

**From:** [Rep BoshartDavis](#)  
**To:** [Sen Taylor](#); [Rep Reardon](#); [Sen Frederick](#); [Rep Hayden](#); [Rep Breese-Iverson](#); [Sen Girod](#); [Rep Holvey](#); [Rep Neron](#)  
**Cc:** [JWMNR Exhibits](#)  
**Subject:** SB1530 - concerns with Highway Fund  
**Date:** Wednesday, February 19, 2020 11:42:27 AM  
**Attachments:** [Memo on SB 1530 Davis.pdf](#)  
[Cap & Trade Related to Transportation.pdf](#)

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Chair Taylor, members of the Joint Committee on Ways and Means Subcommittee on Natural Resources,

As soon as the -35 were adopted, I reached out to LRO/Chris Allanach about updating the impacts to the Highway Fund. He responded: "My apologies, but given the difference in program structure between the two proposals, we haven't been able to put together a similar analysis. I'm cc'ing Mazen on this message as he is more familiar with the technical details and can better articulate the challenges involved." Monday night, Mazen was able to get back to me. I have attached his report – and also the longer report with the impacts to the Highway fund to HB2020 from the 2019 Legislative Session.

The following questions were asked regarding transportation and the highway fund in regards to HB2020 during the 2019 session (full report attached):

1. The impact of HB 2020 on the ability of ODOT to meet its obligation to the debt service on bonds being sold for the 2017 Transportation Package.
2. The impact of HB 2020 on the viability of the Highway Trust Fund out to 2055.
3. How might HB 2020 impact Cost Responsibility?
4. What modeling has been done on impact of increased fuel costs across sectors ie:
  - a. Trucking
  - b. Passenger
  - c. Recreational Vehicle

Two excerpts from Mazen's report (attached):

*You asked about the impacts of the SB 1530 on the highway fund. Unfortunately, at this time I am only able to provide you with the factors that hamper our ability to detail those impacts.*

*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.*

I hope these concerns will be taken seriously.

Please submit the two attachments and this email into the record for SB1530. Thank you.

Shelly



## Shelly Boshart Davis

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Legislative Revenue Officer  
Christopher Allanach

To: Representative Shelly Boshart Davis  
From: Mazen Malik, Senior Economist  
Subject: Impacts of SB 1530 on the highway Fund  
Date: February 17, 2020

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You asked about the impacts of the SB 1530 on the highway fund. Unfortunately, at this time I am only able to provide you with the factors that hamper our ability to detail those impacts.

SB 1530 defines several covered entities. 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 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 the regulation. 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. Keeping in mind that the secondary market will likely be at a higher price, what comes to the state coffers is only the price of those same allowances bought through the exchange.

The bill imposes a fee on each ton of CO<sub>2</sub> emissions. This fee is levied on all types of emissions caused by combustion of fossil fuel regardless of its use by vehicle type or weight class. This requires the development of a mechanism to trace the source of the payment to the type of vehicle and its weight class. Although this information doesn't seem to be available at this point, DEQ and ODOT seem to be confident that it can trace the allowance revenue coming from the different uses of transportation fuel as time progresses towards implementation. At this

time, however, it is not yet obvious that we can isolate transportation revenues coming from different vehicle classes, nor that it is obvious how the mechanics will work for tracing heavy and light payments (or who is going to do it?).

The issues that arise in estimating revenues going to transportation are:

### **1. Prices of Allowances:**

Section 28 of SB 1530 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 SB 1530.

### **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 SB 1530 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 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 class 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 there are **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 the light on the path forward needed to conduct and implement such 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. SB 1530 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.

The next section will give a general idea of how a regional HCAS can emulate the general statewide process. And how a regional model would work in general terms as the state HCAS does.

