Kelly Hoell, Climate Policy Analyst & Advisor  
DATE: March 7, 2023  
SUBJECT: EWEB Climate Guidebook Part 2: GHG Inventory '21&'22 and CAP2.0  
OBJECTIVE: Discussion and feedback

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## Issue

Staff will present progress towards EWEB's SD15-driven internal operations GHG reduction goals (formerly reported to the Board in December) as well as EWEB's results contributing to the City of Eugene's Climate Action Plan (CAP) 2.0. These are two topics addressed in EWEB's Climate Guidebook v1.0.

## Background

EWEB's forthcoming Climate Guidebook will serve as a resource for both internal and external audiences. Readers will be able to access information about EWEB's implementation of its Climate Change Policy (SD15) in the five areas of focus (Climate Policy, Power Supply & Transmission, Customer Decarbonization, Climate Impacts on EWEB – Resiliency & Adaptation, and EWEB's Internal Operations), as well as how EWEB's work intersects with climate issues broadly.

Two key components of v1.0 of the Climate Guidebook include EWEB's internal GHG reporting and progress towards goals as well as reporting progress on EWEB's actions and results included in Eugene's Climate Action Plan (CAP) 2.0.

### 1. Internal GHG reporting and progress towards SD15 reduction goals:

EWEB has been tracking its internal greenhouse gas emissions annually since 2009. Per SD15, EWEB must reduce our net Scope 1 and 2 GHG emissions from operations relative to 2010 levels by:

- 25% by 2020,
- 50% by 2030,
- Achieve carbon neutrality from our operations by 2050.

Scope 1 includes direct emissions from owned equipment and facilities. For EWEB, this includes fleet fuel consumption in owned vehicles, natural gas consumption in owned buildings, and industrial gas releases into the atmosphere from owned equipment. EWEB's industrial gases includes refrigerants used in vehicles and buildings and SF6 used in electrical switchgear at substations.

Scope 2 includes indirect emissions associated with electricity and steam purchased from the electric utility. For EWEB, Scope 2 only includes emissions associated with the energy consumption by EWEB's for internal operations. Emissions associated with power generation for all retail customers is outside the boundaries of this report.

EWEB has calculated these results in accordance with the best available greenhouse gas reporting protocols including World Resources Institute, GHG Protocol Corporate Accounting and Reporting Standard<sup>1</sup> and Scope 2 Reporting Guidance<sup>2</sup>.

## 2. Eugene CAP2.0 EWEB Voluntary Commitment Reporting

The city conducted its first Community Climate and Energy Action Plan in 2010. In 2014, City Council passed the first version of its Climate Recovery Ordinance (CRO), which was updated to its current form in 2016. The CRO includes 4 goals – two focused on the community including residents and businesses and two focused on city operations.

The two community goals include:

- Reduce community fossil fuel use by 50% of 2010 levels by 2030.
- Reduce total community greenhouse gas emissions to an amount that is no more than the city of Eugene's average share of a global atmospheric greenhouse gas level of 350 ppm by 2100, which was estimated to require an annual average emission reduction level of 7.6%.

Eugene published CAP2.0 in summer of 2020. The document outlines a broad coalition of stakeholders (called Eugene Climate Collaborative) and documents their voluntary commitments to move towards reduced fossil fuel use, carbon neutrality, and climate change adaptation. EWEB submitted 15 voluntary commitments in Eugene CAP2.0 in the areas of transportation, building energy, and resiliency. Eugene has a CAP2.0 dashboard on the City's website where updates on progress towards these commitments is documented.

Eugene Climate Collaborative (ECC) partners were defined as organizations who have significant oversight and impact on community-wide fossil fuel use and emissions or have the ability to affect or alter systems that will enable the community to adapt and prepare for climate change.”

ECC partners include: City of Eugene, Lane County, Bethel School District, Eugene 4J School District, Lane Community College (LCC), University of Oregon, Lane Transit District (LTD), Eugene Water & Electric Board (EWEB), Metropolitan Wastewater Management Commission (MWWMC), NW Natural, PeaceHealth, Eugene Area Chamber of Commerce.

## **Discussion**

### 1. Internal GHG reporting and progress towards SD15 reduction goals

In 2020, EWEB not only met but greatly exceeded its first GHG reduction milestone by achieving a 55% reduction in annual emissions compared to the 2010 baseline. Some of this reduction can be attributed to the COVID-19 pandemic as business travel in EWEB vehicles and building energy use declined due to stay-at-home orders.

