

MJB&A Summary ■ July 3, 2019

## Oregon’s Cap-and-Trade Legislation

This year, Oregon lawmakers considered legislation (HB 2020) that would implement an economy-wide cap-and-trade program to meet the state’s long-term greenhouse gas (GHG) reduction goals.<sup>1</sup> Many had been watching to see if Oregon would become the second state to implement an economy-wide cap-and-trade program. While the bill passed 36 to 24 in the House of Representatives, the bill had narrower margins in the Senate. And, on June 19, 2019, Senate Republicans left the state for nine days to avoid voting on the legislation. On June 25, 2019, the Senate President made an unofficial statement that the bill did not have sufficient support to pass in the Senate during this legislative session. On June 29, 2019, the Senate voted to refer the bill back to committee. The legislative session adjourned on June 30, 2019.

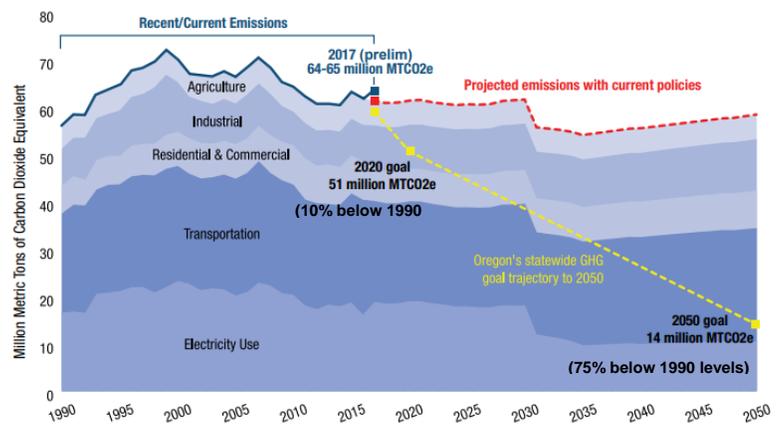
Oregon Governor Kate Brown, who supported the legislation, has since signaled that she is prepared to use executive authority to implement measures to reduce state GHG emissions.

### Background

Oregon has a goal 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).<sup>2</sup>

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 legislation and to prepare a bill for consideration in 2019. On February 4, 2019, the Committee introduced HB 2020 for consideration.

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



Source: Oregon Global Warming Commission.<sup>4</sup>

<sup>1</sup> This MJB&A Issue Brief summarizes the latest version of the bill, HB 2020-B, the engrossed version passed by the House Committee on Ways and Means. The bill is available at: <https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/HB2020/B-Engrossed>.

<sup>2</sup> 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>.

## Summary of Key Aspects of HB 2020

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 the state’s 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 annually declining cap based on aggregate GHG emissions from covered sources from 2018, 2019, and 2020.<sup>3</sup> Specifically, the Act directs the Carbon Policy Office to determine the 2021 cap “to be equal to a forecast of regulated emissions for 2021,” informed by GHG emissions information that is available for covered sources for the three most recent years prior to 2021 that is confirmed by the office, as well as other information.

The emissions cap would gradually decline to a level 45 percent below 1990 levels by 2035, and 80 percent below 1990 levels by 2050.

### Regulated Entities and Program Coverage

As proposed, the economy-wide program would regulate the sectors listed in Table 1, which would equate to coverage of roughly 80 percent of Oregon’s statewide emissions in 2021 (Figure 1).

