

# OREGON DEPARTMENT OF ENERGY

## Annual Performance Progress Report (APPR) for 2025

### Agency Mission:

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.



# OREGON DEPARTMENT OF ENERGY

## Annual Performance Progress Report (APPR) for 2025

### INTRODUCTION

To achieve our mission, the agency oversees diverse programs to meet the state’s energy goals and policies – including programs that are not necessarily included in the scope of this report. The areas covered by this biennium’s key performance measures are important for meeting Oregon’s energy goals. Areas not included in the KPMs are also critical, such as ODOE’s Nuclear Safety and Emergency Preparedness division, which oversees Oregon’s interests in the Hanford Nuclear Site cleanup and ensures that the state is prepared to respond to nuclear- and energy-related emergencies. Further, the KPMs do not wholly capture ODOE’s work to support energy policy development and innovation – efforts such as promoting energy resilience, providing technical expertise on issues like home energy performance and residential energy codes, and tracking emerging issues like electric vehicles, energy storage, renewable natural gas, and more.

The agency is reporting on seven key performance measures:

<b>KPM#</b>	<b>Key Performance Measures (KPMs)</b>	<b>Page #:</b>
1	Customer Service	3
2	Zero Emission Vehicle Adoption in Oregon	6
3	Application Processing	11
4	Energy Use by State Buildings	12
5	Greenhouse Gas Content of Oregon’s Electricity & Stationary Fuel	15
6	Transportation Fuels Used in Oregon	27
7	Home Energy Scoring	31

KPM # 1	CUSTOMER SERVICE: Percent of customers rating their satisfaction with the agency's customer service as "good" or "excellent": overall, timeliness, accuracy, helpfulness, expertise, availability of information.	Measured since: 1997
Goal	Provide customers with a high degree of satisfaction with ODOE programs and services.	
Data source	Survey conducted by the department.	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

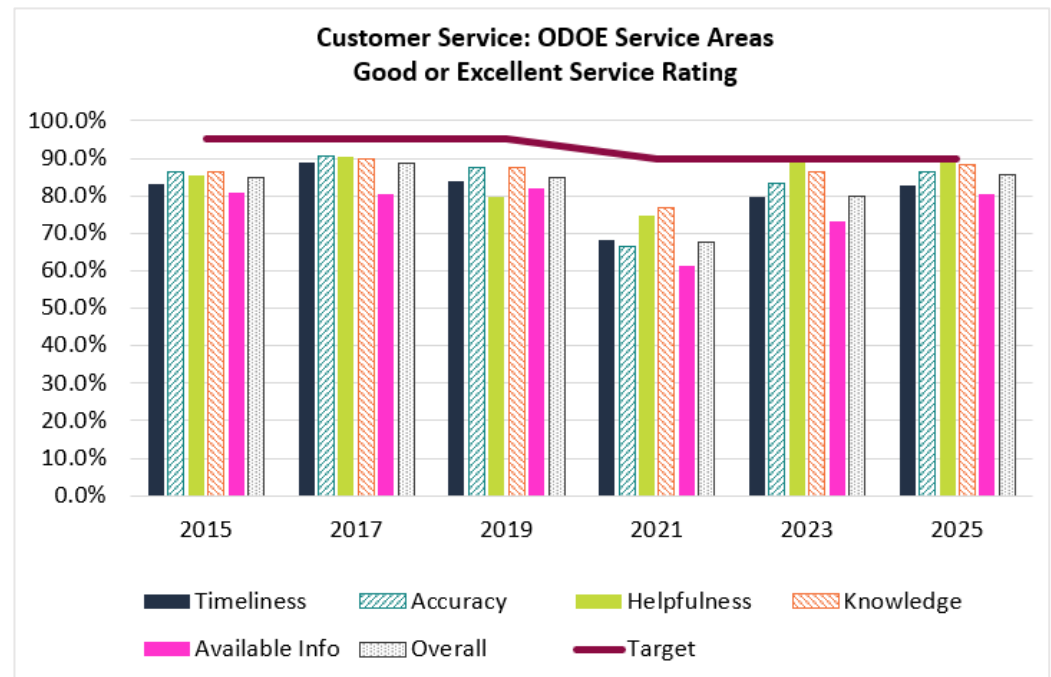
## 1. HOW WE ARE DOING

**Results.** The Oregon Department of Energy reports every odd-numbered year on results from customer service surveys to measure this Key Performance Measure. Fourteen topic-based surveys were issued and the results are outlined in this report. Each topic-based survey included the same six questions about the agency that measure customer service: timeliness, accuracy, helpfulness, knowledge, availability of information, and overall service. Results represent customer feedback ratings of "good" or "excellent," weighted to remove any "don't know" or "N/A" responses. All categories showed an increase in ratings over the last biennium, but the agency remains below the overall target goal of 90 percent.

**About the Target.** The Legislative Fiscal Office updated the target to 90 percent of respondents rating "good" or "excellent" for all service categories in 2021. In preceding years, the target was 95 percent.

Customer service is an integral part of ODOE's work and an essential component of meeting the agency's mission. For day-to-day operations, the agency defines "customer" broadly – from community stakeholders to industry representatives to fellow State agencies.

**About the Data.** The survey was comprised of results from 14 topic-based surveys for current ODOE program areas and activities. Survey results were carefully reviewed, including customer feedback in the additional open-ended questions the agency included in the surveys. Moving forward, ODOE will continue to survey new groups of customers as programs begin and end at the agency.



## 2. FACTORS AFFECTING RESULTS

**Background.** The 2025 customer survey results show a measured increase in satisfaction in all areas over the last biennium. Some factors have likely influenced this improvement, including better survey methodology and new ODOE incentive programs that benefit Oregonians.

**Survey Methodology.** For this KPM, ODOE previously surveyed external customers once each biennium using the standard customer service questions. In an effort to gather more timely and relevant survey results, ODOE now issues targeted surveys for specific programs each summer (apart from a schools program survey, which is sent in the spring before summer break). Topic-based questions help us measure our services in addition to the six required questions measuring overall services. Starting in 2021, ODOE also added demographic questions (racial/ethnic background, geographic area, and household income) to better understand who we are serving.

As of 2021, ODOE sends topic-based surveys by customer service area, such as to members of the public interested in the energy facility siting processes; contractors participating in energy incentive programs; members and attendees of ODOE stakeholder and advisory bodies; school districts participating in schools-related programs; and others. In the survey emails, ODOE reminds the recipients how they engaged with us. This approach has been successful in receiving relevant results for our programs (for example, no comments from people confused about why they received the survey or commenting on programs that aren't ours).

While ODOE reports survey results every odd-numbered year, we will continue to survey most customers annually or on a regular basis. For example, ODOE has made a survey available year-round for customers who want to provide feedback at any time.

**Response Rate.** With the improved methodology for surveying, it becomes difficult to measure a true response rate. As noted above, ODOE has a general customer service survey that we leave open year-round, so we don't have a list of survey recipients against which we can compare a response rate. Because we measure annually for many ODOE programs, some recipients may ultimately fill it out twice – one for each year they received services during the biennium.

The number of responses received increased between 2023 and 2025, however. In 2023, ODOE received about 200 survey responses, and about 270 in 2025. Some topics, such as energy incentive programs, had more engagement. Others received few responses, even after an email reminder, a mention in ODOE's monthly newsletter, and targeted emails from specific staff members in place of a generic email blast.

**Strategic Plan.** The Oregon Department of Energy completed its 2021-2024 Strategic Plan earlier this year and is now developing a new plan for 2026-2029. The 2021 plan included imperatives (focus areas to guide our work) that helped ODOE improve our customer service and how we engage with and serve Oregonians. Specific imperatives that speak to customer service included *Expanding and Improving Stakeholder Engagement*; *Building Practices and Processes to Achieve More Equitable Outcomes*; and *Assessing and Modernizing Agency Programs and Activities*. Other imperatives around data capabilities and optimizing or organizational efficiency and impact also helped ODOE improve its overall service to Oregonians.

### **3. HOW WE COMPARE.**

ODOE's survey results have fluctuated over the years – as noted above, responses are likely influenced by expanded customer bases thanks to incentive programs, as well as improved survey methodology. In the 2021 survey in particular, there were fewer customers to survey due to lack of customer-facing programs as long-time incentives met their legislative sunset. The 2023 and 2025 surveys saw marked improvement in all categories following new incentive programs (and therefore new customers).

KPM #2	ZERO EMISSION VEHICLE ADOPTION IN OREGON: ZEV registrations in the light-duty vehicle sector statewide.	Measure since: 2020
Goal	State Agencies to procure 25 percent of eligible vehicles as zero emission vehicles by 2025	
Data source	Oregon Department of Transportation, Department of Motor Vehicle registration Data	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

## 1. HOW WE ARE DOING

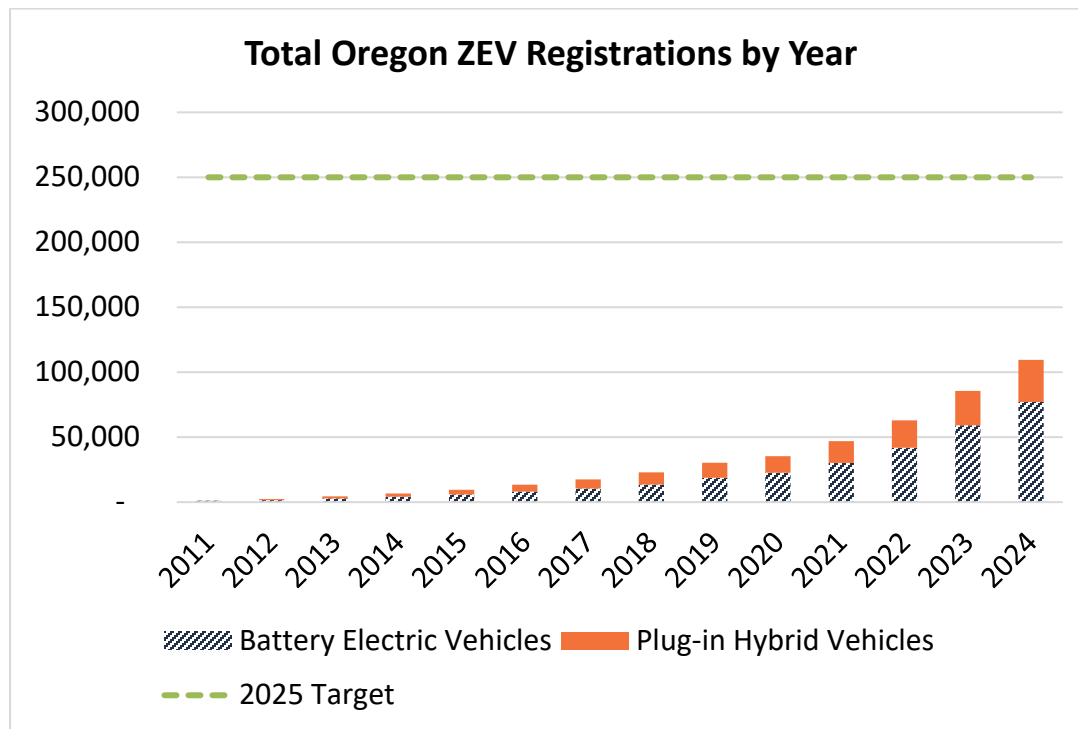
**Results.** Oregon added 24,483 registered light-duty ZEVs in 2024, ending the year with 109,485. As of May 2025, there are 119,850 light-duty zero-emission vehicles registered in Oregon, comprising just over 3.2 percent of passenger vehicles. Of these, 35,214 are plug-in hybrids and 84,636 are battery electric vehicles. In 2024, light-duty EVs were 15.3 percent of all vehicles sales. Although the percentage share of EV sales has been flat since 2023, total ZEV registrations continue to grow. Figure 1 shows the state’s total ZEV registrations each year, broken out into battery electric vehicles in the bottom portions of the bars, and plug-in hybrid electric vehicles in the top portions of the bars. It also shows progress toward the state’s 2025 EV adoption goal of 250,000 registered ZEVs. Oregon will likely fall short of the 2025 goal.