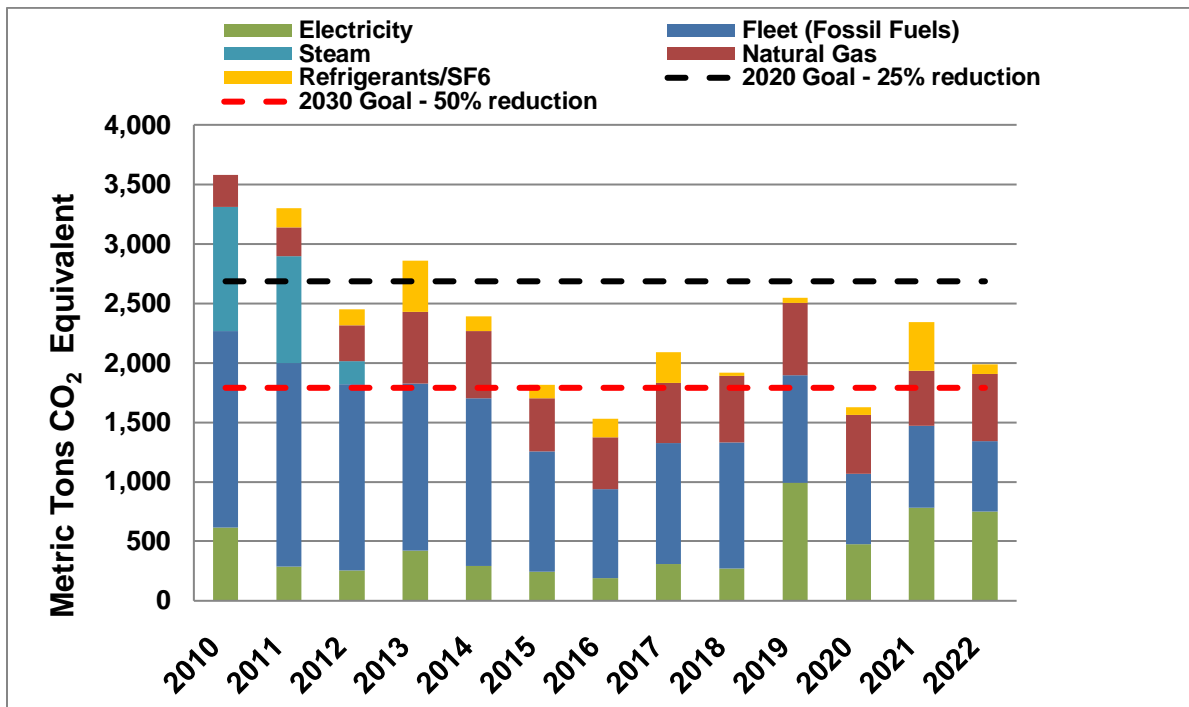
In 2021 and 2022, emissions rose slightly compared to the year prior, and EWEB achieved a 35% and 44% reduction in emissions over the 2010 baseline, respectively. EWEB is well on its way to meeting the ambitious goal of 50% reduction over baseline by 2030. Progress towards EWEB's internal GHG goals is calculated using a market-based approach to electricity emissions and using the EWEB-specific emissions factor as calculated by Oregon DEQ's GHG reporting program.

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1 [Corporate Standard | Greenhouse Gas Protocol \(ghgprotocol.org\)](https://ghgprotocol.org/)

2 [Scope 2 Guidance | Greenhouse Gas Protocol \(ghgprotocol.org\)](https://ghgprotocol.org/)

**Figure 1: EWEB's GHG Emissions in MT CO<sub>2</sub>e, 2010-2022 (market-based approach)**



Since staff presented our calendar year 2020 results to the Board in Nov 2021, it has undergone a systematic review process to ensure all calculations and methodologies are following industry best practices. Several updates have taken place since the last GHG reporting including:

- Update to 2010 baseline year: EWEB's Board updated SD15 to change the baseline year from 2009 to 2010 in early 2023. This ensures that EWEB and City of Eugene are using the same baseline year and allows both a market-based and location-based accounting of electricity emissions in accordance with industry standard protocols.

As EWEB's emissions went down between 2009 and 2010, this change only serves to make achieving our goals of 25% reduction over baseline by 2020 and 50% reduction over baseline by 2030, more challenging to achieve.

- Accounting for REC purchases and PV generation at ROC: Per GHG inventory protocols EWEB has historically reported its electricity emissions using both a location-based and market-based method per GHG protocol guidance and will continue to do so.

