

**REVENUE IMPACT OF
PROPOSED LEGISLATION
80th Oregon Legislative Assembly
2020 Regular Session
Legislative Revenue Office**

Bill Number:	HB 4167
Revenue Area:	Emissions Revenue
Economist:	Mazen Malik
Date:	02/28/2020

*Only Impacts on Original or Engrossed
Versions are Considered Official*

Measure Description:

The bill specifies that the state anthropogenic greenhouse gas (GHG) emissions reduction goals are at least 45 percent below 1990 emission levels by 2035 and at least 80 percent below 1990 emission levels by 2050. The bill excludes from regulation GHG emissions from the combustion of aviation, watercraft, or railroad locomotive fuel and emissions attributable to a landfill. It also exempts any person that imports a de minimis amount of gasoline and diesel fuel as determined by rule. For the covered entities that don't get free allowances, the bill initiates the program in 2022 in the area defined by Metro (Regional Government) borders and continues that until the end of 2024. From 2025 to 2027 the program is extended to 17 western counties not including Curry and Coos Counties. Beginning in 2028 and extending to 2050, the regulation adds the two counties (Curry and Coos) and the cities of Bend and Klamath Falls. The program can be extended state wide any time after 2028 if the number of counties exercising option to join program meets or exceeds 23 counties.

The emission allowances (pollution permits) system is segmented into four main spheres. The electricity sector seems to be independent and separate from the industrial, natural gas, and transportation spheres. Utilities and other electric providers go through a free allowances allocation that operate almost autonomously, and most transactions end up outside the state revenue system. Thus, for the purpose of the state revenue analysis, the utility sector is within the cap on emissions, but outside of the revenue collection and investing program for several years, before they gradually transition in during latter stages.

The industrial and transportation sectors are subject to the emissions cap set by DEQ, and thus mandated to acquire emission allowances. Allowances must be purchased to satisfy the limit imposed by the cap during a compliance period (which can be three years). Natural Gas entities get a number of allowances consigned for the benefit of their low-income customers. Some entities in the industrial sector are allocated free allowances (credits for Trade Exposed Industrial Entities EITE), which can be used against their emission targets. Similar treatment is afforded to the Trade Exposed Natural Gas Users (TENGU). If those industrial entities are not allocated full credit and still need to purchase some allowances to satisfy their targets, they will purchase them from the primary market (auction) resulting in revenue to the state, equivalent to that marginal difference. Other industrial entities must buy all their allowances (to satisfy their emission targets) from the exchange at the settlement price of the auction or pay a higher price on the secondary market at a later time. All the resulting revenue from selling allowances on the primary exchange (auction) goes to the state. The different entities, which need more allowances (or end up with extra) at time of compliance, can buy (or sell) allowances on the secondary market. The secondary market, however, is outside the government collections process and doesn't yield any revenue to the state, therefore we will ignore its impact on the price of allowances and its market participants in the short term. The industrial emissions revenue (from the primary market participation in an auction) is the most flexible

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type of revenue out of the C&T legislation. After distributing the lesser of 10% or \$10 million to the Just Transition Fund (JTF), the revenue is allocated to five specific programs. The Oregon Climate Investment Fund (OCIF) receives 25%, for Forest Health. 25%, for Natural & Working Lands 10%, for the direct benefit of tribes, 20% for local emissions-reduction projects, and 20% for statewide emissions-reduction projects.

The transportation sector receives free allowances (in the form of retired compliance credits) only for the areas that are not included in one of three phases of treating allowances. Thus, in each phase, fuel importers or distributors (since there are no refineries in Oregon) are mandated to purchase allowances against their emission budget requirements. The sale price of allowances at the exchange (auction) is at least the floor price or the settlement price, and the revenue resulting from that transaction are essentially paid by the fuel dealers and go to the state. All the revenue generated from the sales on the exchange equivalent to fuel emission allowances are subject to the constitutional restrictions (Article IX 3(a)). Any additional allowances needed at the end of a compliance period are bought from the secondary market and do not filter to the state coffers.

Revenue Impact:

The estimation of revenue impacts is hindered by several factors as stipulated in the explanation section.

Impact Explanation:

There are three main issues that make the estimates of revenue to the state unattainable currently.