**Table 1. Zero-Emission Vehicles as a Percentage of Total Light-Duty Vehicles in Oregon by Year**

Year	Light-Duty Vehicles	Total EVs	EVs as % of Light-Duty
2011	3,414,178	1,197	0.04%
2012	3,423,188	2,238	0.07%
2013	3,465,840	4,374	0.13%
2014	3,526,839	6,642	0.19%
2015	3,624,079	9,313	0.26%
2016	3,744,150	13,169	0.35%
2017	3,839,134	17,313	0.45%
2018	3,881,355	22,847	0.59%
2019	3,972,907	30,242	0.76%
2020	3,591,316	35,165	0.98%
2021	3,566,576	46,708	1.31%
2022	3,644,107	62,577	1.72%
2023	3,622,506	85,002	2.35%
2024	3,697,656	109,485	2.96% <sup>1</sup>

<sup>1</sup> Table 1 comes from DMV data which is updated with continuous QC; therefore, past year counts may not exactly match previous reports  
Oregon Department of Energy  
2025 Annual Performance Report

Figure 1. Total Light-duty Zero-Emission Vehicle Registrations Compared to 2025 Target



In 2024, 3 percent of light-duty vehicles purchased by the Department of Administrative Services were ZEVs (16 out of 541), which is more than double the percentage from the last biennium but less than the 25 percent target.<sup>2</sup>

**Our Strategy.** ODOE provides information and resources about ZEVs to decision makers, consumers, businesses, and government agencies. The [GoElectric.Oregon.gov](https://goelectric.oregon.gov) website hosts information about electric vehicles and charging for consumers, businesses, fleets, utilities, and local governments. It includes high-level information about ZEVs and their benefits, incentives for ZEVs and chargers, links to ZEV-related resources, and the latest information on Oregon’s ZEV successes. ODOE hosts an interactive [EV Dashboard](#) that showcases Oregon ZEV data, including registrations by county, zip code, and utility service territory, a map of ZEV charging locations, and a fuel and greenhouse gas savings calculator for consumers. ODOE provides technical assistance to help schools, fleets, and the state adopt zero-emission vehicles, including administering the [Energy Efficient Schools Program](#) that provides Public Purpose Charge funds for ZEV and charger purchases and [hosting](#) the Electric and Alternative Fuel School Bus Lifecycle Cost Analysis Tool and accompanying Guide to School Bus Electrification. ODOE offers [consumer-owned utilities custom maps](#) indicating where ZEVs are charging on their systems to inform distribution system planning.

<sup>2</sup> Based on the 2024 State Fleet Alternative Vehicle Report Required per ORS 283.337

ODOE uses the data and information it collects to inform ZEV policy options and development. The agency published its third [Biennial Zero Emission Vehicle Report](#) on September 15, 2025, which covers the general state of ZEV adoption in Oregon and deep dives on topics relevant to the barriers and opportunities associated with meeting state ZEV goals. The agency will also be publishing the [Oregon Energy Strategy](#) on November 1, 2025, which will provide policy recommendations on pathways to achieve state energy objectives and climate goals, including transportation electrification-related recommendations. ODOE is a member agency in the Zero Emission Vehicle Interagency Steering Group and the Every Mile Counts initiative, which support collaborative efforts across multiple agencies to encourage ZEV adoption, including developing action plans, coordinating on grant opportunities, and identifying gaps in policies and actions necessary to address barriers and support equitable access to vehicles and charging. The agency also provides technical assistance on ZEV charging contracting and development to the Department of Administrative Services Fleet Services.

**About the Target.** Oregon established zero-emission vehicle adoption goals with the passage of Senate Bill 1044 in 2019. Those goals are:

- By 2020, 50,000 registered motor vehicles will be zero-emission vehicles;
- By 2025, at least 250,000 registered motor vehicles will be zero-emission vehicles;
- By 2030, at least 25 percent of registered motor vehicles, and at least 50 percent of new motor vehicles sold annually, will be zero-emission vehicles; and
- By 2035, at least 90 percent of new motor vehicles sold annually will be zero-emission vehicles.

The Advanced Clean Cars II rule adopted in 2022 increases the minimum percentage of ZEVs to be delivered for sale in Oregon, beginning with a 35 percent requirement for the 2026 vehicle model year and culminating with a 100 percent ZEV sales requirement for the 2035 vehicle model year. The 2035 target surpasses the SB 1044 ZEV adoption goal of 90 percent sales.

Beginning in 2025, [ORS 283.327](#) requires all state agency light-duty vehicle purchases to be ZEVs with exceptions where a ZEV option is not feasible.

**About the Data.** ZEV adoption is calculated and produced using Oregon Department of Transportation's Department of Motorized Vehicles passenger vehicle registration data received monthly by ODOE. Oregon state fleet adoption data is provided in the Oregon Department of Administrative Services 2024 [Biennial Examination on the Use of State-Owned Vehicles](#) required by ORS 283.337.

## 2. FACTORS AFFECTING RESULTS

Federal policies are likely to affect ZEV adoption in Oregon going forward, and there is a great deal of uncertainty in this space. Presidential executive orders encourage the use of fossil resources and Congressional actions have removed all federal incentives supporting ZEV and electric vehicle charging infrastructure, including revoking individual and corporate tax credits as well as resolutions to remove California's waiver that allows them to set ZEV targets. The primary state policies driving ZEV adoption in Oregon are California's Advanced Clean Cars II and Advanced Clean Trucks rules, which require increasing percentages of ZEVs be sold in the state. This includes 2030 and 2035 sales targets that

would enable the state to achieve its 2030 and 2035 ZEV adoption goals. The Congressional resolutions are currently under litigation, but it is uncertain how long the litigation will take to move through court proceedings nor what the outcome will be. These and other changes in federal policies may have a dampening effect on all ZEV adoption.

New ZEV costs continue to approach parity with similar petroleum passenger vehicles, but there are fewer ZEV models available, meaning fewer pricing options for buyers — especially popular SUV and pickup truck models and low-priced economy cars. However, used ZEVs are commensurate with similar gasoline vehicles, and national data show that used ZEV sales are on the rise. The Oregon Department of Environmental Quality's Clean Vehicle Rebate and the Charge Ahead Rebate programs reduce up-front costs of buying a passenger ZEV, but the standard rebate has been oversubscribed each year since 2023, limiting the number of rebates available. The Charge Ahead Rebate, which provides rebates for low-income Oregonians, recently received additional funding through the U.S. Environmental Protection Agency's Climate Pollution Reduction Grant (funding the Climate Equity and Resilience Through Action, or CERTA program in Oregon). Charge Ahead Rebate recipients can receive up to \$7,500 off the cost of a new ZEV or \$5,000 off a used ZEV.

The relative availability and reliability of electric vehicle charging is a large barrier to ZEV adoption, especially for Oregonians living in multi-family homes or other residences where outlets for charging are not readily available. In the last year, almost all ZEV manufacturers agreed to a single electric vehicle charging standard. The North American Charging Standard, or NACS, is the standard for all Tesla charging stations. Many new ZEV models are now able to access Tesla's charging network, which is generally considered to be more widely available and reliable than the other networks. Also in 2025, the first charging stations were added using the Oregon Department of Transportation's National Electric Vehicle Infrastructure grant program. This, in addition to other funding programs to support EV charging — like the Community Charging Rebates, Charging and Fueling Infrastructure Grants, and Reliability and Accessibility Accelerator Grants — will continue to support more charging on major travel corridors, in rural communities, multifamily dwellings, and underserved communities, and to repair and upgrade existing chargers.

The Department of Administrative Services is experiencing challenges in EV procurement and adoption due to a lack of charging infrastructure available at most agency buildings. DAS and ODOT have installed more than 250 Level 2 charger ports at more than 20 sites that will serve state vehicles, employee EVs, and some public charging needs. It's common to need significant site and electric service improvements to support charger installation, and both agencies have seen delays in project completions due to supply shortages for electrical service infrastructure items. DAS also finds a continued lack of vehicle availability because many manufacturers are limiting or not selling newer ZEV models to government fleets. ZEVs are not yet profitable for most of the major auto manufacturers and are therefore focusing ZEV sales on more lucrative private sector markets.

**How We Compare.** The state is still expecting to see increased ZEV adoption, but the rate of adoption may be somewhat dampened by the lack of supporting federal policies. Oregon policies and programs will continue to drive ZEV sales, particularly state rebates that reduce up-front vehicle costs and programs that support the development of more charging infrastructure. In 2024, Oregon averaged 15.5 percent EV sales market share, the fifth highest sales and registrations of light-duty ZEVs in the nation, behind California, Dist. of Columbia, Colorado, and

Washington.<sup>3</sup> The American Council for an Energy-Efficient Economy's 2023 State Transportation Electrification Scorecard<sup>4</sup> has been incorporated as a subsection of the overall State Scorecard for 2025. Oregon scored 20 out of 25 points, again ranking 8th in the country, and ranked second behind California under *State scores transportation electrification outcomes*.

---

<sup>3</sup> From Atlas Public Policy's [EV Hub](#).

<sup>4</sup> ACEEE is a nonprofit research organization that develops policies to reduce energy waste and combat climate change. The scorecard evaluates the progress that state legislatures and agencies are making to implement policies that scale up deployment of light-, medium-, and heavy-duty electric vehicles and the necessary charging infrastructure to support them.

KPM #3	APPLICATION PROCESSING: Percent of applications reviewed and approved within administrative or statutory deadlines for Energy Facility Siting.	Measure since: 2006
Goal	Provide timely processing of site certificates.	
Data source	Energy Facility Siting Division	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

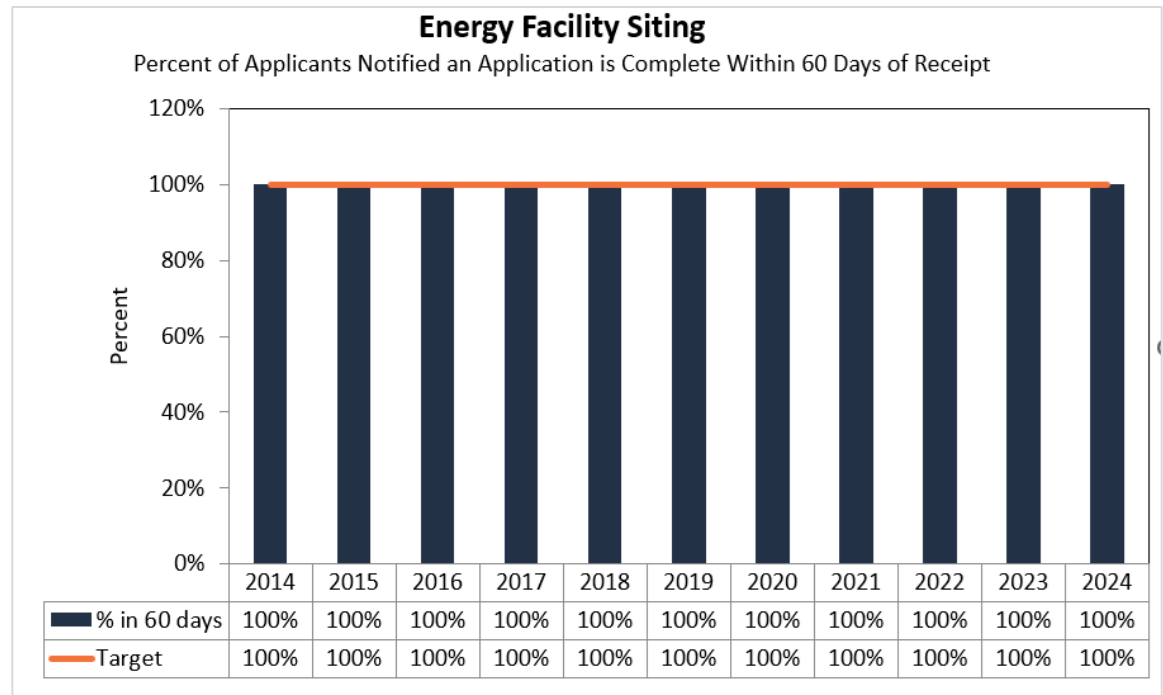
## 1. HOW WE ARE DOING

**Results.** The Energy Facility Siting Division met this target again at 100 percent.

**About the Target.** Part of the agency’s commitment to stakeholders is providing reliable resources and services. To measure this, ODOE monitors the timeliness for processing application completeness reviews for energy facility siting, reflected by the percent of new energy facility applicants notified by ODOE whether an application is complete within 60 days of ODOE receiving it.

## 2. FACTORS AFFECTING RESULTS

**About the Data.** The reporting cycle for this measure is by calendar year. The data for the energy facility siting measures represents actual completeness review processing time data for all applications received during the reporting period.