### **HCAS on The State-Wide Level in General:**

It might be beneficial to explain the HCAS process on the state level. If (for an example) this was a state-wide program, then revenue generated from fuel allowances for the year 2022 would come from both light and heavy fuels. The light vehicles are expected to consume about 2 billion gallons of fuel a year, while heavy vehicles consume approximately 500 million gallons a year. Assuming the allowance price will reach \$20 in 2022, then we can expect the transportation revenues generated from the Cap and Invest program to reach approximately \$500 million (at 20 cents/gallon). This amount however is proportioned to \$400 million (2 billion gallons at 20 cents) from light vehicles and \$100 million from heavy vehicles. This allocation means that the heavy and light vehicles revenues are out of balance. To bring the payments into constitutional balance (at the 2/3 to 1/3 ratios for the current state program), the total amounts of new revenue should be \$600 million (or alternatively down to \$300 million). the choice will be either to raise Heavy vehicles revenue by \$100 million or reduce the light vehicle payments by \$200 million or some other combination of the two.

In other words, the allocation necessitates that if the light vehicle contribution from allowances is \$400 million, then the heavy vehicles are responsible for \$200 million. Revenue from diesel allowances yield \$100 million, and an additional \$100 million needs to be raised some other way. Assuming Allowance revenues will not be refunded, then it means that the weight mile tax (or other heavy vehicles tax instruments) should be raised by about 20% to reach that balancing amount. On the other hand, if the choice is to reduce light vehicle taxes by \$200 million, then the gas tax (from the transportation gas tax revenues and not allowance revenues) needs to be reduced by about 10 cents. These changes can also be done in a combination of half way (half the WM increase and half of the gas tax decrease). The suggested changes in the tax rates could be done in a separate bill rather than in a state-wide C&I legislation.

Certainly, the rate of increases or decreases can be further calibrated once the different types of projects that are chosen to be built with the new revenue are known. This calibration needs to be performed through the biannual cost allocation process. That is the way, in my opinion, that will keep us as closely aligned to the constitutional requirements as possible, while continuing the traditional cost allocation process.

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.



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Legislative Revenue Officer  
Christopher Allanach

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To: Representative: Caddy McKeown,  
Co-Chair of The Joint Committee on Transportation

From: Mazen Malik, Senior Economist,  
Legislative Revenue Office

CC: Senator: Lee Beyer, Senator: Brian Boquist, Representative: Ron Noble

Date: May 22, 2019

Subject: Impacts on the Highway Fund by HB 2020

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You Asked the following questions relating to HB 2020 and Transportation:

1. The impact of HB 2020 on the ability of ODOT to meet its obligation to the debt service on bonds being sold for the 2017 Transportation Package.
  2. The impact of HB 2020 on the viability of the Highway Trust Fund out to 2055.
  3. How might HB 2020 impact Cost Responsibility?
  4. What modeling has been done on impact of increased fuel costs across sectors ie:
    - a. Trucking
    - b. Passenger
    - c. Recreational Vehicle
- 
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**1)** HB 2020 could potentially reduce the revenue stream to the Highway Fund by as much as \$18.5 billion by 2050. ODOT share of that reduction is about 55% of the totals shown in Table 2 and Table 4. The rest of the reductions impact the revenues of Cities and Counties. ODOT uses its share to service the outstanding debt of the agency. Current outstanding bonds are about \$3.2 Billion. Those Bonds are expected to be fully paid by 2042. As the current debt is paid, it opens more capacity for the state and allows for the lower amounts of revenue to finance a bigger debt amount. HB 2017 authorizes two sets of bonds. \$483 million for the projects specified in the bill, and another \$450 for the Rose Quarter project. A third amount of bonds (not specified but) assumed to be approximately \$250 million to finance the I-205 projects. According to the Division of Debt Management, the debt service for current outstanding bonds seem not to be jeopardized by the reduction to the highway



Fund (as it gets slowly paid off by 2042). Moreover, the two sets of bonds specified in HB 2017 will also be secured and not likely to push the capacity below the (critical) 3 times coverage except for one year (2035). However, the two scenarios of reductions to the Highway Fund (Table 2, and Table 4), will push the capacity snugly against that ceiling, and consequently limit the ability of issuing any more Highway user bonds. In other words, the unspecified amount of bonds for the Abernathy Bridge would likely not be issued under the new tight debt capacity ceiling. Furthermore, future bonding will also be curtailed until a replacement of the lost revenues are found. This could be new revenue in the form of higher registration fees, or Road Use Charge (RUC) (per mile charge). Until that replacement is found, it is difficult to see how the bonding prospects will not be significantly impacted.