The market-based method reflects the GHG emissions associated with the choices a consumer makes regarding its electricity supplier or product. This approach uses the EWEB utility-specific emissions factor as calculated by Oregon DEQ for the statewide GHG reporting program. New in this report, EWEB has collected and begun to report on data for all historical years on REC purchases from being an EWEB Greenpower customer, as well as on PV generation from the 74.62 kW solar array at the Roosevelt Operations Center (ROC). EWEB plans to report its progress towards SD15 reduction goals using this approach to electricity emissions.

- Updated calculations for EVs and biofuels in EWEB's fleet: EWEB is now tracking kWh consumption from owned fleet electric vehicles along with all fleet fossil and biofuels.

- Updated electricity emissions factors: In Nov 2021, when EWEB first reported on its 2020 GHG emissions, Oregon DEQ had not yet published an updated utility-specific emissions factor for calendar year 2020 so EWEB used the 2019 emissions factor as a proxy. Along with most western regional GHG emissions factors, EWEB's 2019 emissions factor turned out to be significantly higher than the 2020 emissions factor due to limited water availability in the western hydro system. This report updates the 2020 emissions with the actual 2020 emissions factor, which is the primary reason the 2020 emissions reported here are lower than previously reported.

In this report, a 2022 EWEB emissions factor has not yet been published, so 2022 results are using the 2021 emissions factor as a proxy which will be updated in the next report.

- New Scope 3 calculations - Business travel and commute: In the written report, EWEB will begin to include calculation estimates for indirect Scope 3, emissions sources from business travel in employee-owned vehicles and employee commute emissions. These sources were selected for inclusion because while EWEB doesn't control these sources directly, company policies can influence these emissions. Also, internal practices related to these areas have changed significantly since the COVID-19 pandemic.

While estimates of the embodied emissions within EWEB's purchased goods and services will not be included in annual GHG inventories, it is important to note that EWEB's SD15 requires that staff take a triple bottom line approach to major capital projects. It is in the context of these types of major projects that EWEB will estimate embodied emissions from purchased goods and services and develop an appropriate mitigation plan. For example, this is the approach staff took to understanding the GHG implications for the four Leaburg project alternatives outlined in the Leaburg triple bottom line analysis.

- Embodied emissions in finished water production: Water operations (including Hayden Bridge and water pump stations) represented 68% and 65% of total EWEB electricity consumption in 2021 and 2022 respectively. EWEB consumes this electricity on behalf of our customers to create safe, clean, and delicious drinking water. EWEB seeks to provide guidance on the embodied emissions in the products it sells to our customers. We do this for the electric utility by reporting our emissions to Oregon DEQ, who then publishes a utility specific emissions factor for each MWh of electricity customers purchase from EWEB. EWEB seeks to provide similar information about the carbon impacts of our finished water for our customers moving forward.
- Updated GHG Inventory Calculator Tool: Since 2009, EWEB has been using local consulting firm, Good Company's Carbon Calculator to support our GHG calculations. This tool is also being used by many local and state partners including Cities of Eugene, Springfield, Lane County, Lane Transit District; and Metropolitan Wastewater Management Commission among others. This tool recently was updated to the newest version (v5).

## 2. CAP 2.0 Reporting

The CAP2.0 includes a combined 115 actions that local partners have committed to moving forward to reduce emissions and improve resiliency. EWEB submitted a total of 15 voluntary action items within the plan including (5) transportation actions, (7) building energy actions, and (3) resiliency actions. Appendix D in the Climate Guidebook provides an overview on EWEB's progress towards these commitments.

It is anticipated that City of Eugene staff will be a primary audience of Climate Guidebook Appendix D. To that end, EWEB has been working closely with Eugene staff to report our performance across these action items in a way that can support the City's CAP2.0 performance dashboard on Eugene's

website. Eugene will be updating this Dashboard in the future and EWEB may need to update its reporting to meet new needs over time.