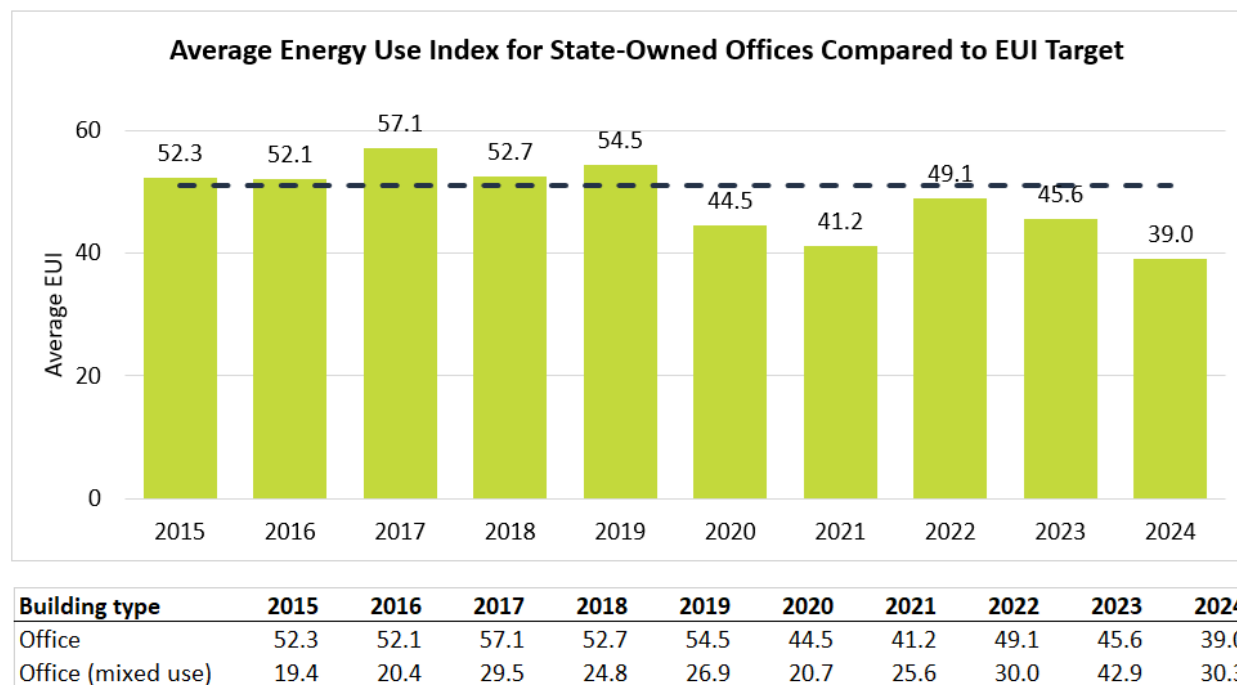


KPM # 4	ENERGY USE BY STATE BUILDINGS: Electrical and fossil fuel energy use in state-owned buildings by use, type and building area.	Measure since: 2015
Goal	Establish a robust data set of building level energy use for state-owned buildings more than 5,000 square feet to facilitate energy reduction.	
Data source	Agencies reporting	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

## 1. HOW WE ARE DOING

**Results.** In 2024, the average Energy Use Index (EUI) for state-owned office buildings was 39.0 thousand British thermal units (kBtu) per square foot, the fifth year below the EUI target<sup>5</sup> of 51 kBtu per square foot (in the case of EUI, the goal is to be below the target). State-owned buildings are engaging in innovative energy efficiency measures to continue reducing the average EUI, resulting in less energy used and more energy saved.

In 2024, energy use saw a significant reduction by 6.6 points from 2023, the lowest year since reporting started. It is important to note that three buildings lacked data at the time of publication and were omitted. Once these agencies are engaged and data is input, the annual EUI value will likely increase slightly.



The Oregon Department of Energy spent significant time with agencies in 2024 to improve data collection. This engagement correlates to 107 state-owned office buildings at 10 state agencies totaling 212 million kBtu over 5.4 million square feet of facility space. Office buildings are only a small subset of this data, however. The State Energy Efficient Design (SEED) Program<sup>6</sup> collected information on 309 total buildings across 15

<sup>5</sup>The Oregon Department of Energy calculated EUI targets for each state-building type based on [ANSI/ASHRAE/IES Standard 100, Energy and Emissions Building Performance Standard for Existing Buildings](#)

<sup>6</sup> [2023-2024 State Energy Efficient Design Biennial Report](#)

agencies in 2024. This information is saved in an ODOE maintained dataset and allows agencies to make informed energy efficiency investment decisions and compare their building to similar facilities in other agencies.

**About the Target.** Building performance is typically measured in EUI (kBtu/square foot/year). Electrical and fossil fuel annual energy use data is converted into common units (British thermal units or Btu) and combined with building square footage to calculate EUI. The ASHRAE target is an EUI value that represents high performance by building type. Because the target is a metric of energy use, achieving an EUI *below* the identified target is the goal – a lower EUI means less energy used. The target for office buildings, shown by the dotted line in the chart above, is based on the ASHRAE Standard 100 high-performance EUI. The target EUIs for each building type are based on ASHRAE Standard 100-2018 targets for climate zones 4C (Western Oregon) and 5B (Eastern Oregon).

EUI targets enable agencies to compare energy used by an individual building to similar type buildings in the state or region. These macro-level indicators support agencies in identifying which buildings need to be evaluated to determine if the higher level of energy use is warranted by a building's characteristics and use profile, or if a comprehensive energy audit should be considered. ODOE delivers technical assistance, if requested, to help agencies identify solutions to lower energy use over time and reach target EUI levels. Each agency determines the cost-effective energy efficiency methods to pursue. ODOE supports agency decision-making by providing reliable building energy use information and energy efficiency consultation.

**About the Data.** ORS 276.915 requires state agencies to track annual energy use at the agency level. Agencies report more detailed facility-level data to identify additional opportunities for energy savings. Beginning in 2015, participating agencies have entered annual energy use for state-owned buildings that are more than 5,000 square feet into the EPA ENERGY STAR® Portfolio Manager platform. By tracking annual energy use, agencies see how their buildings are performing over time and can make informed decisions to determine if operational adjustments or capital investments are needed.

## 2. FACTORS AFFECTING RESULTS

**Background.** Not all state-owned buildings have building-level utility meters. Some facilities share a meter between two or more buildings, as in a campus or complex. Those situations complicate the ability to track energy use at the building level. In such situations, utility use needs to be pro-rated by building square footage and may not give an accurate picture of building performance. Additionally, utility data is manually reported by agencies, which increases the need for data verification. Although some agencies have facility-level personnel with energy management skills, many agencies assign the reporting duties as an add-on to clerical duties. Agency staff unfamiliar with energy use may not be able to identify errors in the data when uploading it. ODOE collaborates with all agencies to review data and identify and correct inconsistencies while maintaining the integrity of the data.

Regarding energy consumption and performance, there are many factors that can affect EUI results. Energy efficiency projects and conservation measures can improve energy performance. Facility characteristics such as occupancy, operating hours, functions, and equipment affect energy use. Other external factors, such as weather, also affect energy use. ODOE provides technical assistance, when requested, to help agencies better understand the factors that have the greatest effect on a facility's energy consumption.

ODOE provides progress reports to agencies with information about how each of their facilities compare to similar buildings. Agencies with buildings exceeding their targets may investigate further to determine if the higher energy use is justified. For those buildings where a satisfactory explanation is not found, ODOE supports the agency, if requested, to identify opportunities for energy reduction, such as continuous commissioning during which building managers routinely track building equipment operating conditions, setpoints, and energy use to maintain peak performance. ODOE provides expert technical assistance to help agencies identify valuable energy improvements.

### **3. HOW WE COMPARE**

Other states in the region also require state-owned facilities to report building energy use into EPA ENERGY STAR® Portfolio Manager. Minimum square footage that triggers reporting varies between states, as do disclosure requirements.

The west coast continues to be a leader in energy efficiency. The State of Oregon is learning from Washington for its own Building Portfolio Standard (BPS) (part of HB 3409); Washington's HB 1257<sup>7</sup> was signed into law in 2019 giving the Department of Commerce authority to develop and implement energy performance standards for non-residential buildings greater than 50,000 square feet. In addition to calculating the building's EUI, each building must designate an energy manager, adopt an energy management plan, and implement an operations and maintenance program. The legislation was expanded in 2022 to cover smaller buildings greater than 20,000 square feet. California is also developing similar legislation (as a result of SB 48) but is still in preliminary stages with a strategy report due by August 2026.

---

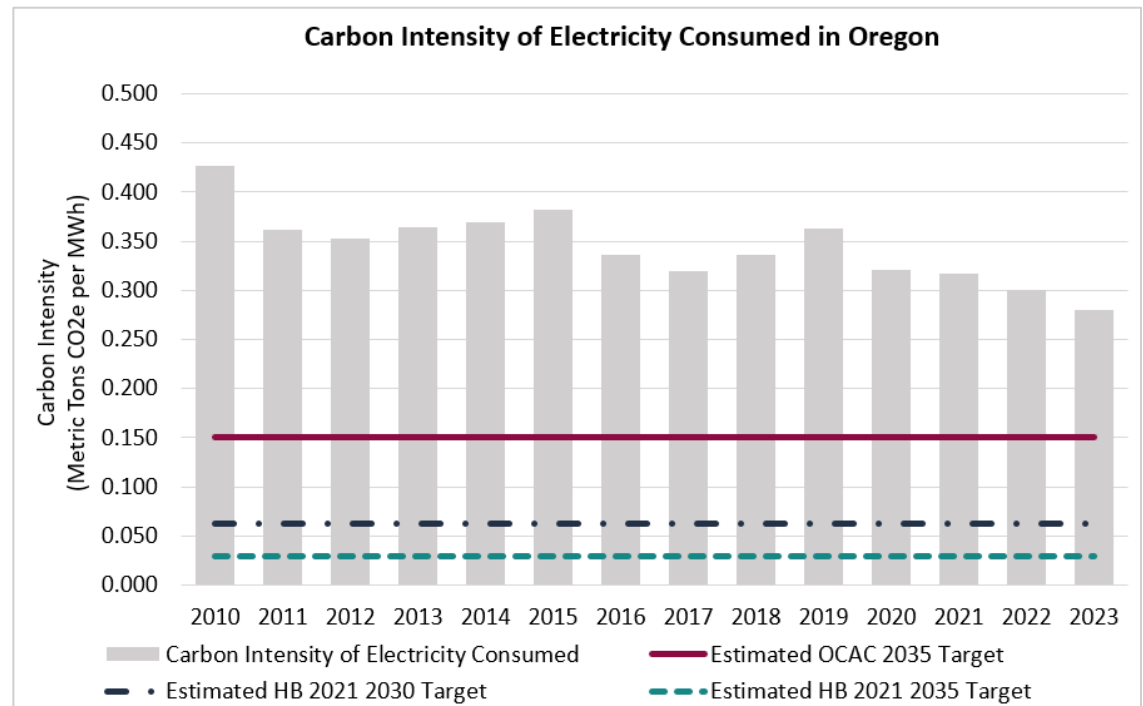
<sup>7</sup> [HB1257](#)

KPM #5a-b	GREENHOUSE GAS CONTENT OF OREGON'S ELECTRICITY: Greenhouse gas emissions per unit of: a) electricity used in Oregon and b) electricity generated in Oregon.	Measure since: 2015
Goal	Assist in meeting Oregon's greenhouse gas emission reduction goals in the state's electricity sector.	
Data sources	Oregon Department of Environmental Quality Greenhouse Gas Reporting Program, U.S. Energy Information Administration, and internal ODOE reports addressing energy mix and conservation efforts.	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

## 1. HOW WE ARE DOING

**Results.** Oregon has two electricity resource mixes: the mix of the electricity it *generates* within the state, and the resource mix of the electricity it *consumes* (a combination of electricity generated both in-state and out-of-state). The mixes are different because Oregon neither consumes all the electricity it generates, nor generates all the electricity it consumes. Competitive energy markets encourage suppliers to import and export electricity across Oregon's borders to meet consumer needs. Each mix has a carbon intensity that describes that mix's greenhouse gas emissions per unit of electricity in metric tons of carbon dioxide or carbon dioxide equivalent per megawatt hour (MTCO<sub>2</sub>/MWh or MTCO<sub>2</sub>e/MWh).