**Table 1: Proposed Coverage of Sectors and Regulated Entities**

Sector	Coverage in Sector	Point of Regulation
<i>Electricity</i>	Electricity generated in Oregon and electricity imported from out-of-state <sup>4</sup>	<ul style="list-style-type: none"> <li>• In-state fossil fuel-fired electric generating facilities serving in-state load would surrender allowances for emissions from electricity generation</li> <li>• Entities that schedule for the delivery and consumption of electricity in Oregon would surrender allowances for emissions associated with the imported electricity, including transmission and distribution line losses<sup>5</sup></li> </ul>

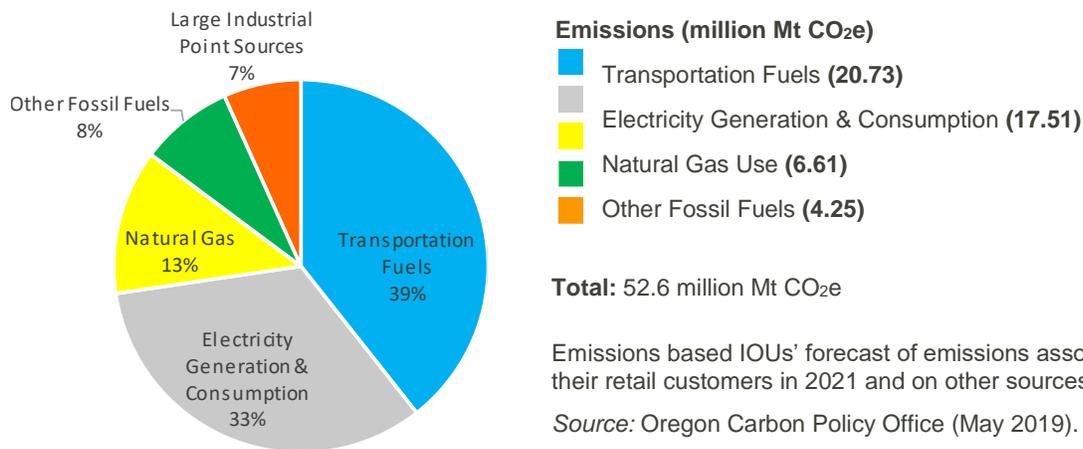
<sup>3</sup> The bill would cover the following anthropogenic GHGs according to their CO<sub>2</sub>e content: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. It would exclude non-anthropogenic GHGs such as CO<sub>2</sub> from certain biofuels (ethanol, biodiesel) and biomass.

<sup>4</sup> For emissions attributable to electricity “[d]elivered to and consumed in another state, accounting for transmission and distribution line losses,” and “[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,” the bill directs the Carbon Policy Office to retire the number of allowances equal to these emissions. The bill would not cover emissions from cogeneration facilities owned or operated by a public university in Oregon or by the Oregon Health and Science University.

<sup>5</sup> For electricity that is imported by consumer-owned utilities and for which the three-year average of the annual GHG emissions attributable to the imported electricity is less than 25,000 MTCO<sub>2</sub>e, HB 2020 directs the Carbon Policy Office to, beginning in 2021 and through 2050, retire the number of allowances equal to the emissions associated with the imported electricity.

Sector	Coverage in Sector	Point of Regulation
<i>Industrial Processes</i>	Manufacturing processes that annually emit $\geq$ 25,000 Mt CO <sub>2</sub> e as a byproduct  Opt-in emissions-intensive, trade-exposed (EITE) entities that annually emit $\leq$ 25,000 Mt CO <sub>2</sub> e as a byproduct <sup>6</sup>	<ul style="list-style-type: none"> <li>• Facility owners would surrender allowances for their process-related emissions and emissions from natural gas use</li> <li>• EITE entities with annual emissions under 25,000 Mt CO<sub>2</sub>e can opt into the program as a regulated entity, which allows them to receive direct allowance allocation (see following section for further detail)</li> </ul>
<i>Fossil Fuel Distribution</i>	All fossil fuels distributed in Oregon including natural gas, gasoline, diesel, home heating oil, and propane (excluding fuel use for aviation, watercraft, and trains)	<ul style="list-style-type: none"> <li>• Natural gas utilities, marketers, and distributors would surrender allowances for emissions associated with the combustion of natural gas for residential and commercial use</li> <li>• 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<sup>7</sup></li> </ul>

**Figure 1: Projected Emissions in 2021 Potentially Covered by Cap**



*Distribution of Allowances*

HB 2020 would direct the state Carbon Policy Office to allocate or auction 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:

<sup>6</sup> The bill would exempt emissions from landfills, instead directing the state Environmental Quality Commission to adopt rules requiring certain landfills to use landfill management and monitoring practices in order to reduce GHG emissions, to become operative by July 2021.