**EWEB has met all metric milestones and is on track with all commitments included in CAP2.0.**

<b>Transportation Action Items</b>		
<b>Action Item #</b>	<b>Topic</b>	<b>Description Details from CAP2.0</b>
T24	EV marketing & awareness	<i>COE and EWEB to increase the number of EV-centered ride and drive consumer education events. This action is scheduled to be completed between 2023 and 2025.</i>
T36	EV market transformation	<i>EWEB will focus on an evolution of targeted market transformation programs and efforts to increase EVs in the community, including dealership engagements and incentives, education campaigns, and ride and drive events. Funding for this action primarily comes from the Clean Fuels Program (CFP).</i>
T37	EV infrastructure incentives	<i>EWEB to incentivize commercial and residential charging infrastructure and to support regional efforts to expand available charging network, including EWEB-owned stations at its properties. Funding for this action primarily comes from the Oregon Clean Fuels Program (CFP).</i>
T38	EV support to underserved communities	<i>EWEB to explore ways to increase EV use in underserved populations through efforts and programs including partnerships with key agencies, grants, culturally appropriate outreach and education, and non-ownership models like multi-family car sharing. Funding for this action primarily comes from the Clean Fuels Program (CFP).</i>
T40	EWEB owned fleet GHG reduction goals	<i>LCC, Lane County, and EWEB continue to invest in fuel efficient motor pools. Public agencies are focused on purchasing electric vehicles when practical and high efficiency hybrids or diesels when necessary. These vehicles require less maintenance and have lower operating costs than the vehicles they are replacing.</i>

<b>Building Energy</b>		
<b>Action Item #</b>	<b>High Level Description</b>	<b>Details from CAP2.0</b>
Guiding Policy	EWEB's Integrated Resource Plan (IRP)	<i>EWEB's IRP helps EWEB understand the resources, technology, and infrastructure that will be needed to meet customers' future electricity needs. EWEB's ongoing electricity supply planning effort is aimed at optimizing power resources, assets, infrastructure, and customer products and services so that EWEB can continue to serve the community with clean, affordable, and reliable power, consistent with the values of EWEB's customer-owners.</i>
B8	EWEB owned facility GHG reduction goal*	<i>EWEB is implementing adopted GHG reduction goals, which call for EWEB to reduce our net Scope 1 and 2 GHG emissions from operations relative to 2010 levels by:</i> <ul style="list-style-type: none"> <li>• 25% by 2020</li> <li>• 50% by 2030</li> <li>• Achieve carbon neutrality from our operations by 2050</li> </ul>
B9	Electrification Study	<i>EWEB to complete an Electrification Impact Study in 2020-2021. The study will explore the impacts of widespread electrification on our community. In this study, EWEB will hypothesize various electrification scenarios and assess potential impacts to power supply, demand, local infrastructure, and community greenhouse gas (GHG) emissions.</i>
B10	Energy Efficiency	<i>EWEB working with community partners to support building upgrades with incentives for smart electrification and energy efficiency.</i>
B11	Limited Income Programs	<i>EWEB and NWN limited income assistance programs and energy conservation education programs, which provide eligible customers with rebates and incentives to lower and pay their bills.</i>

B12	Load Growth via Conservation	<i>EWEB's commitment to conservation includes meeting all new base load growth through acquiring conservation rather than new energy resources. Each year, the utility targets between 1.4 and 1.6 MW for acquisition, dedicating appropriate budget and human resources to those targets.</i>
B13	Advanced Metering Infrastructure	<i>Once fully deployed, EWEB's advanced metering program will facilitate demand side management programs with customers to reduce energy use during peak periods. EWEB has begun consumer education on the value of reducing energy use during peak periods and plans to develop programs to help consumers shift energy use off-peak through a combination of technology and pricing signals.</i>

<b>Resiliency Action Items</b>		
<b>Action Item #</b>	<b>High Level Description</b>	<b>Details from CAP2.0</b>
Guiding Policy	Natural Hazards Mitigation Plan	<i>The Eugene-Springfield Natural Hazard Mitigation Plan (NHMP) in partnership with the City of Springfield, Oregon, EWEB, Rainbow Water District, and the Springfield Utility Board (SUB). An update to the NHMP is expected to be completed in 2020 and is scheduled to be updated again in 2025. Actions R1-R8 provide link back to the NHMP. This is not an exhaustive list of items in the NHMP that will help Eugene achieve its climate goals, but rather a sample of the types of actions that will be needed to help the community adapt to the impacts of climate change.</i>
R20	Emergency Water Stations	<i>EWEB is installing emergency water stations at schools and public spaces around the region, with a goal to have at least five stations around the community. There are three stations that are operational and two more that are now under development with completion slated for the end of 2020. A new site on City property in south Eugene is now under exploration as a potential sixth emergency water station.</i>
R21	Pure Water Partners Program	<i>MWMC partnership with EWEB in Pure Water Partners program, a new initiative designed to reward landowners who protect high quality land along the McKenzie River. The program assists EWEB in protecting water quality and helps avoid future water treatment costs.</i>

**Recommendation**

None.

**Requested Board Action**

Discussion and feedback.

**Attached**

Please see Draft EWEB Climate Guidebook v1.0, Chapter 6: EWEB Internal Operations GHG Reductions and Appendix D: EWEB's Role in City of Eugene's CAP2.0 for detailed information.