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TIGHGER 2.0 (Transformational Integrated Greenhouse Gas Emissions Reductions) Project Gap Measures and Scenarios for Analysis – Updated May 2026

The gap measures listed in this document are for informational purposes only and are not being proposed for implementation.

The TIGHGER Project (Transformational Integrated Greenhouse Gas Emissions Reduction) aims to assess Oregon's progress toward meeting Oregon's greenhouse gas emission reduction goals of 45 percent below 1990 levels by 2035 and 80 percent below 1990 levels by 2050.

The first iteration of the TIGHGER project, finalized in 2023 but incorporating data through 2018, found that the state had the program and policy infrastructure in place to meet its 2035 goal. In late 2025, the Oregon Department of Energy updated the forecast with data through 2023, taking into consideration the programs and policies in effect at the time of the analysis and changes to the energy landscape, for example actual and projected increases in load growth (primarily from data centers). This forecast – under the "Business-As-Planned" scenario – found that Oregon does not currently have the programs and policies in place to meet either its 2035 or 2050 goals.

On March 13, 2026, ODOE released a draft list of gap measures and scenarios for public comment. The draft gap measures on the list released on March 13, 2026, as well as those on the updated list below, are for informational purposes only and are not being proposed for implementation. ODOE sought public comment on the draft gap measures prior to quantifying the greenhouse gas emissions reductions as part of the TIGHGER 2.0 project. The intent is to calculate the greenhouse gas emissions reductions that could be achieved if the measure were implemented, not to suggest whether or how that implementation should take place. The gap measures are also not intended to prescribe program design elements or potential implementation pathways. For many of these measures, should they ever move into an implementation phase, there could be multiple ways of achieving the quantified greenhouse gas emission reductions.

The gap measures are also intended to be in addition to those programs that will be implemented to meet the requirements of existing laws and policies that were modeled in the "Business-As-Planned" scenario, for example the requirements of House Bill 2021 (2021) and the Climate Protection Program (CPP). The measures listed should be considered above and beyond those measures that would likely be implemented to comply with HB 2021 and the CPP.

As a result of the feedback received during the public comment period, ODOE has modified the list of gap measures for which it will quantify greenhouse gas emissions reductions. For example, the list of specific Food and Agriculture Sector related measures were combined into one, which is high-level and includes no specific measures. Instead, this item will project future agriculture sector emissions, based on the current trajectory of emissions in the sector-based inventory. Agriculture sector emissions have been on the decline, and this measure assumes the same rate of decline going forward. ODOE looks forward to working with partners across the state government and the agriculture industry to identify specific measures to reduce greenhouse gas emissions to be included in a future effort.

The following summary provides an overview of the changes that have been made to the gap measure list. It is not an exhaustive description of every change. The full updated list of gap measures and scenarios is provided below.

Summary of Changes to the Gap Measure and Scenario List

Measures Removed (# corresponds to original draft measure list released on March 13, 2026)

The following measures were removed from the gap measure list following ODOE's review of public comments and engagement with interagency partners and its consultant, Sustainable Solutions Group. Measures were also removed to avoid duplication and reflect feasibility constraints. Some measures were also collapsed into another measure.

Food & Agriculture Sector Measures (#3-9)

Cement Industry Improvements (#10)

Water Systems Energy Efficiency (#16)

5% of Fuel Share from Pyrolysis of Biomass by 2040 (#17)

PeakSmart Program (#26)

Energy Efficiency Incentive Program (#27)

Home Fuel Cells 5% by 2030 (#31)

RH2 Injection 15% by 2050 (#37)

Rooftop Solar PV (#38)

Offroad Vehicle Sales (#43)

10% Mode Shift MD to LD (#44)

Measures Modified

Modifications to the gap measure list include:

Decoupling and Collapsing Measures: For consistency across the list, ODOE separated some of the assumptions/metrics into multiple measures to be able to model them independently. For example, in measure #19 in the list released on March 13, 2026, which referenced the adoption of heat pumps and electric water heaters in new residential homes, ODOE has separated heat pumps and electric water heaters into distinct measures. Additionally, the Food and Agriculture Sector measures (#3-9) were collapsed into a single measure.

Specifying Hydrogen Type: ODOE has clarified that relevant measures reflect the use/integration of low-carbon intensity hydrogen.

Industrial Decarbonization Assumption: ODOE modified the measure to address industrial decarbonization focused on wastewater thermal energy.

Specifying Assumptions: For those measures in which ODOE previously provided a numerical range in the assumption/metric, ODOE has specified the particular outcome for which GHG emissions reductions will be calculated.

Consistency with the Oregon Energy Strategy, HB 2021, and the CPP: To ensure consistency with the Oregon Energy Strategy, HB 2021, and the CPP, the assumptions for several measures were modified to explicitly state that the measure was above and beyond what may eventually be achieved as a result of compliance with HB 2021 and the CPP.

Measures Added

Additions to the gap measure list include:

Aviation Efficiency: ODOE is adding a measure to model a 20% efficiency gain in fuel economy in the aviation sector, consistent with the Oregon Energy Strategy and the International Air Transport Association Net Zero Roadmap.