<sup>7</sup> The bill would exclude emissions from gasoline and diesel fuel that are lower than a to-be-determined amount.

- Investor-Owned Utilities (IOUs): Between 2021 and 2030, IOUs would receive allowances equal to 100 percent of their forecasted emissions to serve retail customer loads each year (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 annually decline by a constant amount such that in 2050, the amount of directly allocated allowances represents 20 percent of the IOU's average annual emissions for the five most recent years preceding the effective date of the bill. If IOUs were to emit above their forecasted level and/or more than the amount of allowances they own, they would be required purchase allowances; if below, they could sell allowances to the benefit of their retail customers.<sup>8</sup>
- Consumer-Owned Utilities (COUs):<sup>9</sup> In 2021, COUs would receive an amount of directly allocated allowances equal to 100 percent of forecasted emissions for that year. In determining the amount to be directly allocated in 2021, HB 2020 directs the Carbon Policy Office to consider several factors, including GHG emissions from past years, variability of hydroelectric power generation, and certain changes in load requirements. After 2021, the amount of directly allocated allowances would decline at the same rate as the economy-wide cap until the amount reaches 20 percent of the amount initially allocated in 2021. COUs would be required to purchase allowances if they were to emit above their forecasted level; if below, they could sell allowances to the benefit of their customers.
- Natural Gas Utilities: Natural gas utilities would receive directly allocated allowances each year in an amount necessary to cover emissions associated with natural gas service to their low-income residential customers. The Carbon Policy Office would work with the PUC to determine this amount at the beginning of each compliance period. In addition, in 2021, natural gas utilities would receive an amount of directly allocated allowances equal to 60 percent of the weather-normalized forecast of GHG emissions attributable to the utility. After 2021, the amount of directly allocated allowances to cover the utility's emissions associated with weather-normalized GHG emissions would decline at the same rate as the economy-wide cap. The bill requires that the total number of allowances directly allocated to the utility not exceed the number of allowances equal to 75 percent of the weather-normalized GHG emissions attributable to the utility for the year the allowances are to be directly distributed. The bill also requires natural gas utilities to consign all directly allocated allowances to auctions and to use the proceeds to provide rate relief and to reduce GHG emissions associated with natural gas.<sup>10</sup>

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<sup>8</sup> In such cases, HB 2020 states, "The [PUC] shall require proceeds received by an electric company from the sale of allowances directly distributed at no cost[...]: (a) To be spent by the electric company for the exclusive benefit of retail customers that are supplied electricity by the electric company; and (b) To be used only for activities that serve to reduce greenhouse gas emissions or provide assistance to the electric company's retail customers[...]. Specifically, the bill directs the electric company to prioritize the use of auction proceeds for "(a) Providing weatherization, energy efficiency improvements, bill assistance or rate assistance to the electric company's low-income residential customers; (b) Accelerated transportation electrification; (c) Investments and activities that serve to reduce greenhouse gas emissions through actions such as energy efficiency improvements, voltage optimization, portfolio optimization and renewable energy procurement; and (d) Facilitating integration and utilization of variable energy resources through investments in programs and technologies such as demand response, smart grid communication and control systems, grid connected end uses and energy storage." HB 2020 also directs the PUC to adopt rules for the implementation and enforcement of these provisions.

<sup>9</sup> HB 2020 defines COUs to include municipal utilities, people's utility districts, and electric cooperatives.