- 2) The Cap and Trade program (in HB 2020) stated two distinct but connected goals. The first is to reduce CO<sup>2</sup> emissions in the state to 45% (below 1990 levels) by the 2035. The second is to extend that reduction to 80% (below 1990 levels) by the year 2050. For the transportation sector these goals translate to a reduction in the combustion of fuel equivalent to all the fuel amounts currently used by Oregon's light fleet. According to the BEAR<sup>1</sup> report, achieving that reduction in transportation fuel emissions requires complete electrifications of Oregon's light fleet by 2050. Naturally that transformation occurs gradually over the coming thirty years. As we approach that landmark, the the Gas-Tax that has been the staple of Highway funding since 1917, will gradually become quaint until it no longer exists by 2051. Much of the highway funding system is dependent on the gas tax, and in the absence of an alternative funding mechanism, the Highway Fund is likely to experience significant reductions.

To model the reduction to the Highway Fund I utilized most of the assumptions proposed by the BEAR report in addition to the HCAS and the Carbon Tax study of 2015. Those assumptions are:

- The moderate scenario profile for the full electrification of the light fleet, with the Plug-in-Hybrids Electric Vehicles (PHEV) playing a gateway role to full electrification before they fade away by 2048. (see Table 1)
- The Heavy fleet to continue the current path of (Diesel) fuel use that follows the general reduction path in fuel use caused by the general improvement of fuel efficiency.
- The higher EV registration fees instituted by HB 2017 will allow for some recovery of lost funds. The EV registration fee of \$115, is parsed into \$25 to match the general registration increases and \$90 to compensate for some fuel revenue loss. At the time of HB 2017, the registration fee was estimated based on an annual 4500 miles per Electric Vehicle (the current range of the EV fleet). However, for PHEV that difference is only \$10. As the EV's improve their range increased registration fees are needed. To allow for the registration fees to fully compensate for the losses caused by the reduction in fuel use, EV fees would need to double, while the HPEV registration fees need to go up by ten folds.

Two sets of results are shown in tables (2) and (4). Table (2) shows the reductions caused by the loss of the fuel tax (\$10.1 billion), registration revenues from EV's and HPEV's are added, then the adjustment

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<sup>1</sup> BEAR: Berkeley Economic Advising and Research. Oregon's Cap-and-Trade Program (HB 2020): An Economic Assessment. Roland-Holst, Evans, Heft-Neal, and Behnke.

of the Weight Mile payments to the cost responsibility proportions are subtracted (\$3.4 billion). The result is a total reduction of \$2.7 billion by 2035, and \$10.1 billion by 2050.

Table (4) include the amounts from table (2), with the further subtraction of adjustments of heavy taxes and fees to compensate for the Revenues going to the Transporting Decarbonization Fund (TDCF) from emission allowances. That total heavy adjustment comes to \$8.5 billion, leaving the total reduction in the Highway Fund (HF) at \$3 billion by 2035, and \$18.55 billion by the year 2050.

- 3)** As to the Cost Responsibility effects: Adjustments are needed for the heavy payments to balance two separate revenue reduction effects caused by the lower light fleet payments.

**First:** As a result of the electrification of the fleet and the reduced fuel use, the light fleet will contribute less to the Highway Fund (\$10.144 billion), thus the Heavy payments will have to be reduced (through a reduction in Weight-Mile Taxes) commensurate to the cost responsibility requirements. This first adjustment comes to \$3.431 billion by the year 2050. (Table 2)

**Second:** HB 2020 charges allowance prices to fuel use based on emissions equivalency of fuel used. Revenues from the sale of allowances (\$32 Billion) are directed to a subaccount of the Highway Fund (Transportation Decarbonization Fund TDCF) which is restricted in its uses to mitigation and adaptation.