1. Price of Allowances:

Section 28 of HB 4167 instructs the Oregon Greenhouse Gas Reduction Board (OGGRB) to establish a floor and a ceiling price for the allowances sold in the state auction. It also instructs the OGGRB to consider prevailing prices for carbon in other jurisdictions. Although the state of Oregon might choose to follow the floor and ceiling prices in other jurisdictions even without officially linking to them (say through the WCI), this does not necessarily mean the actual market price for allowances in Oregon will mirror the other established markets. The regional and incremental approach contemplated in Oregon, is more likely than not to yield a different price than the fully developed markets. It is conceivable, however, that with the passage of time, the two differing prices (Oregon and the WCI) will come closer together in the advanced stages of the Oregon program. Thus, without a more robust study of the Oregon market dynamics it is unlikely that we will be able to forecast where the prices will fall in the initial stages, or how they will behave within the envelope between the floor and ceiling price. As a reference point, the market will not be functioning properly if the price continues hugging the floor price for long periods, and on the other hand, continual breaching of the ceiling price will indicate a breakdown in the allowance market. Secondary markets will never sell allowances above the ceiling price (due to state intervention at that price), and they will not develop as profitable markets if the price continues to hover around the floor price.

Price forecast is essential in determining the revenue expectation. The analysis of HB 2020 during the 2019 session benefited from the information provided by the BEAR report, which relied on the principle of linking the Oregon program with the WCI. The forecast of allowance prices principally followed the WCI forecast. The price of fuel is essential in reducing fuel consumption as well as making alternatives (electrification) more

economically feasible. Unfortunately, no similar modeling of the proposed regional arrangement is available or can be relied upon to inform the analysis for HB 4167.

2. Fuel Demand and Quantities:

The new fuel market to start in the Metro area in 2022 is likely to experience quantity leakage in both gasoline and diesel consumption (demand for fuel). The availability of cheaper fuel in the peripheries of the metro area is likely to create a new type of border effect. In addition to the traditional cross-state borders, the Metro region becomes the new and enhanced border to avoid. This will defuse gas consumption to those areas outside the Metro region and across the state borders, thus distorting the dynamics of the metro area gasoline market. The diesel market (and other use-fuels) are likely to experience larger distortions. The (currently taxed use-fuel) diesel used by light vehicles and medium-weight trucks (10,000-26,000 lb.) will likely be impacted in the same fashion as gasoline, albeit businesses will find ways to reduce their costs by further diversifying their fuel sources. Diesel used by heavy trucks (above 26,000lb.) is currently not taxed in Oregon. The availability and concentration of major truck stops around and outside the (regulated) Metro area is likely to further the dispersion and reliance of the heavy trucking fleet (using currently untaxed diesel) on the unregulated sources of diesel outside the Metro area. The ability of heavy trucks to travel long distances bypassing the metro area will likely result in near complete avoidance of the Metro area market by some segments of the heavy fleet. Naturally the non-transportation fuels are more likely to be used and thus purchased outside the Metro area fuel market as much as feasible, leaving most of the impacts upon the dyed fuel, home heating oil, other fuel uses, and propane used within the metro area.

The prices imposed by the program are likely to trend lower towards a floor as a result of weaker demand. If the floor proves to be even higher than what the market demand requires, it might impose further pressure for more dispersion of demand outside the Metro area. In essence the leakage constitutes an amplified dynamic version of what is traditionally known as the border effects. The pressures of border effects will lessen as more geographic areas are included in the program after 2025. A continuing effect of reduced and defused demand will still be witnessed as more of the state is covered by the program, but the impact will be more localized to the traditional cross state border effects at that time.

Simply proportioning fuel quantity demanded to today's percentages is an oversimplification that is not likely to occur. Section 93 of HB 4167 recognizes the need for multiple studies to explore the impacts on the fuel markets and the transportation system. These studies, when done, will allow for LRO to estimate fuel prices, impacts on demand of fuel, leakage, diversion of quantities demanded, revenues and ways to deal with these issues. However, at this time there is no credible way to assign values to both price and quantity.