<sup>10</sup> HB 2020 directs natural gas utilities spend no less than 25 percent of the proceeds on non-volumetric bill credits or other rate relief for residential, commercial, and industrial sales customers and to spend remaining proceeds to reduce and address the impacts of the emissions attributable to the natural gas utility through approaches such as weatherization, providing renewable natural gas or renewable hydrogen, and/or providing renewable thermal resources. HB 2020 also directs the PUC to adopt rules for the implementation and enforcement of these provisions.

- Emissions-Intensive, Trade-Exposed (EITE) Entities:<sup>11</sup> HR 2020 directs the Carbon Policy Office to directly allocate to EITE entities annually an amount of allowances based on the entities’ benchmarked emissions. Benchmark emissions are the product of the EITE entity’s output from the previous year, multiplied by an emissions efficiency benchmark for the EITE entity’s good or group of goods. From 2021 through 2024, the benchmarks would be structured based on the average emissions efficiency of the EITE entity during the last three years, such that EITE entities would receive allowances equal to 95 percent of entities’ annual benchmarked emissions. Beginning in 2025, the benchmarks would be based on the emissions estimated from production at each facility if the facilities were using the “best available technology” (to be determined by a third-party auditor and updated every nine years).

In addition, a to-be-determined percentage of allowances would be set aside in a reserve account for EITE entities. According to the Carbon Policy Office, allowances in this reserve account would become available for new or expanded EITE entities and for EITE entities that demonstrate the occurrence of “significant changes to the emissions or their competitive environment.”<sup>12</sup> A to-be-determined percentage of allowances would also be set aside in any other reserves or accounts that the Carbon Policy Office were to establish by rule (to include, for example, a price containment reserve and/or a voluntary renewable electricity generation reserve).

Remaining allowances would enter the auction pool. Regulated entities that would not receive directly allocated allowances include marketers and distributors of fossil fuels, as well as independent power producers (Oregon has some natural gas combined cycle facilities that are owned by independent power producers). The bill allows non-regulated entities to participate in auctions, in addition to covered entities and opt-in entities, provided that they register to do so.

The proposed 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. Direct allocation can also be designed to be a tool to help to offset the impact of the program on consumers, whose energy bills may increase through 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.”<sup>13</sup> 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 [that requires large IOUs to obtain 50 percent of electricity from renewable resources by 2040], and a state mandate

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<sup>11</sup> HB 2020 identifies the following sectors as EITE: aerospace product and parts manufacturing; basic chemical manufacturing; cement and concrete product manufacturing; foundries, fruit and vegetable preserving and specialty food manufacturing; glass and glass product manufacturing; iron and steel mills and ferroalloy manufacturing; lime and gypsum product manufacturing; nonmetallic mineral mining and quarrying; other nonmetallic mineral product manufacturing; plastics product manufacturing; pulp, paper and paperboard mills; sawmills and wood preservation; semiconductor and other electronic component manufacturing; and veneer, plywood, and engineered wood product manufacturing.

<sup>12</sup> Carbon Policy Office, Summary of Core Elements of the Oregon Climate Action Program: HB 2020-A, [https://www.oregon.gov/gov/Documents/Updated\\_OregonClimateActionProgram\\_CoreElementsSummary\\_HB2020A\\_FINAL.pdf](https://www.oregon.gov/gov/Documents/Updated_OregonClimateActionProgram_CoreElementsSummary_HB2020A_FINAL.pdf).

<sup>13</sup> Carbon Policy Office Update to Joint Legislative Committee on Carbon Reduction, slide 18 (December 13, 2018), <https://olis.leg.state.or.us/liz/201711/Downloads/CommitteeMeetingDocument/153404>; Carbon Policy Office, Fact Sheet: Oregon Climate Action Plan & Electricity (updated May 17, 2019), <https://www.oregon.gov/gov/Documents/How%20is%20electricity%20covered%20under%20cap-and-trade-AEngrossed.pdf>.

for IOUs to eliminate coal from Oregon electricity customer rates [by 2030].”<sup>14</sup> 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 price “floor” and “ceiling,” as well as an allowance price containment reserve floor price, all to be determined by the Carbon Policy Office and to increase by a fixed percentage over inflation each calendar year. Entities could also acquire allowances from other entities in the secondary market.