The carbon intensity of Oregon's electricity *consumption* has decreased from 0.427 MTCO<sub>2</sub>e/MWh in 2010 to 0.280 MTCO<sub>2</sub>e/MWh in 2023. This represents the sixth straight year of reduced carbon intensity and is the lowest reported value since at least 2010. In 2023, Oregon's mix of electricity consumed was 33.7 percent hydro, 20.2 percent natural gas, 11.3 percent coal, 7.5 percent wind, 3.3 percent nuclear, and 3.5 percent solar. Less than 1 percent in total came from biomass, biogas, geothermal, fuel oil, and other anthropogenic sources. The remaining 19.5 percent came from unspecified sources.<sup>8</sup> The 2023 carbon intensity is 85 percent higher than the KPM of 0.151 MTCO<sub>2</sub>e/MWh (the solid line shown in the graph) and is also considerably higher than the estimated goal under the state's new HB 2021 clean energy targets for 2030 (the higher dashed line) and for 2035 (the lower dashed line). Much of the electricity consumed in

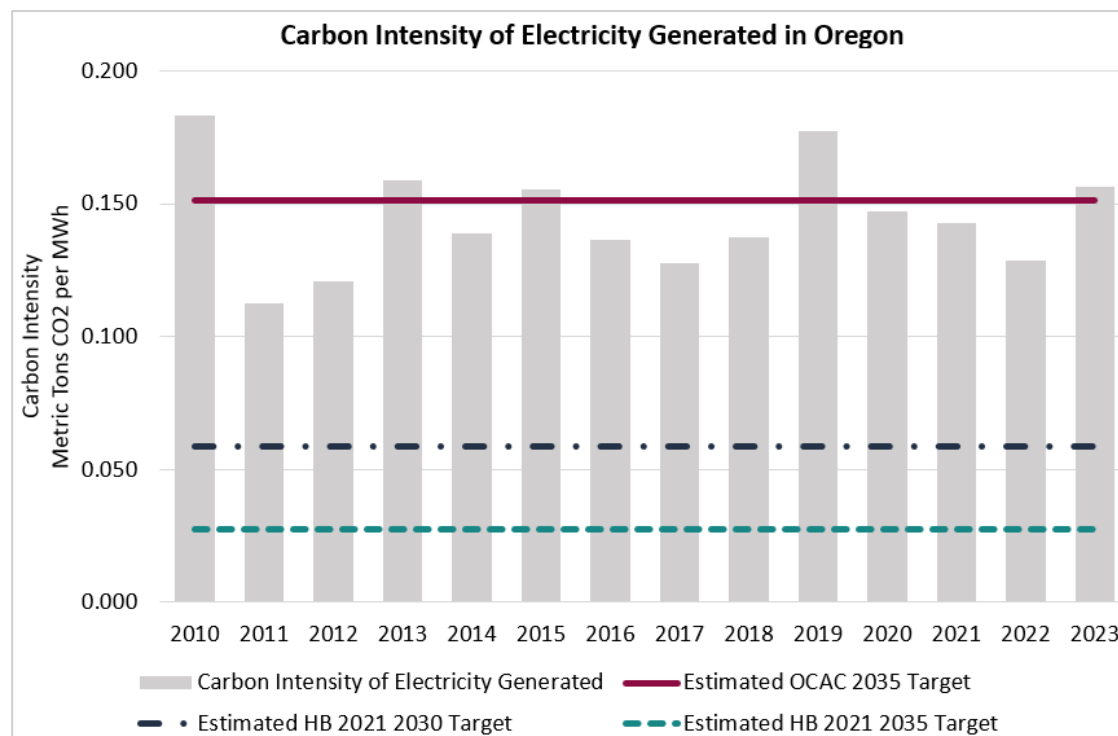


<sup>8</sup> DEQ assigns a default emissions rate of 0.428 MTCO<sub>2</sub>e/MWh to unspecified resources.

Oregon is generated by Oregon’s zero-carbon hydropower resources, but a significant portion is also generated by out-of-state fossil-fuel resources – about 39 percent in 2023, excluding unspecified power purchases on wholesale markets.<sup>9</sup> However, the share of fossil fuel generation in the mix of electricity Oregonian’s use has significantly reduced: in 2019, coal and natural gas contributed 48 percent of non-market purchase electricity in Oregon.

Electricity *generation* carbon intensity increased from 0.128 MTCO<sub>2</sub>/MWh in 2022 to 0.156 MTCO<sub>2</sub>/MWh in 2023,<sup>10</sup> which pushed the 2023 value above the KPM of 0.151 MTCO<sub>2</sub>e/MWh (the solid line), This is the first year since 2019 that the carbon intensity of Oregon’s electricity generation has been above the KPM target. The carbon intensity of Oregon’s electricity *generation* is lower than that for *consumption*. Most emissions from electricity generated in the state are from natural gas combustion because there are no coal-fired generation plants in Oregon.

Year-to-year variations in electricity generated and electricity consumed are mainly driven by natural variation in annual precipitation, which affects the amount of water available for hydropower generation. Less hydropower in the marketplace affects wholesale energy prices which may cause Oregon utilities to run natural gas generators more. This was likely the primary cause of the increase in the carbon intensity of the electricity generated in Oregon from 2022 to 2023, where lower-than-average precipitation in 2023 reduced available hydropower generation. Utilities may also rely more on wholesale market purchases when hydropower generation is lower than expected. In 2023, BPA market purchases were 272 percent higher than 2022, and 393 percent higher than 2021.<sup>11</sup> Many of the BPA hydro facilities, including the Bonneville, John Day, McNary, and The Dalles dams, are located in Oregon, and therefore changes in Hydro conditions have a significant effect on Oregon generation values. A similar low water year for the hydro system caused the jump from 2018 to 2019.



<sup>9</sup> In 2023, Oregon power providers purchased 19.5 percent of their power through electricity markets, and do not have specific data on the resources used to generate that electricity.

<sup>10</sup> The data used in this section reflect only carbon dioxide emissions and do not include emissions of other GHGs at this time.

<sup>11</sup> BPA’s 2023 annual report indicates \$977M in market purchases in 2023 compared to \$358.7M in 2022 and \$248.2M in 2021. The full report can be downloaded at [ar2023.pdf](#).

The carbon intensity of the electricity generated and consumed in Oregon is expected to continue to decline. Clean electricity legislation passed in 2021 banned new natural gas electricity generation development or repowering in Oregon above 25 MW capacity, which will limit the amount of natural gas that can be built in the state. There are also anticipated developments of clean electricity resources, both in and out of state, to meet the state clean electricity targets, which also drives lower carbon intensity. As hydro and natural gas are currently the resources used most to balance variable solar and wind resources, it is expected that use of these resources will fluctuate from year-to-year. Some natural gas use is also expected to be needed for this purpose even as the state electricity providers work toward the state's clean electricity target of 80 percent below baseline by 2030.

**About the Targets.** Oregon does not have a formal sector-specific target for the carbon intensity of electricity, but because the electricity sector contributes about 29 percent of greenhouse gas emissions, this KPM was developed to specifically track progress in that sector toward state greenhouse gas reduction goals. To do this, ODOE derived a target in 2016 using the Oregon Climate Action Commission's<sup>12</sup> 2035 greenhouse gas reduction goal based on state GHG reduction goals set in ORS 468A.205 and utility projections for future electricity loads.<sup>13</sup> This target represents the carbon intensity that Oregon's electricity resource mix would need to reach in 2035 for the sector to achieve its proportional share of the state's overall emissions reduction goal.

To calculate the target, ODOE used the OCAC's goal of 42.5 percent below 1990 levels,<sup>14</sup> and the aggregate state load forecast developed from utility load projections for the Commission's 2015 Biennial Report to the Legislature. For the electricity sector to achieve its proportional share reduction from 1990 levels, emissions in 2035 would need to be 9.5 million metric tons CO<sub>2</sub>. Dividing this by the aggregate state load forecast in 2035 yields an interim carbon intensity target of 0.151 tons of CO<sub>2</sub>/MWh.<sup>15</sup>

The target in this KPM needs to be updated with more recent load forecasts. Updating the target will not affect the trend data collected, but rather take into account changes in anticipated load growth as well as state policy that underpins how the target is calculated. Since 2015, electricity load forecasts have been increasing, largely due to expected industrial load growth, electrification of end uses like electric vehicles and heat pumps, population growth, and economic development. In 2021, the Oregon Legislature passed HB 2021, mandating that Oregon's largest investor-owned utilities and electricity service suppliers reduce GHG emissions by 80 percent below baseline levels in 2030, 90 percent in 2035, and eliminate GHG emissions from retail electricity supply by 2040. In its Roadmap to 2030, the Oregon Climate Action Commission recommended a more ambitious target of achieving 45 percent greenhouse gas reductions by 2030 rather than 2035, based on the findings of the Transformational Integrated GHG Emissions Reduction modeling developed in 2022. ODOE is currently working to update this model, including updated load forecasts, and will use these findings to update this KPM target in 2026.

---

<sup>12</sup> Formerly the Oregon Global Warming Commission.

<sup>13</sup> ORS 468A.205 established a policy goal to achieve GHG levels that are at least 75 percent below 1990 levels by 2050.

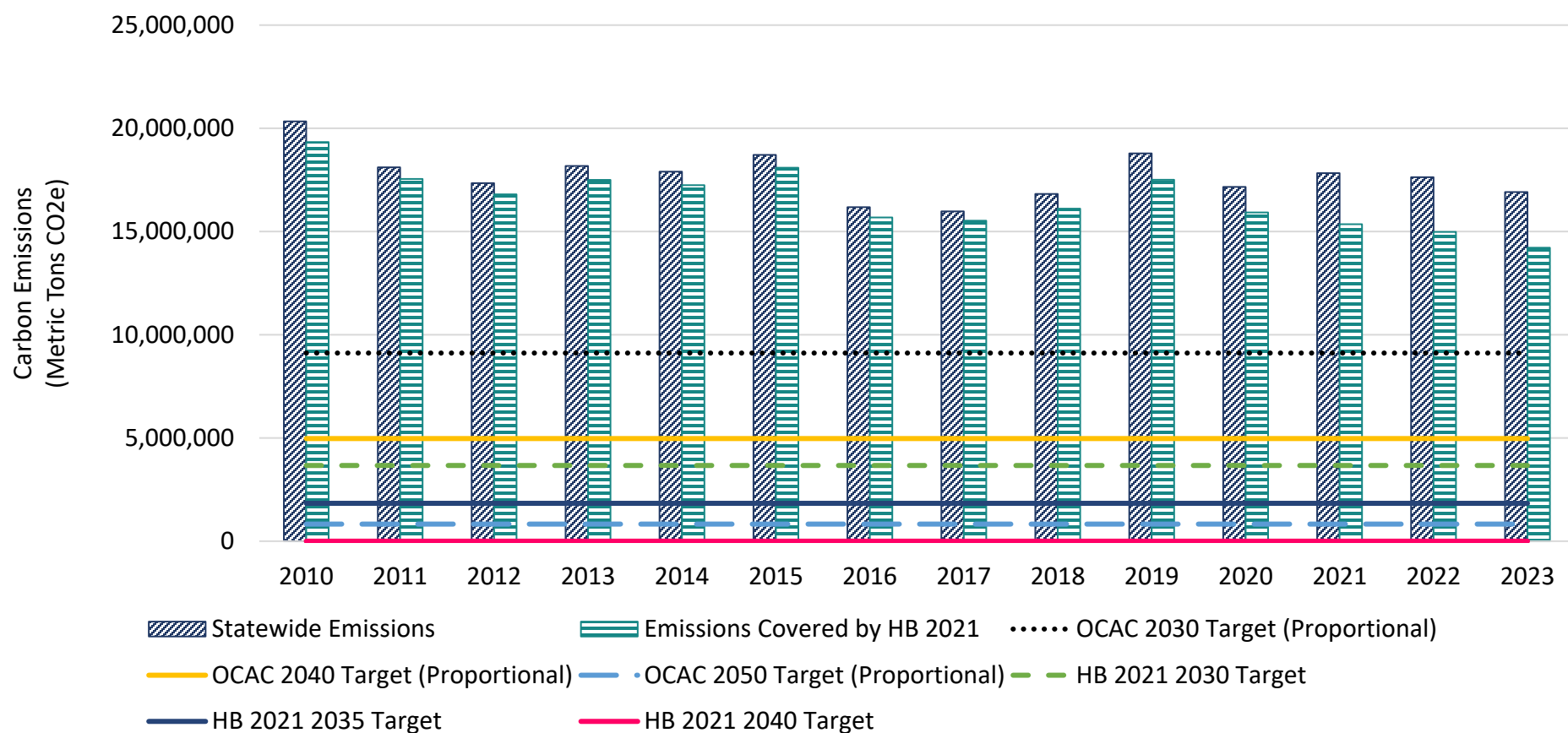
<sup>14</sup> The Oregon Climate Action Commission has since recommended accelerating the 2035 goal to achieve 45 percent GHG emissions reductions below 1990 levels by 2030, but this has not been adopted by the Oregon Legislature. ODOE will consider updating the target for future KPM reports.

<sup>15</sup> The Oregon Climate Action Commission recommended accelerating the 2035 goal to include GHG emissions reductions 45 percent below 1990 levels by 2030.

KPM 5 illustrates progress by the electricity sector to decarbonize but does not directly reflect progress on state goals. HB 2021 clean electricity targets are to reduce total emissions, which should make significant progress toward achieving this KPM target.

