



January 21, 2025

Oregon Public Utility Commission
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RE: UM 1696 - Comments supporting Staff's recommendation to approve major cost-effectiveness exceptions for multiple heat pump measures, as requested by Energy Trust of Oregon.

The Green Energy Institute at Lewis & Clark Law School (GEI), Community Energy Project (CEP), Oregon Environmental Council (OEC), Earthjustice, Mobilizing Climate Action Together (MCAT), NW Energy Coalition (NWEC), Oregon Citizens' Utility Board (CUB), and Verde appreciate the opportunity to submit this comment in support of Staff's recommendation to approve major cost-effectiveness exceptions for multiple heat pump measures, as requested by Energy Trust of Oregon (ETO or Energy Trust).¹ Energy Trust has requested the Commission exempt two heat pump measures from ETO's cost effective requirements to better support Oregon households and state goals to combat climate change and energy burden. These measures supporting heat pump adoption, particularly for low- and moderate-income households and will provide economic and health benefits to individual households while also supporting Oregon climate and energy goals.

¹ *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Staff Report (Dec. 30, 2024) [hereinafter Staff Report on ETO Request].

We urge the Commission to approve these measures to support a just energy transition, particularly for energy burdened households and environmental justice communities; traditional cost effectiveness tests fail to adequately capture the benefits provided by heat pumps, especially for those households experiencing low and moderate incomes prioritized by ETO’s present request. In this comment, we identify five key reasons ETO’s request will support Oregon goals and households, thus justifying cost-effectiveness exceptions. We focus on state heat pump goals, cost savings, extreme weather events, healthier homes, and meeting climate goals while also supporting environmental justice communities.

First, in 2023, state legislators established a goal to install half-a-million heat pumps statewide by 2030.² Over the next five years, agencies like the Commission are tasked with supporting this goal, including removing both financial and nonfinancial barriers to heat pump adoption.³ More importantly, these efforts should prioritize environmental justice communities and households lacking adequate heating and cooling technology.⁴

ETO’s heat pump pilot programs rolled out to great success over the last year-and-a-half; the program exhausted its initial funds rapidly and ETO applied for—and received—an additional \$2 million from the Commission to support further efforts.⁵ Under the pilot program, low- and moderate-income residents received heat pumps through ETO. The Commission found the program was a viable mechanism for reaching energy burdened customers.⁶ Continuation of these programs, through approval of these two cost-effectiveness exceptions, will help ETO build on its existing successes to promote heat pump deployment statewide, supporting Oregon’s goals and priorities.⁷

We further support the longer timelines proposed for these cost effectiveness exceptions: three and five years respectively for the measures. These longer timelines are better aligned with complimentary funding sources and will help build stability into ETO’s heat pump offerings through, for example, allowing for contractor training.⁸

Second, the Commission is further tasked with adopting programs to reduce energy burden for Oregon households; the heat pump programs supported through these measures will support this directive. In 2022, Oregon passed HB 2475, authorizing the commission to reduce energy burden for households through various pathways, including energy efficiency.⁹ As mentioned above, these low- and no-cost heat pump measures have proven both popular and successful at reducing energy burden; ETO previously requested and was approved for more funds for the pilots after

² O.R.S. § 469.760(2).

³ O.R.S. § 469.760(2)(b); *id.* § 469.763(2)(c).

⁴ O.R.S. § 469.760(2)(c)

⁵ See *In the Matter of Energy Trust of Oregon, Cost Effectiveness Exception Request for Electric Measures*, Docket No. UM 1696, Order No. 24-142, at 2–3 (May 20, 2024).

⁶ *Id.* at 3.

⁷ See Staff Report on ETO Request, *supra* note 1, at app. A, 2.

⁸ See, e.g., City of Portland, Portland Climate Investment Plan: Executive Summary, August 2023, at 4 (2023), <https://www.portland.gov/bps/cleanenergy/climate-investment/documents/pcef-climate-investment-plan-amended-dec-2024/download>.

