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Oregon's Cap-and-Trade Proposal

Oregon lawmakers are considering adopting an economy-wide cap-and-trade program to meet the state's long-term greenhouse gas (GHG) reduction goals. On February 4, 2019, the Oregon legislature's Joint Committee on Carbon Reduction introduced House Bill (HB) 2020, which would direct the creation of the "Oregon Climate Action Program."[1] While HB 2020 establishes a proposed framework for the program, if enacted, many key program design decisions would be determined by a new state Carbon Policy Office, which would also implement the program.

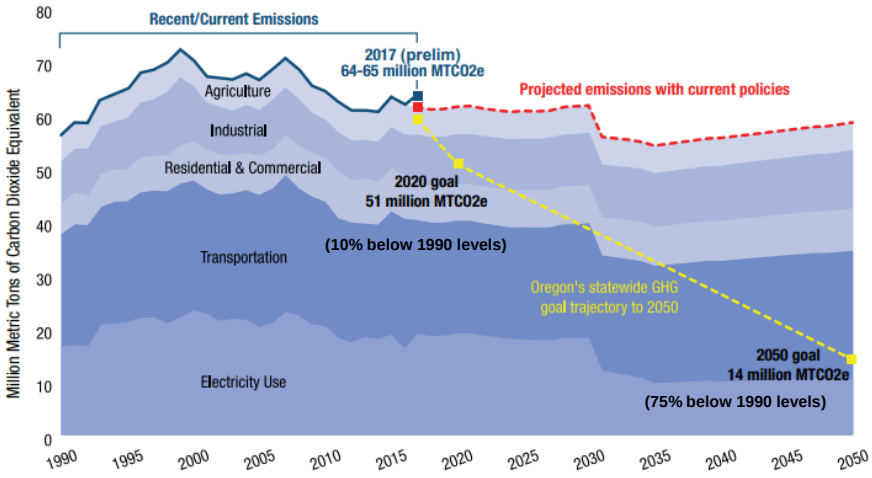
Expectations are high for passage of the cap-and-trade proposal after Democrats expanded control of the Oregon state legislature in 2018, with a supermajority in each chamber. The proposal also has the support of Democratic Governor Kate Brown.[2] If passed, Oregon would become the second state after California to adopt an economy-wide cap-and-trade program. The legislative session ends on June 30, 2019.

Background

Oregon has established goals to reduce GHG emissions 10 percent below 1990 levels by 2020 and 75 percent by 2050. However, Oregon is not currently on track to meet these goals with existing policies (see Figure 1).[3]

In recent years, the Oregon state legislature has considered several market-based proposals to reduce GHG emissions. Last year, the state legislature considered cap-and-trade bills in both chambers but ultimately failed to pass legislation within the short, 35-day legislative session. Before the conclusion of the 2018 legislative session, Oregon lawmakers established the Joint Interim Committee on Carbon Reduction to study options for carbon pricing

Figure 1: Oregon Past and Projected Emissions Compared to Current Goals



Source: Oregon Global Warming Commission.[3]

[1] HB 2020, *Relating to greenhouse gas emissions, declaring an emergency*, https://olis.leg.state.or.us/liz/2019R1/Measures/Overview/HB2020.

[2] Statement of Gov. Kate Brown on the Oregon Climate Action Program (January 31, 2019), https://www.oregon.gov/newsroom/Pages/NewsDetail.aspx?newsid=3127.

[3] Oregon Global Warming Commission, 2018 Biennial Report to the Legislature for the 2019 Legislative Session, https://static1.squarespace.com/static/59c554e0f09ca40655ea6eb0/t/5c2e415d0ebbe8aa6284fdef/1546535266189/2018-OGWC-Biennial-Report.pdf.

legislation and to prepare a bill for consideration in 2019. On January 31, 2019, the Committee published HB 2020 for consideration.

Summary of Key Aspects of Proposal

As proposed, HB 2020 would establish a cap-and-trade program from 2021 through 2050 to meet the state's GHG reduction goals. HB 2020 would also amend these current goals, eliminating the existing 2020 goal (10 percent reduction), establishing a new interim reduction target of 45 percent by 2035, and strengthening the existing 2050 goal from a 75 percent reduction to an 80 percent goal (all below 1990 levels).