The following chart is not provided as a KPM but offered for informational purposes only. The chart below shows total carbon emissions reduction targets for state clean electricity in 2030, 2035, and 2040 under HB 2021 and OCAC statewide targets for the electricity sector to meet its proportional share of reduction targets in 2030, 2040, and 2050. The chart illustrates that the HB 2021 targets require more aggressive decarbonization in the electricity sector than would occur based only on a proportional basis under the statewide decarbonization goals. While further reductions are necessary before HB 2021's goals will be achieved, this chart illustrates that total emissions from HB 2021 entities are decreasing overall. Some of this is attributable to other Oregon policies besides HB 2021. The reductions in emissions from entities covered by HB 2021 are expected to reduce the carbon intensity of electricity in Oregon. However, load growth — particularly the proliferation of data centers — has created some uncertainty about the future carbon intensity of electricity consumed across the entire state. HB 2021 targets do not apply to consumer-owned utilities or Idaho Power Company, and Oregon is experiencing significant load growth in areas served by COUs for new data center developments. While many data center developers have clean electricity goals that should drive the use of clean resources, the rate at which data centers and clean electricity resources come online will affect the choices of resources to meet that load, and thereby the carbon intensity of electricity statewide.

**Informational Chart on Total Carbon Emissions of Electricity Consumed in Oregon**



**About the Data.** ODOE uses data from DEQ’s greenhouse gas inventory to determine the carbon intensity of the electricity consumed in Oregon and U.S. Energy Information Administration data for electricity generated in Oregon. The GHG Inventory is updated by DEQ annually and is based on utility generation and electricity purchases. The 2035 interim target is derived using EIA data, HB 2021 goals, and utility load projections. Prior to 2019, ODOE calculated the carbon intensity of electricity consumption in Oregon based on ODOE Electricity Resource Mix calculations. There are minor differences in these methodologies, which means the carbon intensity methodology for the electricity consumed in Oregon reported before 2019 does not match the methodology used since 2019. While results should be similar, using the current methodology to calculate carbon intensities prior to 2019 will not yield the same results. ODOE used EIA data for the chart showing how Oregon compares to other states in the region, and GHG Emissions Inventory data to estimate the HB 2021 carbon intensity targets.

## 2. FACTORS AFFECTING RESULTS

**Background.** There are several policy drivers helping to reduce the carbon intensity of electricity consumed in Oregon, including:

- The Oregon “Clean Energy for All” Act (HB 2021) passed in 2021.
  - HB 2021 requires PacifiCorp, Portland General Electric Company, and Oregon’s electricity service suppliers to reduce their GHG emissions by the following amounts in relation to a 2010-2012 baseline emissions level:
    - 80 percent below by 2030
    - 90 percent below by 2035
    - 100 percent below by 2040 (i.e., achieve zero emissions)
  - HB 2021 restricts the Oregon Energy Facility Siting Council from issuing new or amended site certificates for natural gas-fueled energy facilities that emit GHGs into the atmosphere.
- The Oregon Coal to Clean Act (SB 1547), passed in 2016, requires PacifiCorp and Portland General Electric Company to eliminate electricity generated by coal-fired power plants from Oregon utility rates by 2030.<sup>16</sup>
- The Oregon Renewable Portfolio Standard, first established in 2007, sets renewable energy requirements for the state’s electric utilities. Updated in 2016 via SB 1547, the Oregon RPS requires large utilities to have 50 percent of their electricity sales come from qualifying renewable energy sources by 2040; smaller utilities have lesser requirements.
- Executive Order 20-04 (2020) increased Oregon’s 2050 economy-wide GHG reduction target to 80 percent below 1990 levels.

Other policy drivers in Oregon include the federal and state Public Utility Regulatory Policies Act, or PURPA, which requires utilities to purchase the power offered to them from independent (non-utility) renewable generators with capacities of 80 MW or less. This has led to increased renewable and carbon-free electricity. Oregon’s community-based renewable energy projects goal requires PacifiCorp and Portland General Electric to obtain at least 10 percent of their electrical capacity from small-scale renewable energy projects or qualifying biomass facilities. Further, green power and other voluntary programs also increase the mix of renewable resources used to meet Oregon’s electric load. In effect, these laws, policies, and programs help lower the carbon emissions of the average megawatt-hour generated and consumed.

ODOE supports this work by providing policy recommendations to affordably and reliably achieve clean electricity targets, siting large scale renewable electricity projects, providing technical assistance for renewable energy projects, certifying eligible resources for the Oregon Renewable Portfolio Standard, reporting the electricity resource mix annually, publishing policy briefs on energy issues for the Biennial Energy Report, and participating in statewide clean energy policy development work and regional conversations.

In November 2025, ODOE will publish the first Oregon Energy Strategy, providing policy recommendations to achieve Oregon’s energy objectives and climate goals through insight gathered from technical resources and experts, and input from Oregonians and Oregon businesses. Energy modelling conducted to support the Oregon Energy Strategy indicates considerable load growth for electric utilities in Oregon driven primarily by new tech loads like data centers and transportation electrification. Modeling results found that Oregon utilities could reliably meet Oregon’s energy policy objectives by increasing energy efficiency, developing more clean energy resources, using demand-side management

---

<sup>16</sup> With one exception for the Colstrip plant in Montana that would enable rate-basing costs for up to five years after the plant has fully depreciated.

and resources, and developing more transmission capacity. The publication will include specific recommendations on policies supporting these actions.

Oregon’s total forecasted electricity load used to generate the interim 2035 target depends on growth in Oregon’s population, industries, and transition to more electric end uses as well as the effectiveness of energy efficiency and conservation programs implemented by utilities, the Bonneville Power Administration, the Oregon Department of Energy, Energy Trust of Oregon, and others. Climate change could also affect load growth and electricity supply. As average temperatures climb, increased summer loads for air conditioning and agricultural irrigation needs are likely to increase. Decreased snowpack and shifting periods of runoff may reduce the amount of zero-carbon hydropower resources to meet load, especially in late summer.

**How We Compare.** Largely due to the Federal Columbia River Power System and other private and publicly owned hydropower facilities in the state, Oregon generally has an electricity resource mix with a lower carbon intensity than states in other regions. Neighboring states like Idaho and Washington also benefit from in-state federal hydropower facilities and have similar or lower carbon intensities than Oregon. Other states in the West, such as California and Montana, have fewer hydro facilities and correspondingly higher unit carbon intensities. The table below indicates carbon intensity of in-state generation for 5 western states in 2023.

State	2023 In-State Generation	2023 CO2 Emissions (Metric Tons X 1000)	2023 Metric Tons CO2 per MWh
Washington	102,960,605	13,674	0.133
Oregon	61,691,869	9,636	0.156
Idaho	17,842,446	3,002	0.168
California	216,628,794	43,360	0.200
Montana	26,895,758	13,774	0.512

Washington passed SB 5116 in 2019, which established new goals for reducing carbon emissions in its electricity sector. The bill requires utilities to remove coal from the electricity resource mix consumed in state by 2025 and requires 100 percent of electricity consumed be carbon neutral by 2030. In 2021, Washington also passed SB 5126, which established a carbon emissions cap-and-trade program for Washington’s largest emitting sources and industries, including electric generating facilities. California has a 100 percent clean electricity goal by 2045 and achieved 61 percent clean electricity in 2022.<sup>17</sup> Montana has an economy wide GHG neutrality goal by 2050, and as part of this includes a graduated energy efficiency standard for the state. Idaho has no clean energy targets, but Idaho Power – which serves a portion of customers in Oregon – has pledged to have 100 percent clean electricity by 2045.

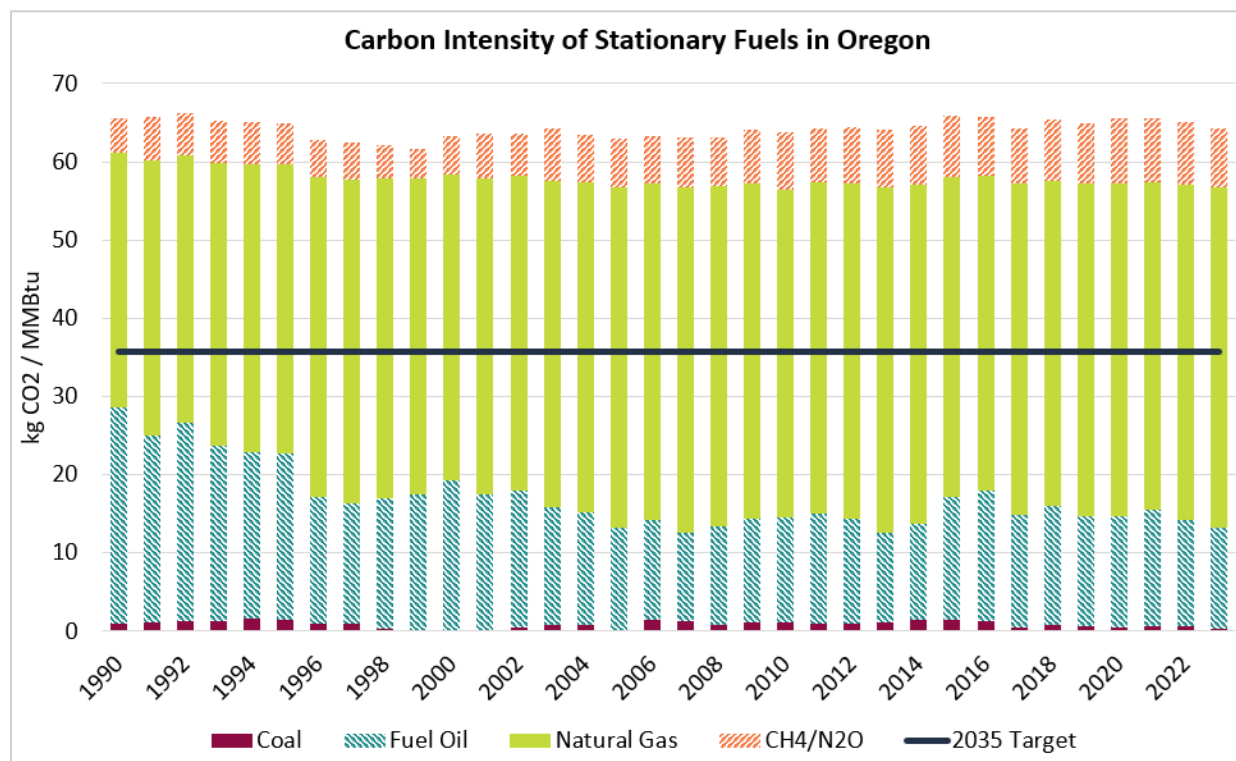
<sup>17</sup> This statistic is reported by the California Energy Commission at <https://www.energy.ca.gov/programs-and-topics/topics/renewable-energy/clean-energy-serving-california>.  
Oregon Department of Energy  
2025 Annual Performance Report

KPM #5c	GREENHOUSE GAS CONTENT OF OREGON'S STATIONARY FUEL: Greenhouse gas emissions per unit of the mix of other stationary fuels used in Oregon.	Measure since: 2015
Goal	Assist in meeting Oregon's greenhouse gas emission reduction goals in the state's stationary fuels sector.	
Data source	Oregon Department of Environmental Quality's Greenhouse Gas Sector-Based Inventory Data 1990-2023, Energy Information Administration's State Energy Data System 1960-2023, Executive Order 20-04, and internal ODOE reports addressing energy modeling, low-carbon fuels, and conservation efforts.	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

## 1. HOW WE ARE DOING

**Results.** The greenhouse gas content of Oregon's stationary fuels has decreased less than 2 percent since 1990. The GHG intensity of the stationary fuel mix is expressed as kilograms of carbon dioxide equivalent per million British thermal units (kg/MMBtu) in the chart to the right to illustrate fuel changes and emission impacts over time.<sup>18</sup> In 2023, the most recently available data, Oregon's carbon intensity of stationary fuel combustion was 64.2 kg/MMBtu, a little less than the 1990 carbon intensity of 65.5 kg/MMBtu.

Oregon has an interim greenhouse gas content reduction target of 35.7kg/MMBtu by 2035, which is represented by the horizontal line in the chart. Without significant policy and market intervention, the target will not be achieved. To meet it, Oregon's stationary fuels carbon intensity mix will need to decrease by 28.56 kg/MMBtu — a 44.5 percent reduction — by 2035.



The stationary fuels sector includes most fuels used in Oregon other than those used for electricity generation and transportation. Stationary fuels are commonly used to cook, heat buildings, and support commercial and industrial manufacturing processes, and include natural gas,

<sup>18</sup> Carbon dioxide equivalent is a measure of all greenhouse gas emissions adjusted to the equivalent amount of carbon dioxide based on the global warming potential of each greenhouse gas.

coal, and other petroleum fuels used in these sectors. CH<sub>4</sub>/N<sub>2</sub>O represents the non-carbon dioxide emissions of methane and nitrous oxide from combustion of these fuels. Bars in the visualization above reflect these sources from bottom to top as listed in the key from left to right. This data set captures fuel combustion emissions from these specific fuels but does not include the emissions from the combustion of woody biomass, municipal or agricultural waste, wildfires, or some manufacturing processes (for example iron and steel production or semiconductor manufacturing) that produce emissions beyond fuel combustion.