⁹ H.B. 2475, 81st Leg., 2021 Reg. Sess. (Or.) (authorizing the Commission to consider the “differential energy burdens on low-income customers[.]”); O.R.S. § 757.695(1) (“[T]he Public Utility Commission may address the mitigation of energy burdens through . . . demand response . . .”).

the initial funds were rapidly exhausted from the programs' popularity.¹⁰ The Oregon legislature has further recognized heat pumps as the “most energy efficient space heating option available in the market,” that can “help people to save money on household energy bills.”¹¹ Particularly as utilities' bill discount programs gain traction, heat pumps can provide an important avenue towards long-term, sustainable bill savings, particularly as energy costs rise across the state.¹² We urge the Commission to approve these exceptions to help reduce energy burden for households across the state.

Industry experts also expect that, as our economies decarbonize from fossil fuels to meet the climate challenge, household bills, particularly natural gas bills, will dramatically increase as more and more households, businesses, and communities phase out fossil fuels.¹³ This phenomenon will leave “stranded costs” as fewer customers remain connected to gas systems.¹⁴ Models predict that customers left on the gas system may see bills increase by as much as 129% or more.¹⁵ In contrast, energy efficiency and electrification strategies, including heat pump deployment, are already saving consumers money and supporting the electricity grid by helping it run more efficiently.¹⁶

Third, every household in Oregon deserves a comfortable and safe home. Since the record-breaking summer of 2021 left dozens of Oregonians dead or hospitalized from extreme heat, legislators have emphasized the importance of access to cooling equipment. Examinations of fatalities related to the 2021 heat dome in Multnomah County found that over 90% of the 72 fatalities were of people in their own homes, mostly without access to any or adequate cooling equipment.¹⁷ A year later, state legislators passed SB 1536 to increase residential access to cooling equipment.¹⁸ In doing so, state legislators recognized the “disproportionate impact” extreme weather events have on low income households and environmental justice communities.¹⁹ The following year, in HB 3409, the state legislature again recognized the importance of access to cooling equipment, and in particular electric heat pumps, to “provide both heating and cooling benefits that keep people safe during extreme weather events that are becoming more frequent and more intense as a consequence of climate change.”²⁰

¹⁰ Docket No. UM 1696, Order No. 24-142.

¹¹ O.R.S. § 469.760(1)(d)–(e).

¹² See Monica Samayoa, Utility Watchdog Calls to Cap Oregon Rate Hikes as Energy Bills Continue to Rise, OPB (May 20, 2024) <https://www.opb.org/article/2024/05/20/oregon-electricity-utilities-cost-portland-general-electric-northwest-naturals>; *In the Matter of Portland General Electric Company, Request for a General Rate Revision*, Docket No. UE 435, Order 24-454 (Dec. 20, 2024); *In the Matter of PacifiCorp, dba Pacific Power, Request for a General Rate Revision*, Docket No. UE 435, Order 24-447 (Dec. 19, 2024).

¹³ Steve Nadel, *Impact of Electrification and Decarbonization on Gas Distribution Costs*, ACEEE (June 2023) <https://www.aceee.org/sites/default/files/pdfs/U2302.pdf>.

¹⁴ *Id.* at 30.

¹⁵ *Id.* at iv. Notably, other models show even higher increases with decarbonization pathways such as replacing fossil gas with biogas—where gas customer bills may quadruple. *Id.*

¹⁶ Monica Samayosa, *As Northwest Homes and Businesses Get More Energy Efficient, That's Helping the Power Grid*, Study Finds, OPB (Sept. 13, 2024), <https://www.opb.org/article/2024/09/13/northwest-energy-efficiency-power-grid-report/>.

¹⁷ Multnomah County, *Final Report: Health Impacts from Excessive Heat Events in Multnomah County, Oregon, 2021* (June 2022), https://multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com/s3fs-public/20220624_final-health-report-2021_SmallFile-2.pdf.

¹⁸ S.B. 1536, 2022 Leg. Ses., 81st Leg. (Or.) (codified at various sections of O.R.S.).

¹⁹ *Id.* at Preamble.

²⁰ H.B. 3409 § 1(1)(d), 2023 Leg. Ses., 81 Leg. (Or.).