Beginning in 2021, the cap-and-trade program would impose an annual cap on GHG emissions from covered sources.[4] HB 2020 defines the cap for 2021 as the average emissions emitted by regulated entities from the three most recent years prior to 2021 for which GHG emissions information is available and verified by the office.[5] From 2021 through 2035, the cap would decline annually by a constant amount to achieve a cumulative 45 percent reduction in regulated emissions below 1990 levels. From 2036 to 2050, the cap would decline annually by a constant amount to achieve a cumulative 80 percent reduction below 1990 levels.

Regulated Entities and Program Coverage

As proposed, the economy-wide program would regulate the following sectors at the corresponding points of regulation (Figure 1). This would equate to coverage of more than 80 percent of Oregon's statewide emissions in 2021 (Figure 2).

Figure 1: Proposed Coverage of Sectors and Regulated Entities

Sector	Coverage in Sector	Point of Regulation
Electricity	All electricity consumed in Oregon (either generated in-state or imported from out-of-state)[6]	• In-state fossil fuel-fired electric generating facilities serving in-state load would surrender allowances for emissions from electricity generation • Entities that schedule the import of electricity into Oregon would surrender allowances for emissions associated with the imported electricity, including transmission and distribution line losses[7]

[4] The bill would cover the following anthropogenic GHGs according to their CO_2e content: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. It would exclude non-anthropogenic GHGs such as CO_2 from certain biofuels (ethanol, biodiesel) and biomass.

[5] HB 2020 would allow the exclusion from the calculation of baseline emissions "those GHG emissions during the three most recent years prior to 2021 that would not have been regulated emissions if the Oregon Climate Action Program had been in effect during the time that the GHG emissions occurred."

[6] The bill would exempt emissions attributable to electricity "[d]elivered to and consumed in another state, accounting for transmission and distribution line losses." It would also exclude emissions associated with electricity "[f]or which the capital and fuel costs associated with the generation are included in the rates of a multistate jurisdictional electric company that are charged to the electricity consumers in a state other than Oregon." Additionally, the bill would exclude cogeneration facilities owned or operated by a public university in Oregon or by the Oregon Health and Science University.

[7] The bill would exempt emissions associated with electricity imported by a public power utility if such emissions have averaged less than 25,000 Mt CO_2e over the past three years.

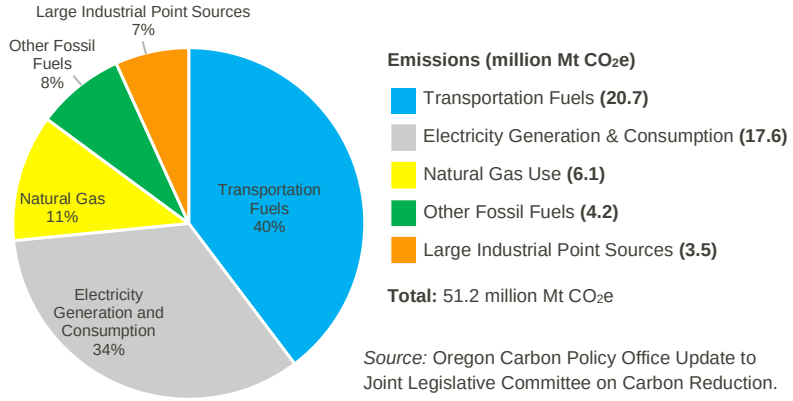
Sector	Coverage in Sector	Point of Regulation
Industrial Sector	Landfills and manufacturing processes that emit GHGs more than a certain amount as a byproduct[8]	• Owners of one or more facilities with total reported regulated emissions ≥ 25,000 Mt CO_2e would surrender allowances for their process-related emissions and emissions from natural gas use
Other Sectors	All fossil fuels distributed in Oregon including natural gas, gasoline, diesel, home heating oil, and propane (excluding fuel use for aviation, watercraft, and trains)	• Natural gas utilities, marketers, and distributors would surrender allowances for emissions associated with the combustion of natural gas for residential and commercial use • Entities that produce in Oregon, or import into Oregon, other fossil fuels (gasoline, diesel, home heating oil, and propane) for sale or distribution would surrender allowances for emissions associated with the combustion of these fuels[9]