**About the Target.** Carbon intensity is a measure of the amount of greenhouse gas emissions per unit of energy. For the carbon intensity to decline, the state would need to replace existing stationary fuels with a low-carbon fuel — for example, replacing fossil natural gas with renewable natural gas. Renewable natural gas is made by capturing methane biogas emitted from decomposing food waste, agricultural manure, landfills, and wastewater treatment plants. Biogas is processed to remove non-methane elements and can then be added to a pipeline or used onsite as natural gas.<sup>19</sup> Oregon produces some renewable natural gas that is used in transportation or onsite to generate electricity. To replace a significant portion of the natural gas consumed in Oregon would require a large investment in expanding in-state production and importing renewable natural gas from other states.

Energy efficiency or electrification measures can reduce the volume of Oregon’s stationary fuel consumption GHG emissions, but electricity is *not* a stationary fuel so this would not decrease the carbon intensity of the stationary fuels consumed. This KPM is an examination of the carbon intensity of the stationary fuels that are used in Oregon with less focus on the volume of the fuel consumed. However, electrification of end use heating, cooling, and appliances will result in significant total greenhouse gas savings and is needed for Oregon to reach its emission reduction targets.

ODOE derived the interim target for this report based on GHG reduction goals in ORS 468A.205 and the Oregon Department of Environmental Quality’s sector-based GHG emissions inventory.<sup>20</sup> ODOE calculated the total GHG emissions and Btu of energy from all stationary fuel use in 1990 and created a carbon intensity baseline. The target is a 45 percent reduction in carbon intensity from the 1990<sup>21</sup> baseline. This target does not derive from a statutory requirement and, depending on the reductions achieved in other sectors, this sector may need to achieve more or less to meet the state’s overall goals in the future. This target represents the carbon intensity that Oregon’s fuel mix would need to reach by 2035 for the sector to achieve its proportional share of the state’s overall emissions reduction goal.

**About the Data.** Formal tracking of GHG emissions from stationary fuel energy use is based on data provided by DEQ’s Greenhouse Gas Reporting Program and the U.S. Department of Energy’s Energy Information Administration. For stationary fuel use, these data sources use a combination of reported consumption and emissions from parts of the industrial sector and fuel suppliers (fossil fuels, but not biomass) as well

---

<sup>19</sup> U.S. Environmental Protection Agency. (2018, December 6). Renewable Natural Gas [Overviews and Factsheets]. <https://www.epa.gov/lmop/renewable-natural-gas>

<sup>20</sup> Oregon Department of Environmental Quality’s Greenhouse Gas Sector-Based Inventory Data, Accessed August 2025, [Department of Environmental Quality : Oregon Greenhouse Gas Sector-Based Inventory Data : Action on Climate Change : State of Oregon](#)

<sup>21</sup> This was based on a calculation of the 1990 value available from DEQ in 2016. This value has been updated since then, and would now be calculated as 36 kg CO<sub>2</sub>/mmBtu. For consistency, ODOE has not updated this target. Future iterations of this report may update this value and/or develop a new value based on Oregon Department of Environmental Quality’s Climate Protection Program carbon cap which will rely on a different specified baseline.

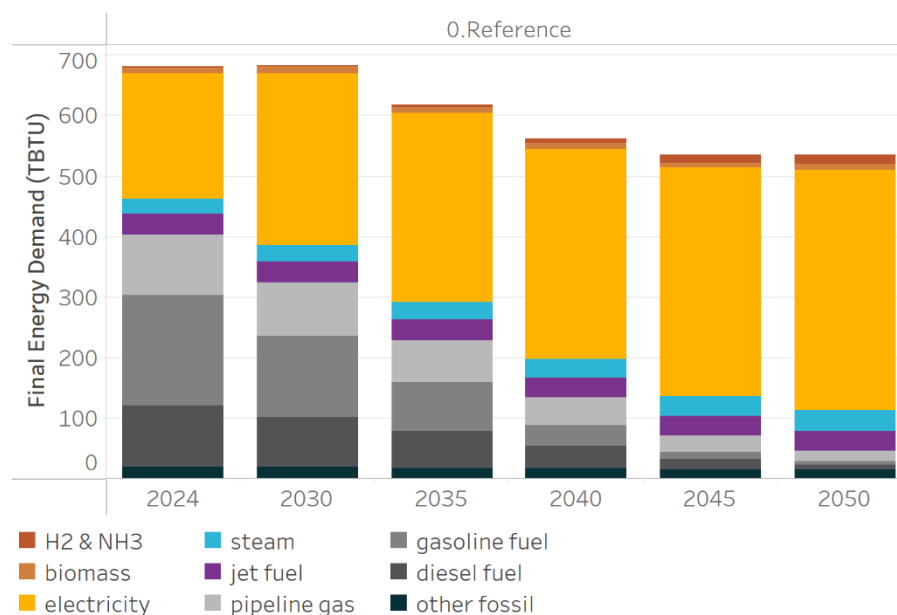
as modeling of emissions from residential/commercial buildings and small manufacturing. DEQ continually improves its data collection and analysis, resulting in estimated emissions numbers in the inventory changing slightly year to year. The modest data changes affect all reported years from 1990 to 2023. EIA’s State Energy Data System is also used to determine the CO2e/MMBtu of stationary fuels consumed and emissions estimates of neighboring states.

## 2. FACTORS AFFECTING RESULTS

**Background.** Significantly reducing the carbon intensity of stationary fuel used in Oregon would require a shift from fossil fuels to low- or no-carbon renewable fuels, such as renewable natural gas, clean hydrogen, ammonia, and potentially other biomass-derived fuels — but these options are not yet available in adequate quantities to support large gains. Renewable natural gas and other biofuels are currently available in limited supply and are significantly more expensive, while fuels like renewable hydrogen and ammonia are not yet widely commercially available.<sup>22</sup> Availability, price, and technological barriers may limit the stationary fuel sector’s ability to quickly transition to low-or no-carbon fuels and achieve the targeted level of carbon intensity reduction by 2035.

Stationary fossil fuel consumption will need to decline for the state to achieve its GHG goals at the least cost. For the upcoming Oregon Energy Strategy, ODOE and its technical expert contractors modeled different energy pathways to achieve the state’s emissions reductions in line with state energy objectives. The modeling exercise provided insight into how different energy choices would affect the economywide cost to meet state goals. All pathways modeled an 80 percent reduction in GHG emissions compared to 1990 levels by 2050 as directed in EO 20-04.<sup>23</sup> While modeling results do not create a specific plan to achieve the goals, they do provide valuable information about how different energy choices affect overall costs. All modeled scenarios found that overall demand for fuels in Oregon declines over time, largely driven by energy efficiency and electrification of end uses. The visualization<sup>24</sup> at right from the reference scenario – the least cost of all scenarios modeled – shows the total annual energy demand by fuel type in Oregon every five years. Total annual energy demand decreases by 22 percent in 2050. Fossil fuels remain foundational to Oregon’s energy system, but many existing fuel applications are electrified so the volume of stationary fuel consumption declines.

Energy Demand by Fuel in Oregon



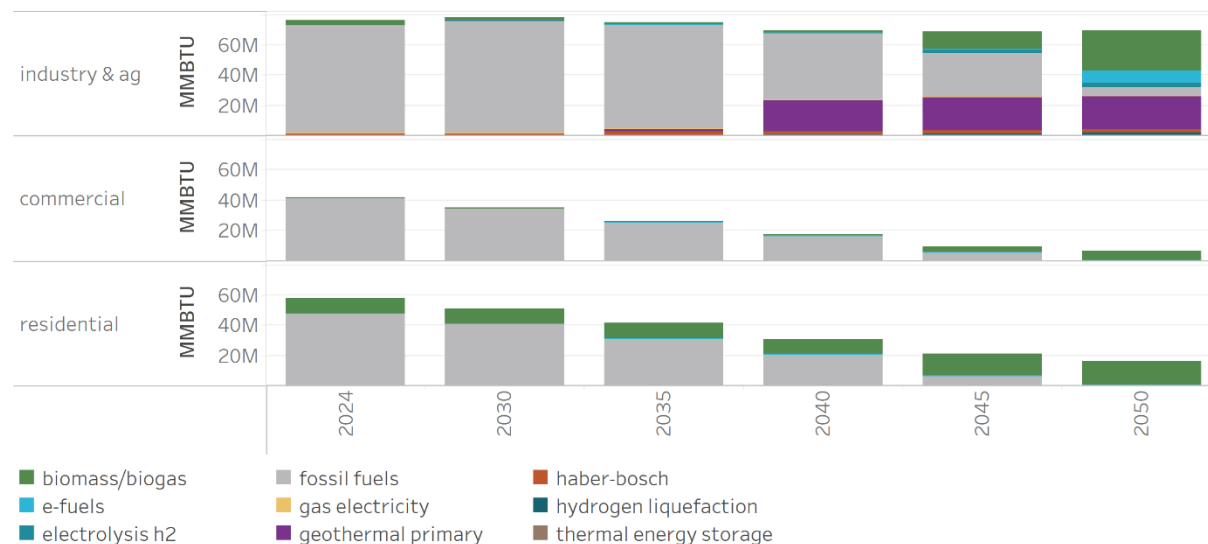
<sup>22</sup> See Oregon Department of Energy’s [Renewable Hydrogen Study](#).

<sup>23</sup> Oregon Department of Energy, Oregon Energy Strategy, Accessed August 2025, [State of Oregon: DATA & REPORTS - Oregon Energy Strategy](#)

<sup>24</sup> Oregon Department of Energy, Oregon Energy Strategy Technical Report, July 2025, [Technical Report for the Oregon Energy Strategy July 2025](#)

Reducing stationary fuel use in the residential and commercial sectors is the most cost-effective option to reduce fuel consumption. As Oregon’s demand for fuel and potential solutions changes over time, the timing, degree of end use electrification, and specific low-carbon fuel options are expected to differ for each sector. The figure below<sup>25</sup> represents the least cost pathway for stationary fuels (labeled as Direct Use Fuels in the chart) as modeled for the Oregon Energy Strategy. The commercial and residential sectors show dramatic decreases in their use of these fuels as most applications are electrified. The industrial sector shows only a slight decline in demand from energy efficiency and electrification because these are difficult and/or very expensive to do, such as high-heat applications. For this reason, this sector will likely be more dependent on the adoption of low-carbon fuels to meet demand, most of which are not commercially available today.

Direct Use Fuels in Industry & Ag, Commercial, and Residential Sectors



Due to the current limited availability of low-carbon fuels and how nascent many of these resources are, it is challenging to determine which low-carbon fuels will be the most widely adopted in the future. In 2018, ODOE conducted an inventory of current and potential renewable natural gas facilities and estimated that up to 4.5 percent of Oregon’s total annual natural gas use could be replaced with renewable natural gas produced in the state, if all existing resources could be exploited. Currently, six RNG projects operate in Oregon, with the collected biogas being injected into a natural gas pipeline, combusted to create electricity, or used as a transportation fuel.<sup>26 27 28</sup> Oregon is also a member of the Pacific Northwest Hydrogen Hub, which in 2024 was awarded up to \$1 billion to develop a clean hydrogen economy in the Pacific Northwest.<sup>29</sup> Changes to the federal tax code and energy provisions in H.R. 1 (also known as the Big Beautiful Bill) may limit the feasibility of developing

<sup>25</sup> Oregon Department of Energy, Oregon Energy Strategy Technical Report, July 2025, [Technical Report for the Oregon Energy Strategy July 2025](#)

<sup>26</sup> US Environmental Protection Agency, Livestock Anaerobic Digester Database, Accessed September 2024 from: <https://www.epa.gov/agstar/livestock-anaerobic-digester-database>

<sup>27</sup> Argonne National Laboratory, Renewable Natural Gas Database, Accessed September 2024 from: <https://www.anl.gov/esia/reference/renewable-natural-gas-database>

<sup>28</sup> See ODOE’s [2018-RNG-Inventory-Report.pdf \(oregon.gov\)](#)

<sup>29</sup> See [The Pacific Northwest Hydrogen Association](#)

renewable hydrogen facilities, but this project has demonstrated that there is regional interest in developing clean hydrogen as a resource. Low-carbon fuels may be years away from the production and distribution levels needed to affect significant change in Oregon’s stationary fuel carbon intensity, but these fuels are expected to be needed to meet decarbonization targets, especially in the last decade before the 2050 goal.