Wildfires are a second climate impact that Oregonians are becoming increasingly familiar with.²¹ For communities on the wildfire frontlines, May through October now bring smoke and power outages, among other fire threats.²² Heat pumps, by providing cooling and air filtration, can protect households from both extreme heat and wildfire smoke risks. Electric heat pumps are effective air filters, helping homes reduce indoor air pollution from wildfire smoke.²³ Energy Trust’s request further emphasizes opportunities for co-funding to support weatherization work,²⁴ which can better protect homes from extreme weather events.²⁵ We urge the Commission to approve these measures to support Oregon households—and in particular households with inadequate cooling and frontline wildfire communities.

Fourth, we write to support Staff and ETO’s emphasis in this request for serving all homes with heat pump technologies—including those with gas appliances—for the health and climate benefits that can be provided through beneficial electrification supported by these efforts.²⁶ To combat a future of rising costs, researchers recommend pursuing energy efficiency and electrification strategies.²⁷ Oregon law, through HB 3409, recognizes electric heat pumps as the “most energy efficient space heating option available in the market.”²⁸ The Oregon legislature further found that “[u]pgrading space and water heating appliances with contemporary heat pump technologies can help people to save money on household energy bills” and that “additional support and innovative solutions are needed” to ensure “all households” benefit from efficient appliances like heat pumps.²⁹

Beneficial electrification can also carry indoor air quality and resulting health benefits. In recent years, more studies are uncovering the health risks from gas appliances. Combusting natural gas

²¹ U.S. Dep’t of Agric., *How do Climate and Wildfire Relate?*, USDA Climate Hubs, <https://www.climatehubs.usda.gov/hubs/northwest/topic/climate-change-and-wildfire-idaho-oregon-and-washington> [<https://web.archive.org/web/20250121225102/https://www.climatehubs.usda.gov/hubs/northwest/topic/climate-change-and-wildfire-idaho-oregon-and-washington>] (last visited Jan. 21, 2025).

²² See Bob Jenks, *Preparing for Fire Season and Power Outages*, Citizens Utility Board (May 18, 2021), <https://oregoncub.org/news/blog/preparing-for-fire-season-and-power-outages/2341/> (discussing how to prepare for wildfire-related power outages); <https://portlandgeneral.com/outages-safety/safety/wildfire-safety-and-prevention> (noting “public power shutoffs” as a way Portland General Electric manages wildfire risks); *Protect Your Home’s Air Quality During Wildfires*, Energy Trust:Blog: Res. News (July 24, 2024), <https://blog.energytrust.org/protect-your-homes-air-quality-during-wildfires/> (discussing wildfire indoor smoke risks).

²³ *Do Heat Pumps Provide Air Filtration?*, British Columbia: Clean BC Better Homes, <https://www.betterhomesbc.ca/products/do-heat-pumps-provide-air-filtration> (last visited September 18, 2024).

²⁴ See Staff Report on ETO Request, *supra* note 1, at 8.

²⁵ See Brendan Bane, *How to Protect Yourself from Wildfire Smoke When Indoors*, Pacific Northwest Nat’l Lab. (Sept. 8, 2022) <https://www.pnnl.gov/news-media/how-protect-yourself-wildfire-smoke-when-indoors> [<https://web.archive.org/web/20241128121620/https://www.pnnl.gov/news-media/how-protect-yourself-wildfire-smoke-when-indoors>] (“Tightening up [a] building envelope offers a double win: you can protect yourself from smoke and reduce your home’s energy consumption.”); John Matson, *How the California Grid Can Become More Resilient to Wildfire*, RMI (Jul. 26, 2021) <https://rmi.org/how-the-california-grid-can-become-more-resilient-to-wildfire/> (“Well-insulated, weatherproofed homes provide more “hours of safety” during an outage by keeping living spaces comfortable in the absence of electric cooling or heating.”).

²⁶ See Staff Report on ETO Request, *supra* note 1, at 9–10.

²⁷ Charlotte Cohn & Nora Wang Eram, ACEEE, *Building Electrification: Programs & Best Practices*, at 60–61 (2021), <https://www.aceee.org/sites/default/files/pdfs/b2201.pdf>.

²⁸ O.R.S. § 469.760(1)(d).