Distribution of Allowances

As proposed, the state Carbon Policy Office would distribute each year the number of allowances equal to that year's cap through a mixture of direct allocation and auctions. The following entities would receive at least a portion of allowances through direct allocation:

- Investor-Owned Utilities (IOUs): Between 2021 and 2030, IOUs would receive allowances equal to their forecasted emissions to serve retail customer loads (based on the companies' most recent Integrated Resource Plan (IRP), or an update to the plan, as of January 1, 2021). Beginning in 2031, the percentage of directly-allocated allowances would decline at the rate of the economy-wide cap. If IOUs were to emit above their forecasted level, they would be required purchase allowances; if below, they could sell allowances to the benefit of their retail customers.[10]

Figure 2: Projected Emissions in 2021 Potentially Covered by Cap



Source: Oregon Carbon Policy Office Update to Joint Legislative Committee on Carbon Reduction.

[8] The bill would exempt landfills closed before the effective date of the bill that are closed and maintained in compliance with state regulations. It would also exempt methane emissions from a landfill that are recaptured and used to generate renewable energy including but not limited to electricity, transportation fuels or heat. GHG emissions from the direct combustion of municipal solid waste to generate renewable energy would also be exempted. The bill includes a temporary exclusion through January 1, 2026 for fluorinated gases generated from semiconductor manufacturing.

[9] The bill would exclude emissions from gasoline and diesel fuel that are lower than a to-be-determined amount.

[10] According to Sections 43 and 44 of HR 2020, "The [PUC] shall require proceeds received by an electric company or natural gas utility from the sale of allowances directly distributed at no cost[…]: (a) to be spent by the electric company or natural gas utility within the service territory of the electric company or natural gas utility; and (b) to be used only for activities that serve to reduce [GHG]

- Public Power: In 2021, public power entities would receive directly allocated allowances equal to forecasted emissions for that year. After 2021, directly-allocated allowances would decline at the same rate as the economy-wide cap.
- Natural Gas Utilities: Natural gas utilities would receive directly allocated allowances in an amount necessary to cover emissions associated with natural gas service to their low-income residential customers. The PUC would determine this amount at the beginning of each three-year compliance period.
- Emissions-Intensive, Trade-Exposed (EITE) Entities: In addition, HR 2020 would directly allocate a to-be-determined percentage of allowances to emissions-intensive, trade-exposed (EITE) entities.

In addition, a to-be-determined percentage of allowances would be set aside to establish a price containment reserve, a voluntary renewable electricity generation reserve, and a reserve account for emissions-intensive, trade-exposed processes.

Remaining allowances would enter the auction pool. Entities that would not receive directly allocated allowances include marketers and distributors of fossil fuels, independent power producers (Oregon has some natural gas combined cycle facilities that are owned by independent power producers), as well as certain industrial emitters not qualified as EITE.

The distribution of allowances is a key design element of a cap-and-trade program with important distributional effects. Direct allocation reduces the amount of revenue collected by state authorities by lowering the number of allowances sold at auction. It can also help to offset the impact of the program on consumers, whose energy bills may increase (although auction revenues can also be used to provide consumer rebates to achieve the same purpose).

The Oregon Carbon Policy Office, which conducted research and analysis to inform the development HB 2020, has stated that HB 2020 "is designed to incentivize further reductions without duplicating costs" and to "maintain affordable and competitive electricity rates."[11] The office notes that "Oregon's electricity sector is already decarbonizing, due largely to market forces driving low carbon alternatives, the state's renewable portfolio standard [of 50 percent renewable electricity from large IOUs by 2040], and a state mandate to eliminate coal from Oregon electricity customer rates [by 2030]."[12] In light of these trends and existing state policies, the Carbon Policy Office has expressed support for direct allocation of allowances in order to maintain affordable and competitive electricity rates and to avoid duplicating compliance costs.