ODOE greatly appreciates the public comments that were submitted to date. This revised list will now be used to generate calculations for greenhouse gas emissions reductions for each gap measure. The results from these calculations, as well as the greenhouse gas emissions reduction forecast completed in late 2025, will be incorporated into a final TIGHGER 2.0 report. A public comment period on the draft of this report is anticipated to open this summer.

Gap Measures for Greenhouse Gas Reduction Calculations (Updated May 2026)

(The gap measures are grouped by sector in alphabetical order, and sector gap measures are not listed in any particular order.)

Measure	Sector	Assumption/Metrics to Model
1. Energy Infrastructure Resilience Programs	Electricity	Expand ODOE's statewide energy infrastructure resilience programs, including the Community Renewable Energy Grant Program, to support projects that improve energy resilience. Projected addition of 13,316 kW (13 MW) of nameplate capacity in solar, storage, hydro, and biomass projects.
2. Large Load Renewable Power Program	Electricity	New large loads to be supplied with 100% clean energy resources.
3. Agriculture Sector Reductions	Food and Agriculture	Agriculture sector reductions based on historic annual reduction amount, exact programs TBD.
4. Industrial Electrification	Industrial	Electrification of 100% of machine drives by 2035; 100% of low temperature heat by 2050; 50% of heat in bulk chemicals production by 2050; 25% of heat in glass production by 2050; 50% of integrated steam production by 2045; 100% of refrigeration by 2040; 75% of industrial HVAC loads by 2050; 80% of industrial vehicles, including in agriculture by 2050; and 50% of construction energy use by 2050.
5. HFC Product Reduction Program	Industrial	85% reduction in Oregon's hydrofluorocarbon emissions by 2036.
6. Hydrogen Fuel Adoption	Industrial	Low-carbon intensity hydrogen used for: 50% of heat in bulk chemicals by 2050; 20% of integrated steam production by 2050; 20% of construction energy use by 2050; and 20% of industrial vehicles by 2050.
7. Industrial Wastewater Decarbonization Program	Industrial	Potential for wastewater thermal energy direct-to-district energy; and additional incentives for projects

Measure	Sector	Assumption/Metrics to Model
		located in rural or environmental justice communities.
8. Non-Climate Protection Program Industrial Process Efficiency by 2050	Industrial	1% annual improvement in process efficiency compared to previous year across industries not regulated in the CPP through 2050.
9. Low-Carbon Fuels by 2050	Multi-Sector	Low-carbon fuels (biogas/RNG, low-carbon intensity hydrogen, ammonia, etc.) providing 20% of current direct use gaseous fuel demand by 2050.
10. Backup Battery Storage	Multi-Sector	100% conversion of diesel backup power to battery storage by 2035 in industrial and commercial sectors.
11. Non-Heating Equip Elec in All Res by 2040	Residential and Commercial	Consistent with OSES, ODOE modeling will assume HB 2021/CPP will achieve 85% new electric non-space and non-water heating appliance sales for residential homes by 2040. This measure increases that figure by an additional 10% to 95% by 2040.
12. Weatherization in Existing Residential by 2040	Residential and Commercial	Consistent with OSES, ODOE modeling will assume HB 2021/CPP will achieve 85% weatherization of existing residential home envelopes by 2040, this measure increases that figure an additional 10% to achieve 95% by 2040; achieve a 50% reduction in space conditioning and non-space conditioning energy use.
13. Residential Space Heating	Residential and Commercial	65% of heating system sales are heat pumps by 2030; 90% by 2040. Households currently with wood stoves: by 2050, 75% will shift to air-source heat pump (ASHP) with woodstove hybrid, 20% woodstove only, 5% heat pump only.
14. Residential Water Heaters	Residential and Commercial	Consistent with OSES, ODOE modeling will assume HB 2021/CPP will achieve 85% electric heat pump for water heaters sales by 2040. This measure increases that figure by an additional 10% to 95% of overall sales by 2045.

Measure	Sector	Assumption/Metrics to Model
15. Non-Heating Equip Elec in All Com by 2040	Residential and Commercial	Consistent with OSES, ODOE modeling will assume HB 2021/CPP will achieve 85% electric non-space and non-water heating appliance sales for new commercial buildings by 2040. This measure increases that figure by an additional 10% to achieve 95% by 2040.
16. Large Commercial Water Heaters	Residential and Commercial	2035: Electric heat pumps for water heaters 15% of overall sales, other electric technologies 10% of overall sales; 2045: Electric heat pumps for water heaters 50% of overall sales, other electric technologies 40% of overall sales
17. Small Commercial Water Heaters	Residential and Commercial	Consistent with OSES, ODOE modeling will assume HB 2021/CPP will achieve 85% electric heat pump for water heaters sales by 2040. This measure increases that figure by an additional 10% to 95% of overall sales by 2045.
18. Large Commercial Space Heating	Residential and Commercial	Electric heat pumps are 15%, and other electric/electric hybrid systems are 10%, of commercial HVAC sales by 2030; electric heat pumps are 50%, and other electric/electric hybrid systems are 40%, of sales by 2045.
19. Small Commercial Space Heating	Residential and Commercial	65% of heating systems sales are heat pumps by 2030; 90% by 2040. Households currently with wood stoves: by 2050, 75% will shift to air-source heat pump (ASHP) with woodstove hybrid, 20% woodstove only, 5% heat pump only.
20. Commercial Building Decarbonization Program	Residential and Commercial	Apply Building Performance Standard to Tier 2 buildings (e.g., special use; schools) to meet BPS targets.
21. Expanded Building Decarbonization Program	Residential and Commercial	Within the city of Portland, broader or stricter standards than the Building Performance Standards program's targets with specific GHG intensity/energy intensity targets:

Measure	Sector	Assumption/Metrics to Model
		require each property owner of a 20,000+ sf commercial or multifamily building to reduce their GHG emissions by 20% increments every five years compared to a baseline (CY 2026 or 2027) starting in 2030 and reaching 100%, net zero by 2050.
22. Com Code Reduction 60% by 2030	Residential and Commercial	Commercial Code Energy Reduction: require new commercial buildings to use 60% less energy than base year by 2030 as per EO 17-20.
23. Res Code Reduction 60% by 2030	Residential and Commercial	Residential Code Energy Reduction: require new residential buildings to use 60% less energy than base year by 2030 as per EO 17-20.
24. Low Carbon Buildings Program	Residential and Commercial	Buildings and infrastructure reduce embodied carbon through changes in project design, material use and selection (e.g., cement substitutes), industrial decarbonization (e.g., efficiency upgrades). (This measure is evaluated by the Oregon Department of Environmental Quality for global emissions impact, but for the TIGHGER analysis only emissions reductions in the state's sector-based inventory are calculated and included.)
25. OHCS Manufactured Home Replacement Program	Residential and Commercial	Replace 100 manufactured homes; use same assumptions from Manufactured Home Replacement Program.
26. Low-Income Solar PV Program	Residential and Commercial	Increased access to solar PVs for low-income households and disadvantaged communities.
27. Behind-the-Meter Solar PV	Residential and Commercial	400 MW of new behind-the-meter solar PV capacity by 2030.
28. Medium- and Heavy-Duty ZEV Sales Shares	Transportation	100% ZEV sales by 2050 for transit and school buses, and 100% ZEV sales by 2050 for other Class 2b vehicles, e.g., select pickup trucks and SUVs based on gross vehicle weight rating.

Measure	Sector	Assumption/Metrics to Model
29. Aviation Fuel	Transportation	100% sustainable aviation fuel by 2050.
30. Fuel Economy Aviation	Transportation	20% efficiency gain through 2050, to reflect International Air Transport Association (IATA) Net Zero Roadmap.
31. Maritime Shipping Fuel	Transportation	Domestic ship fuel: 10% electric, 20% low-carbon intensity hydrogen, and 50% ammonia by 2050. International ship fuel: 20% low-carbon intensity hydrogen and 60% ammonia by 2050.
32. Rail Fuel	Transportation	Trains become 20% electric and 70% low-carbon intensity hydrogen by 2050.
33. Increased Transportation and Growth Management (TGM) Funding	Transportation	Renew TGM 2027-9 biennium funding for voluntary planning by cities outside metropolitan areas. • $3.5 million over 2 years • 46 projects, including in cities over 10k outside of metropolitan areas

Scenarios (Updated May 2026)

The five scenarios presented below reflect potential changes to the baseline Business-As-Usual and Business-As-Planned scenarios which, if realized, would lead to different results in Oregon's forecasted greenhouse gas emissions reductions. The scenarios are intended to reflect the risks associated with certain greenhouse gas emission reduction initiatives and uncertainty with respect to future energy growth. The scenarios will take into consideration uncertainty surrounding key variables such as data center growth and their location, as well as challenges to full and timely implementation of existing programs. In response to feedback, an additional scenario was added to reflect a further delay (to 2050) in the deployment of 100% clean energy sold to Oregon consumers.

Scenarios	Sector	Assumptions
1. Delayed deployment of clean energy (2040)	Electricity	Investor-owned utilities to reduce greenhouse gas emissions associated with electricity sold to Oregon consumers to 80% below baseline emissions levels by 2035 (instead of 2030) and 100% by 2040.

2. Delayed deployment of clean energy (2050)	Electricity	Investor-owned utilities to reduce greenhouse gas emissions associated with electricity sold to Oregon consumers to 80% below baseline emissions levels by 2035 (instead of 2030) and 100% by 2050.
3. Less data center load growth	Electricity	Model Northwest Power and Conservation Council's medium load growth forecast, lower than the high load growth forecast modeled in the Business-As-Usual scenario.
4. Federal changes	Multi-Sector	Discussion of the effects to programmatic emissions reductions that have resulted from Federal changes since the beginning of 2025, and that are not otherwise addressed by an existing state program.
5. Lower rate of EV adoption	Transportation	Lower EV adoption rate: 57% by 2050 for cars and 41% by 2050 for Heavy-Duty Trucks.