3. Cost Responsibility issues and the required balance under section IX 3 (a) (3) of the constitution:

The Cost Responsibility (CR) shares are traditionally imposed in a prospective fashion. Light vehicle forecasted revenue are usually the anchor to which the heavy taxes need to be adjusted, in order to reach the right balance that covers the expected (road) program expenditures. The absence of a forecast for vehicle-weight allocated allowances, forecast for the price of allowances (from proposed auctions), as well as the lack of clarity on the

planned programs of the intended expenditures, implies that not enough is known to allow for an accurate forecast of the CR ratios needed to comply with the CR requirements. Thus, CR ratios need to be developed based on the future programs funded by the distributions of allowance revenues (90% local, 10% state). Those local programs are likely to be different than the general overall percentages (approximately two thirds for light and 1/3 for heavy). HCAS (Highway Cost Allocation Study) issued an issue paper that examined the ways by which environmentally focused programs can be treated and allocated as state wide programs. A similar examination needs to be performed for the regional projects to determine the appropriate allocators and the cost factors for the different class vehicles. Additionally, new research will examine the appropriate revenue attributions needed to achieve equity ratios.

The regional arrangement: As discussed previously, the distortions of fuel markets (gasoline and diesel) in the different phases of the program, and particularly the initial (Metro) phase of the program, precludes the ability to sift revenue sources in that regional context:

- It is not logistically possible at this time to forecast the quantities of fuel that will be likely consumed in the Metro region.
- The heavy and light consumption quantities and proportions are unknown.
- The price at which the different types of fuel will be assessed, and what revenue recovery ratios are achieved, are unknown.

Even if the revenue is to be known, cost responsibility requires knowing or approximating the possible program expenditures in each region that these revenues are to be expended on. The expenditures are the determining cost ratio that the revenue attributions need to adjust towards. Consequently, rates of taxes and/or fees will be recommended. **Thus, Program expenditures by region are not known.**

More problematic yet in the regional arrangement, is that we are not able (nor have) currently a Regional Highway Cost Allocation Model RHCAS. Cost Responsibility in a regional sense would theoretically allow for the understanding of what impacts the basic vehicles and heavy vehicles impose on the region's transportation system. If that is known, then project costs are allocated based on the traffic characteristics and cost allocators for the different project types. The planned projects will be sorted and aggregated based on their cost responsibility. Once that is known, the revenue contributions of the different vehicle classes are compared to the costs to deduce needed revenue ratios, and whether each class is paying its responsibility share, or if an adjustment in rates is needed. **Ratios are not known.**

Assuming that it is feasible to build a cost allocation model with regional parameters, the technical logistics and methods of recovering revenue in a regional arrangement do not exist at this time. For an example **there is no regional Weight Mile tax that can be levied to increase truck taxes**. Nor are there **mileage charges for light vehicles to pay for their regional use of the road**. The use of the road is based on VMT (Vehicle Mile Traveled) by the different classes. An example would be an electronic cordon fashioned around the region that can charge each vehicle the appropriate fee based on number of miles (by weight) driven within the region. New instruments of regional revenue collection are likely be developed in the future, but they are not currently available.

Therefore, a Regional Cost Allocation Study is needed, as well as a regional revenue collection mechanism from both heavy and light vehicles, prior to becoming able to allocate any of the costs and collect the required revenues.

Consequently, we are not able to utilize regional tools to comply with the constitutional requirements of cost responsibility. This is not a new issue, it was recognized in 2017, and a regional HCAS study was mandated in HB 2017. Unfortunately, that requirement was removed from statutes in the 2018 session. Recognizing the issue, ODOT contracted NERC (North-West Economic Research Center) of PSU to study obstacles and ways to perform Regional Cost Allocation Studies. NERC's report in mid-2019 sheds light on the path forward needed to conduct and implement such a regional plan. This will be needed to implement a constitutionally balanced revenue system in one or multiple regions of the state. That type of study will guide us in how to use and utilize different revenue instruments to achieve the desired regional goals and planned projects. HB 4167 phases in three different regions and contemplates county-based programs before the whole state is included, thus RHCAS research is vital for estimating, implementing and creating instruments for revenue recovery.

All these issues of the regional implementation, price of the allowances, quantity demanded in a regional setting, and the issues of regional Cost Responsibility for analysis and implementation, are not insurmountable difficulties. They can be analyzed and researched, and a reasonable solution can be devised. However, this kind of study and solid modeling necessary to estimate revenue impacts to the state will need to be developed in a reasonable time fashion. Once that is available, we can provide a much clearer and quantifiable answers to these questions of impacts to the state and its regions.

Creates, Extends, or Expands Tax Expenditure: Yes No