New policies and programs will reduce the carbon intensity of stationary fuels, most notably DEQ’s Climate Protection Program, which sets a declining limit, or cap, on greenhouse gas emissions from fossil fuels used in Oregon, including stationary fuels. Launched in 2025, this program will drive down stationary fuel emissions by encouraging energy suppliers and industry to invest in decarbonization solutions such as energy efficiency, conservation, electrification, and low-carbon fuels. ODOE will support this market change by collaborating with DEQ, Business Oregon, and other public partners to research and promote potential cost-effective solutions that help Oregon businesses remain competitive.

State investment in research, technological advancements, and economic development are necessary to develop options that will meaningfully address carbon intensity for stationary fuels. Research is needed to better understand potential low-carbon fuel development and their best applications. Oregon’s natural gas utilities are interested in supplementing or replacing existing natural gas use with renewable natural gas or renewable hydrogen. Renewable natural gas produced from waste feedstocks has a much lower carbon intensity than fossil natural gas and hydrogen produced using clean electricity would not only have zero emissions associated with production but is also a zero-emission fuel when combusted. Realizing the decarbonization potential of these low-carbon fuels will require new infrastructure as well as upgrades or replacements to produce, store, and distribute the fuel. This transition may also require upgrades to some consumer appliances.

While the Climate Protection Program will drive demand for low-carbon stationary fuel, it is highly uncertain what the specific future mix of stationary fuels will look like. Historically, Oregon has imported most liquid and gaseous fuels it consumes due to limited fossil fuel resources. The transition to low-carbon fuels presents an economic opportunity for Oregon to use woody biomass, municipal and agricultural waste, and other feedstock resources to develop in-state fuel production. The Oregon Energy Strategy will provide some initial insight into the costs, constraints, co-benefits, and challenges of different energy technology and policy pathways that could achieve these goals. The report, due on Nov. 1, 2025, will provide policy recommendations and near-term state actions to meet climate goals, including for the stationary fuels sector.

**How We Compare.** ODOE doesn’t have information on the carbon intensity of the stationary fuel sector in other states and instead must compare total emissions as estimated by the U.S. Department of Energy’s Energy Information Administration.<sup>30</sup> Oregon’s consumption of stationary fuels in 2023 is estimated by EIA to have emitted 10.1 million metric tons of CO<sub>2</sub>, significantly less than Washington’s 21.5 and California’s 108.3 million metric tons, as well as many eastern and mid-western states. EIA ranked Oregon 40<sup>th</sup> in total CO<sub>2</sub> emissions and 45<sup>th</sup> in per capita CO<sub>2</sub> emissions by states in 2023. Stationary fuel use in Oregon was about 26 percent of total in-state GHG emissions, which is also lower than many states.<sup>31</sup> Annual stationary fuel consumption within states is affected by the availability of the fuels, climate, building regulations, types of industry, economic development, and population growth.

---

<sup>30</sup> EIA GHG emissions estimates are consistently lower than Oregon Department of Environmental Quality’s Greenhouse Gas Sector-Based Inventory Data, but we only have that data for Oregon. We use EIA state emissions data to demonstrate the relative difference between states.

<sup>31</sup> US Energy Information Administration, State Energy Data System, Data for: 2023., Release Date: June 27, 2025 Retrieved from:

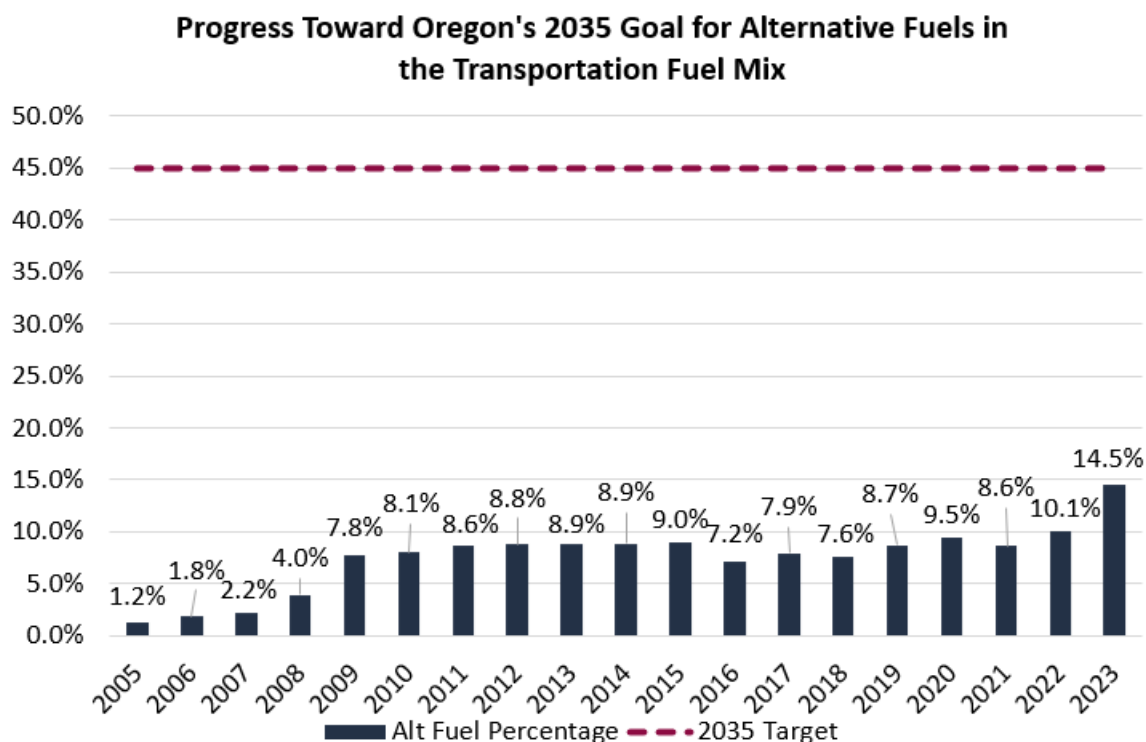
[U.S. Energy Information Administration - EIA - Independent Statistics and Analysis](#)

KPM #6	Transportation Fuels Used in Oregon – Percentage of petroleum vs. non-petroleum fuels used for on-road transportation in Oregon	Measure since: 2017
Goal	Diversify the transportation sector fuel used in Oregon so at least 45% of fuels come from alternative resources rather than fossil fuels by 2035.	
Data source	Energy Information Administration State Energy Data Systems, U.S. Department of Energy, U.S. Department of Transportation Federal Highway Administration, Oregon Department of Transportation motor vehicle fuel taxable distribution reports, Oregon Department of Environmental Quality Clean Fuels Program, Clean Cities annual surveys, Oregon Department of Energy survey of large fleets.	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

## 1. HOW WE ARE DOING

**Results.** The percentage of alternative fuels consumed in Oregon increased by 4.4 percent, the highest jump since data tracking began in 2005. Oregon used 35.3 percent more gallons of alternative fuels in 2023 than in 2022. The increase is primarily driven by increased use of renewable diesel and, to a lesser extent, electricity. This increase puts the state on a better track to achieve at least 45 percent alternative fuel use by 2035. State policies implemented by the Oregon Department of Environmental Quality — including Clean Fuels Program targets, the Advanced Clean Cars II and Advanced Clean Trucks rules, and the Climate Protection Program — are expected to make strong headway on this target in coming years.

In 2024, gasoline use rose to its highest use since before the COVID-19 pandemic but remained 15 percent below 2019 levels. The reduction is due to more zero-emission vehicles in lieu of gasoline and may also be influenced by a post-pandemic increase in remote work. In 2023, diesel consumption was down 22 percent from 2022, reversing its pandemic-era upward trend and approaching pre-pandemic levels.



**Strategy.** Adoption of lower carbon intensity transportation fuels is a key strategy to meet Oregon’s greenhouse gas emissions reduction goals. ORS 468A.205 established a GHG emissions reduction goal of 75 percent below 1990 emission levels by 2050, and Executive Order 20-04 increased this to 80 percent and added a 2035 goal of 45 percent below 1990 levels. The Oregon Climate Action Commission<sup>32</sup> indicated that all emitting sectors in the state will need to lower emissions to achieve this reduction. The transportation sector produces the largest share, which means reductions must occur in this sector for the state to be successful. The Commission’s *Oregon Climate Action Roadmap to 2030* found that if Oregon fully implements its current policies and programs as intended and expected, the state can be on track to meet the 2035 GHG reduction goal.

There are many state programs supporting alternative fuel adoption, including:

- The Oregon Renewable Fuels Standard, which requires most gasoline to be blended with 10 percent ethanol per gallon and standard diesel blended with 5 percent biodiesel per gallon.
- The DEQ Clean Fuels Program reduces the carbon intensity of Oregon's transportation fuels through a market-driven credit and debit system that incentivizes lower carbon alternative fuel use. The current rule requires a 10 percent reduction in average carbon intensity from 2015 levels by 2025, followed by a 20 percent reduction by 2030 and 37 percent by 2035.
- The Advanced Clean Cars I rule requires an increasing minimum percentage of ZEVs to be delivered to Oregon for sale in each year of the program. In 2023, 18 percent of light-duty vehicles delivered into Oregon by each manufacturer were required to be ZEVs.<sup>33</sup>
- The Advanced Clean Cars II rule builds on ACC I, also requiring an increasing percentage of ZEVs to be delivered to Oregon for sale beginning with 35 percent for the 2026 vehicle model year and culminating with a 100 percent ZEV sales requirement in 2035.
- The Advanced Clean Trucks rule similarly requires manufacturers to deliver increasing numbers of zero emission medium- and heavy-duty trucks starting with the 2025 model year. In 2025, DEQ indicated they would not enforce requirements for the 2025 and 2026 model years for this program.
- The transition of Oregon Department of Administrative Services bulk fuel purchases from B5 and B20 diesel to renewable diesel when and where available.<sup>34</sup>
- SB 1044 (2019) established goals for zero-emission vehicle adoption in Oregon through 2035.
- SB 2027 (2021) increased state ZEV procurement goals to 100 percent by January 1, 2025.
- The Oregon Department of Environmental Quality’s Electric Vehicle Rebate Programs.
- The Oregon Department of Transportation’s *Transportation Electrification Infrastructure Needs Analysis* produced in 2021, which identified electric vehicle charging infrastructure needs necessary to meet the state ZEV adoption targets.
- The *Every Mile Counts* initiative led by ODOT, with collaborating agencies ODOE, DEQ, and the Department of Conservation and Land Development. The initiative seeks to identify and implement interagency work to help reduce GHG emissions in the transportation sector. Among other activities, the four agencies collaborate to increase ZEV adoption in the light-duty as well as medium- and heavy-

---

<sup>32</sup> Formerly the Oregon Global Warming Commission.

<sup>33</sup> There are alternative compliance methods for this program, including the use of transfer credits. These credits are earned when a manufacturer delivers more qualifying ZEVs than are required during a program year. Credits cannot exceed 15 percent of a manufacturer’s annual compliance obligation and expire in 2030.

<sup>34</sup> B5 and B20 refer to blends of biodiesel with regular diesel. B5 is blend of 5 percent biodiesel and B20 is a 20 percent blend.

duty sectors, identify optimal vehicle use cases for different forms of alternative fuel vehicles in the medium- and heavy-duty sector, and identify opportunities to reduce emissions in the freight sector, including using lower carbon alternative fuels.

- Participation in multiple international and interstate agreements and pledges to support increased zero-emission vehicle adoption.

**About the Targets.** The Oregon Department of Energy has set a Key Performance Measure target of at least 45 percent of on-road transportation fuels coming from alternative resources by 2035. The Oregon Energy Strategy, which will be published by November 1, 2025 will include modeling of transportation fuel supply and demand that will provide more in-depth analysis for future KPM reporting on progress toward this target. The results of this modeling may help provide an alternative fuels target that is better aligned with specific statewide targets and goals.

**About the Data.** This KPM calculates the percentage of alternative fuels in the on-highway transportation sector on a gasoline gallon equivalent basis. This makes it possible to compare one fuel to another in quantity. The data provide a snapshot of total alternative fuels measured in gasoline gallon equivalents consumed in the on-road transportation sector and are from DEQ's Clean Fuels Program. Prior to the implementation of the Oregon Clean Fuels program, ODOE assessed liquid biofuels using various data resources. Since 2016, ODOE uses DEQ's Clean Fuels program data to assess fuel demand. Because the sources of data have differences in how they are collected, the resulting trend line had an artificial decline between 2015 and 2016.

Electric motors are much more efficient than internal combustion engine vehicles; this efficiency is not accounted for in this KPM. Overall, on-road electric vehicles are about 3.4 times more efficient than comparable internal combustion engine vehicles. This means it requires less overall energy to drive the same distance in an electric vehicle than a non-electric vehicle.