²⁹ *Id.* § 469.760(1)(e), (h); see also Eric J.H. Wilson et al., NREL, *Heat Pumps for All? Distributions of the Costs and Benefits of Residential Air-source Heat Pumps in the United States*, 8 Joule 1000, 1005 (showing that high-efficiency heat pumps are expected to reduce energy bills for 95% of households).

to operate stoves and other appliances releases pollutants known to be harmful to human health and linked to childhood asthma.³⁰ While much attention focuses on gas stoves, stoves are not the only source of gas-related indoor air quality harms. Most gas space and water heaters rely on venting systems to reduce indoor air pollution.³¹ Malfunctioning vents or failing equipment increase the risk of harm from even vented systems.³² These problems are more prevalent in older homes: up to 25% of homes built before 1980 may have issues with gas equipment or lines, leading to indoor air pollutants.³³

We recognize that Energy Trust believes it faces restrictions imposing challenges to electrifying dual-fuel households (homes currently served by both electric and natural gas utilities). Even so, beneficial electrification is an essential decarbonization strategy.³⁴ We, therefore, support Staff's recommendation in this request to collect and report relevant conditions and data related to these measures to better inform beneficial electrification strategies for the state moving forward.³⁵

Fifth and finally, Oregon's largest electric utilities are tasked with supplying Oregon customers with carbon-free electricity by 2040, while Oregon's natural gas utilities must reduce their emissions 90% by 2050,³⁶ and energy efficiency, including heat pumps, will serve an important role in achieving this target.³⁷ Building energy use accounts for roughly one third of Oregon greenhouse gas emissions, two-thirds of which is attributed to space and water heating.³⁸ Electric heat pumps, as the most energy efficiency space heating option available on the market, provide the most cost-effective pathway to decarbonization.³⁹

Oregon utilities are further tasked with meeting the state's climate goals in a manner that "minimizes impacts on environmental justice communities," while Executive Order 20-04 emphasizes reducing greenhouse gas emissions and energy burden to meet state priorities.⁴⁰ As discussed above, heat pumps provide a myriad of climate, health, and energy benefits to Oregon households. These low- and no-cost measures are particularly targeted toward environmental justice communities and will be an essential element of meeting the state's carbon goals in a manner that supports and uplifts environmental justice communities.⁴¹

³⁰ Tanya Lewis, *The Health Risks of Gas Stoves Explained*, Scientific American (Jan. 19, 2023) <https://www.scientificamerican.com/article/the-health-risks-of-gas-stoves-explained/>.

³¹ Sarah Wessler, *Gas Stoves Pose Health Risks. Are Furnaces and Other Appliances Safe to Use?*, *Yale Climate Connections* (Mar. 9, 2023), <https://yaleclimateconnections.org/2023/03/gas-stoves-pose-health-risks-are-gas-furnaces-and-other-appliances-safe-to-use/>.

³² *Id.*

³³ *Id.*

³⁴ Daniel Steinberg et al., NREL, *Electrification & Decarbonization: Exploring U.S. Energy Use and Greenhouse Gas Emissions in Scenarios with Widespread Electrification and Power Sector Decarbonization* (2017), <https://www.nrel.gov/docs/fy17osti/68214.pdf>.

³⁵ Staff Report on ETO Request, *supra* note 1, at 9–10.

³⁶ Or. Climate Prot. Prog., O.A.R. § 340-273-9000(2).

³⁷ O.R.S. § 469A.410.

³⁸ O.R.S. § 469.760(1)(a).

³⁹ O.R.S. § 469.760(1)(b).

⁴⁰ Exec Order No. 20-04 (Mar. 10, 2020), https://www.oregon.gov/gov/eo/eo_20-04.pdf; *see also* Staff Report on ETO Request, *supra* note 1, at app. A, 6.

⁴¹ Staff Report on ETO Request, *supra* note 1, at app. A, 5.

For the above reasons, we respectfully urge the Commission to approve ETO's request for cost effective exceptions, as outlined in Staff's Report. These heat pump measures will greatly benefit residents across the state and help meet Oregon climate goals and environmental justice priorities.

Respectfully,

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