At the end of each compliance period (the length of which would be determined by the Carbon Policy Office), regulated entities would be required to surrender the number of allowances equal to their total emissions (or the emissions resulting from the combustion of fossil fuels sold). 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.<sup>15</sup>

Revenue generated from the sale of emissions allowances would be used by the state to invest in transportation decarbonization initiatives, to advance the transition to a low-carbon economy, to help to ensure a just transition to a low-carbon economy, and to operate the cap-and-trade program.<sup>16</sup>

### *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 (WCI), which includes California and Quebec. As proposed, in order to link with a program, the Carbon Policy Office must first notify the Governor of the intent to link with another cap-and-trade program. The Governor must then find that the program with which Oregon intends to 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 (for reference, 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). Lastly, the Carbon Policy Office would be required to provide a report on the proposed linkage agreement to the Joint Committee on Climate Action.

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.

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<sup>14</sup> 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.

<sup>15</sup> The use of offset credits to fulfill up to eight percent of an entity’s compliance obligation is subject to certain conditions, among them: offset projects must be located in the U.S. or approved by a jurisdiction with which the state has linked its cap-and-trade program, and no more than four percent of an entity’s compliance obligation can be met with offset credits that do not have a direct environmental benefit in Oregon. The Climate Policy Office may adopt additional restrictions on the number of offset credits that an entity can use for compliance purposes if the entity is located in an “impacted community” and either: the location if the entity is in nonattainment of a NAAQS and the entity “substantially contributes to or causes the nonattainment of air quality standard”, or the entity is in violation of their air quality permit.

<sup>16</sup> Revenue allocation is subject to review by the Oregon Supreme Court on the question of whether revenue raised by the purchase of allowances constitutes a tax. The Oregon Constitution requires the revenue raised by taxes on certain fuels and emitting entities to be deposited into the state Highway Trust Fund and Common School Fund. The bill would expedite any petition for review of this question to the Oregon Supreme Court.

## Economic Impacts

An 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 17,000 new jobs; by 2050, this would amount to a 2.5 percent increase of GDP and roughly 50,000 total new jobs (compared to a reference case of existing policies that would lead to a less ambitious and more gradual decline of emissions). 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 estimated that permit prices would rise slowly until nearly 2040, starting at roughly \$20/Mt CO<sub>2</sub>e in 2021 and slowly escalating to roughly \$45/Mt CO<sub>2</sub>e by 2040. By 2050, the price would increase to roughly \$135/ Mt CO<sub>2</sub>e (all in \$2016). The analysis also predicted that allowance prices would be considerably lower due to the existence of complementary regulatory policies.<sup>17</sup>

## Next Steps

While the bill did not garner enough support to pass in the Senate during this legislative session, the state is likely to continue developing and refining policy proposals to reduce state GHG emissions. It is now expected that Governor Brown and the relevant executive agencies will now explore regulatory opportunities using existing executive authority to implement measures to reduce state GHG emissions.

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<sup>17</sup> Berkeley Economic Advising and Research, Oregon's Cap-and-Trade Program (HB 2020): An Economic Assessment, prepared for the Oregon Carbon Policy Office, [https://www.oregon.gov/gov/Documents/CPO\\_BEAR\\_HB2020\\_Economic\\_Assessment.pdf](https://www.oregon.gov/gov/Documents/CPO_BEAR_HB2020_Economic_Assessment.pdf). Of note, BEAR analyzed the projected impacts of the bill based on an analysis of the introduced version of HB 2020; the bill has since been amended and this MJB&A Issue Brief summarizes the most recent version of the bill (HB 2020-B).

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