Market Design and Revenue

As proposed, once the state has allocated the portion of the allowances to certain regulated entities, the remaining would be sold at allowance auctions (to be held at least annually). The auction price for allowances would be subject to a to-be-determined price "floor" and "ceiling." Entities could also acquire allowances from other entities in the

emissions or provide energy assistance to the electric company's or natural gas utility's retail customers […]." Specifically, "an electric company or natural gas utility shall prioritize the use of auction proceeds for energy assistance programs, including: (a) rate design based solutions; (b) bill assistance, weatherization, energy efficiency, transportation electrification measures and grid modernization; and (c) participation by low-income residential customers in conservation programs that further reduce the out-of-pocket costs for energy efficiency measures." HB 2020 also directs the PUC to adopt rules for the implementation and enforcement of these provisions.

[11] Carbon Policy Office Update to Joint Legislative Committee on Carbon Reduction, slide 18 (December 13, 2018), https://olis.leg.state.or.us/liz/2017I1/Downloads/CommitteeMeetingDocument/153404 ; Carbon Policy Office, Fact Sheet: Oregon Climate Action Plan & Electricity, https://www.oregon.gov/gov/Documents/How%20is%20electricity%20covered%20under%20cap-and-trade.pdf.

[12] The Clean Electricity and Coal Transition Act, passed in 2016, requires the state's two IOUs, PacifiCorp and Portland General Electric (PGE), to eliminate coal-fired electricity from their generation mix by 2030.

secondary market. At the end of each three-year compliance period, regulated entities would be required to surrender the number of allowances equal to their total emissions (or the emissions resulting from the combustion of sold of fossil fuels). HB 2020 would allow for unlimited banking of allowances for future compliance periods and would allow covered entities to meet up to eight percent of their compliance obligation using offset credits, subject to certain restrictions.

Revenue generated from the sale of emissions allowances would be used to invest in projects to advance the transition to a low-carbon economy or to promote adaptation or resiliency.

Linkage with California

HB 2020 allows for linkage of the Oregon Climate Action Program with other cap-and-trade programs, such as the neighboring Western Climate Initiative, which includes California and Quebec and included Ontario for a brief period. As proposed, in order to link with a program, the Governor would be required to find that jurisdiction with which the program would link is at least as stringent as Oregon's program and that the linkage would not negatively affect Oregon's ability to enforce its program. California's program has set a goal of a 40 percent reduction below 1990 levels by 2030. Quebec's program, which also began in 2013, has set a target of 37.5 percent below 1990 levels by 2030.

If Oregon were to link with the Western Climate Initiative, access to this larger carbon market could provide for increased price stability. Its proximity to the program could also offer the advantage of mitigating the possibility of emissions leakage into neighboring jurisdictions.

Economic Impacts

A draft economic analysis of HB 2020 by Berkeley Economic Advising and Research found that HB 2020 would have a net positive impact on the state: by 2030, the bill would increase state GDP by roughly one percent and create 11,000 new jobs; by 2050, this would amount to a 2.5 percent increase of GDP and roughly 23,000 total new jobs (compared to a reference case of existing policies). The analysis found that net benefits of the proposed program would be primarily due to efficiency gains, multiplier effects from economy-wide energy savings, and public health benefits, with the latter comprising roughly one-third of the total economic benefits of the program. The analysis also predicted that allowance prices would be considerably lower due to the existence of complementary regulatory policies.[13]

Next Steps

It is expected that the state legislature will vote on the bill before the end of the legislative session on June 30, 2019. If passed, the Carbon Policy Office will be responsible for determining many of the specific design decisions of the program. These decisions will affect the program's overall efficiency in reducing emissions and its economic impact.

[13] Berkeley Economic Advising and Research, Oregon's Cap-and-Trade Program (HB 2020): An Economic Assessment, prepared for the Oregon Carbon Policy Office, https://olis.leg.state.or.us/liz/2019R1/Downloads/CommitteeMeetingDocument/157983.

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