## 2. FACTORS AFFECTING RESULTS

**Background.** In 2005, petroleum products like gasoline and diesel accounted for 98.8 percent of the fuel consumed in the on-road transportation fuel mix, while just 1.2 percent came from alternative fuels. New state and federal programs that have come online since then have contributed to increasing amounts of alternative fuels. Federal and state Renewable Fuels Standards began requiring blending of lower carbon ethanol and biodiesel in gasoline and diesel respectively beginning in 2007. The stand-up of Oregon Clean Fuels Program in 2016 led to increasing use of renewable diesel instead of fossil diesel and electricity instead of gasoline. Other programs listed above support wider availability and use of electric vehicles, and electricity as an alternative fuel is expected to grow significantly in the next decade.

The effects of the COVID-19 pandemic included sector-wide disruptions in transportation fuel availability and demand, including a dip in alternative fuel consumption. Alternative fuel consumption rose by 2.3 percent from 2016 to 2020, but fell by nearly a percent in 2021. This has been attributed to limited availability of renewable diesel during the pandemic, and to a lesser extent stagnant electric vehicle sales. At the same time, fuel use patterns changed significantly, with gasoline demand declining and diesel use increasing. Because renewable diesel is the primary non-blend alternative fuel used in Oregon, the effects of higher overall demand for diesel coupled with pandemic supply chain constraints that limited the availability of renewable diesel, led to a reduction in alternative fuel use. By 2023, diesel consumption dropped but remained somewhat higher than pre-pandemic levels and renewable diesel availability increased. Overall fuel use in Oregon's transportation

sector seems to be stabilizing, accounting for 303.6 trillion Btu of energy use in 2023 (2.3 million gasoline gallon equivalents). At the height of the pandemic, transportation fuel consumption dropped from 314.4 trillion Btu (2.70 million GGE) in 2019 to 281.3 trillion Btu (2.42 million GGE) in 2020.

Renewable diesel is currently the biggest driver increasing alternative fuel use in the transportation sector. Consumption of renewable diesel grew from 10.5 million gallons in 2021 to 134.9 million gallons in 2023 and electricity grew from 157,327 MWh to 303,944 MWh. Renewable diesel is growing in popularity with fleet managers because it can be used in existing fueling infrastructure and vehicles, works better in cold weather, and reduces maintenance costs. The largest barrier to adoption is availability, which is limited outside major metropolitan areas and travel corridors. About 7,000 barrels of renewable diesel fuel per day, or about 2.6 million barrels is created at BPs' Cherry Point refinery in Washington state, which is a key supplier of the fuel in Oregon. NEXT Renewable Fuels is currently working through permitting for a production facility at Port Westward, which could make this fuel more widely available in Oregon.

Electricity as an alternative fuel is growing in use across the state. As of May 2025, about 3.2 percent of registered passenger vehicles are electric vehicles. The biggest barriers to increasing use of electricity for fuel are upfront costs to purchase an EV, unfamiliarity with the technology, and availability and reliability of charging infrastructure. The Oregon Department of Environmental Quality's EV rebate programs reduce up-front costs for purchasing an EV, with additional support for low-income Oregonians, and DEQ is using a U.S. Environmental Protection Agency Climate Pollution Reduction Grant (Oregon's Climate Equity and Resilience Through Action grant) to provide additional rebates under this program beginning in 2025. At the same time, Congressional actions revoking existing federal tax credits for new and used EVs beginning in October 2025 as well as California's authority to create the Advanced Clean Cars II and Advanced Clean Trucks rules may have a dampening effect on EV adoption. The Oregon Departments of Transportation and Environmental Quality lead multiple programs that fund charging infrastructure on major travel corridors, in rural communities, multifamily dwellings, underserved communities, and fleets, as well as supporting the repairs and station upgrades for existing chargers. Funding has become uncertain for some of these due to federal actions seeking to revoke funds, but Oregon is actively working to secure contractually obligated money.

**How We Compare.** Although there are no known published data sets to conduct a comparison of this KPM, Oregon does have a higher proportion of alternative fueling infrastructure compared with the state population and gross domestic product. In 2025, Oregon ranked 19th in the nation in total number of alternative fueling stations reported in the U.S. Department of Energy's Alternative Fuel Data Center locator — despite ranking 27<sup>th</sup> in population and 25<sup>th</sup> in total GDP in the country.

KPM #7	HOME ENERGY SCORING: Percent of Oregon population receiving a state-authorized home energy score.	Measure since: 2020
Goal	Increase instances of Oregon-approved home energy scores being conducted within the state.	
Data source	USDOE Home Energy Score database.	
Owner	Heather Tyre, KPM Coordinator, Phone: 503-480-9951	

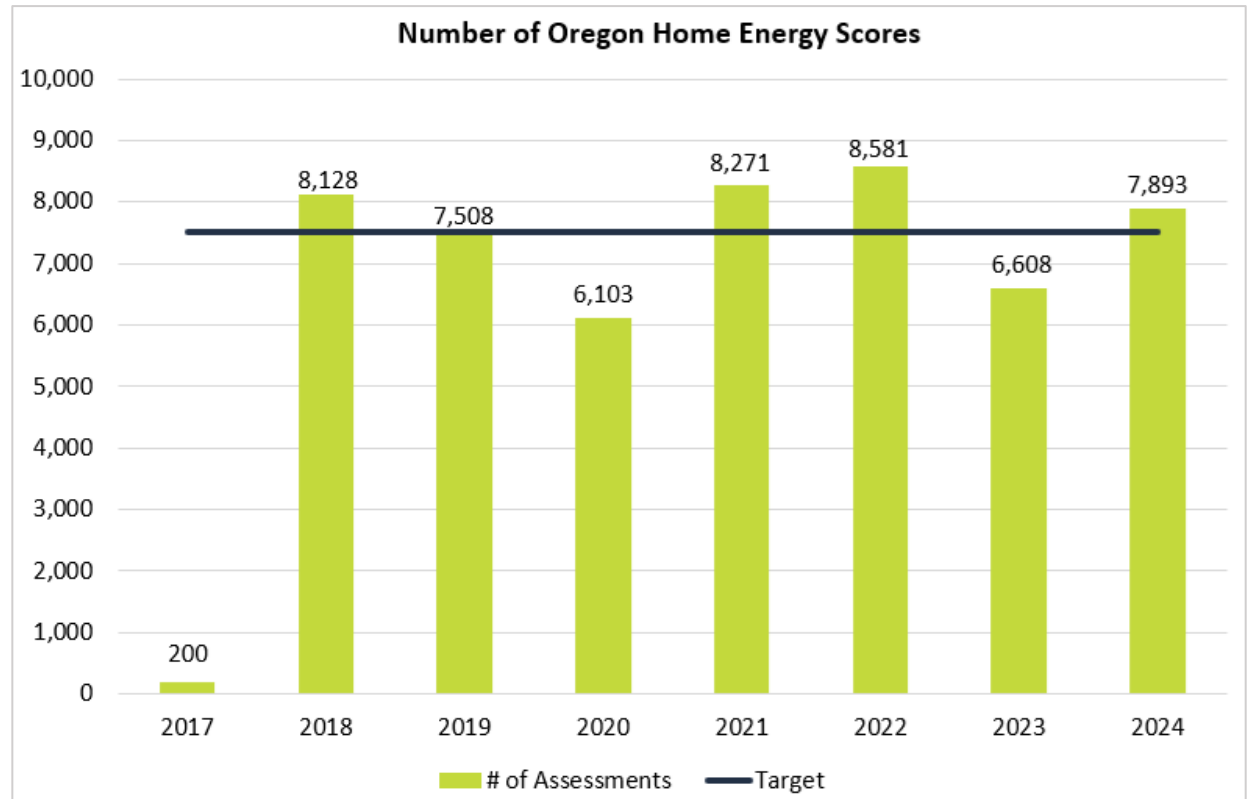
## 1. HOW WE ARE DOING

**Results.** Data is reported by calendar year based on data from the U.S. Department of Energy Home Energy Score System. In 2024, there were 7,893 total home energy scores performed in Oregon.

Oregon Home Energy Scoring continues to pace with Oregon’s home sales activity due to city ordinances that require a score when properties are listed for sale. The number of home sales in Oregon dropped slightly by 2.2 percent from 2023 to 2024; however, cities in Oregon with mandatory HES policies have tightened their ordinance compliance efforts, resulting in additional scores even when sales activity drops.

**About the Target.** The agreed-upon target with the Legislative Fiscal Office is 7,500 scores per year. This may be adjusted over time as the program continues to develop. Factors such as home sales activity and additional cities with mandatory scoring policies will continue to influence the target.

**About the Data.** Data is reported by calendar year; this report includes data through 2024. Data is produced through the U.S. Department of Energy Home Energy Score System.



## 2. FACTORS AFFECTING RESULTS

**Background.** The State of Oregon, through the Oregon Department of Energy, has built a statewide framework for residential home energy scoring activity. This framework provides regulations that prescribe necessary credentials for a professional assessor, outlines what must be included in a scoring report, and provides the calculating engine to determine a score. This framework has been essential for Oregon cities that adopt home energy scoring policies – it builds assurances that scoring activity is well supported, accurate, and consistent across the state. To ensure successful interest and uptake, the framework was also developed with the underlying premise that scores and scorecards would be produced at low cost (\$150 to \$250), would include useful consumer information, and would be easy to understand. Comparable programs across the country have a higher cost of \$500 to \$800 per score and include more detailed information than consumers may need.

Improvements to Oregon’s home energy scoring program continue. The current program is limited to single family homes that are owner-occupied. Future developments will enable work to reach rental properties and include scoring structures such as multi-family units and manufactured homes. ODOE also received federal funding through the federal Energy Efficiency and Conservation Block Grant, which awards funds to eligible local governments for energy projects or programs, including potential free scoring for low-income Oregonians.

**Outreach and Awareness.** To drive the expansion and activity of home energy scoring, ODOE has focused attention on assisting city decision-makers and sharing information about the benefits of energy scoring to improve their energy and climate planning effectiveness. By engaging with cities and providing technical and support resources, ODOE works to overcome significant barriers to widespread adoption of home energy scoring policies. Barriers include:

- City decision-makers may be unaware of energy scoring as an effective option to reduce energy use and consumer utility costs as part of their energy and climate action planning.
- Limited city staff and resources available to develop an energy scoring policy.
- Limited city staff and resources to support on-going home energy scoring program implementation activities.

Stakeholders may raise concerns about the value of the home energy scores compared to the potential costs of implementing a program, so ODOE staff are available to provide expertise and guidance about the benefits of scoring – from energy cost savings to potential greenhouse gas reductions. The response to ODOE’s engagement in home energy scoring has been significant and has led to ongoing discussions and technical assistance with more than 10 cities. These cities range in population from 5,000 (Talent) to 615,267 (Portland). ODOE has responded to multiple city requests for assistance in developing home scoring policies as part of their energy and climate action planning.

## 3. HOW WE COMPARE.

Oregon leads the nation in residential scoring activity, as reported by the USDOE Home Energy Score program. Within the USDOE HES program, there have been more than 250,000 scores conducted. Oregon has contributed 55,000 scores, or 22 percent of the total, between 2016 and the time of this report. Many states have scoring systems other than the USDOE HES, which are voluntary and often coordinated and funded by local utility programs. Identifying these voluntary programs is difficult as they are not reported into a national database.

Other states within the U.S. are contacting ODOE for lessons learned in rolling out HES policies and implementation steps. ODOE has assisted Utah, Washington, South Carolina, Maine, and Colorado. ODOE works with the National Association of State Energy Officials and the USDOE to share the methods Oregon uses to drive participation and to hear the latest updates on system improvements.

Oregon's home energy scoring program has been successful thanks to efforts around messaging the benefits of home energy scoring. At its foundation, home energy scoring is a consumer protection effort, helping people understand energy characteristics that affect home operational costs. Some cities only see the benefits of scoring homes to reduce energy consumption and greenhouse gas emissions. However, what seems to resonate with city decision-makers most is the ability to provide clear energy information to constituents to help them in their homebuying decisions. With a home score in hand, a homebuyer is better equipped to make an informed decision and plan steps to improve the performance of the home they select.

**Recognition.** In 2025, ODOE was invited to present at the National Home Performance Conference hosted by the U.S. Department of Energy to share Oregon's work and assist other states as they consider implementing HES programs. ODOE shared details of how to develop relationships with local government, build a statewide framework to support home energy scoring, and how to develop successful local ordinances that drive activity. ODOE is working to innovate further by supporting access to rental property energy scoring that will be combined with the current HES program. This addition to the current program will help cities add rental property scoring to their mandatory ordinances, increasing the use of scoring by consumers that want to understand energy performance and costs – information that has not been available when choosing a residence to date.