According to the white paper that was done by the Highway Cost Allocation Study (HCAS)<sup>2</sup> consultant (ECO Northwest), the TDCF projects carry a different cost responsibility (28% for Heavy) than the general highway project mix. This is likely to require further adjustment to the Light/Heavy balance and proportionality. Therefore, the heavy payments will require further adjustments to maintain the cost responsibility ratios. Since revenue from allowances are not allowed to be reduced, then a reduction must occur to the main Highway Fund taxes and fees. Thus, a reduction in Weight Mile tax rates and Heavy Registration fees (\$8.477 Billion). (Table 4). The adjustments to heavy taxes are positive (increase) at the beginning before turning negative (decrease) in 2031. Moreover, as we approach advanced years, there will be more reductions required than heavy contributions (all heavy payments to the highway Fund will be reduced to 0). In that case, the light payments would be the instrument of reduction to adjusted down accordingly (at approximately twice the amount needed for heavy reduction). This process effectively sets in motion a downward spiral of Highway Fund revenues.

- 4)** The Price elasticity of Demand works to change fuel consumption in a similar way as electrification. In other words, faced with the higher prices of fuel, consumers will either use less fuel or move away from the Internal Combustion Engines (ICE) to Battery Electric Vehicles (BEV) as an alternative for their transportation needs. Therefore, the estimates based on the electrification assumption under HB 2020 are roughly equivalent to the price effects imposed by the allowance prices.

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<sup>2</sup> Cap-and-Invest Issue Paper, Oregon Highway Cost Allocation Study, October 2018. EcoNorthwest, for DAS/OEA.

- a) Trucking will experience elevated costs from the allowance prices on Diesel estimated (in Table 3) at \$17.44 billion through 2050, however, the industry is likely to experience a reduction in tax rates (Weight Mile and Registration Fees) equivalent to the cost responsibility adjustment of about \$11.8 billion (As shown in Table 4). That leaves the Trucking industry encumbered by about \$5.2 billion (over 30 years), or about \$173 million average annual additional costs.
- b) The passenger vehicle fleet effects are explained in the body of the answer to question (4), however, I was able to consult the results of SB 306 (Carbon Tax Study<sup>3</sup>) that LRO contracted PSU's Northwest Economic Research Center (NERC). That study examined a tax that operates in much the same way the allowance prices do. According to that study a \$20 tax on CO<sup>2</sup> emissions reduces fuel consumption by 2% in short run and about 7% in the long run. Similarly Cap and Trade allowance prices (as shown in table 3 as WCI Med price) impose about 22 cents on a gallon of gas in 2021 increasing to above \$3 dollars by 2050<sup>4</sup>. That large price impact will facilitate the abandoning of gasoline by the consumers, and likely to push the consumers in favor of electric vehicles or other alternatives.
- c) Recreational Vehicles impacts were not estimated explicitly. However, it is reasonable to assume that they will be impacted in the same way as the light fleet reacts to the higher fuel prices. I hope to have the time to refine the estimate of that impact at a later date.

In summary; the steps for estimating the financial impacts to the Highway Fund are the following:

**Step 1:** The change of the fleet and the move to PHEV and EV vehicles will generate an additional registration revenue (as mandated by HB 2017) of \$210 million through the year 2035, extending to \$3.4 billion by 2050. Table 1 shows that process.

**Step 2:** The fuel tax reductions as a result of changing the fleet mix are \$2 Billion through the year 2035, extending to \$10.1 billion by 2050. (Table 2)

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<sup>3</sup> Economic and Emissions Impacts of a Clean Air Tax or Fee in Oregon (SB306)  
<https://www.oregonlegislature.gov/lro/Documents/RR%204-14%20SB%20306%20Clean%20Air.pdf>

<sup>44</sup> A dollar of allowance price represents about one cent on a gallon of fuel. The WCI price in Table 3.

Table 1 Fleet Change to full electrification and Higher Registration Fee revenue

Year	Fleet Vehicles Millions	ICE %	PHEV %	BEV %	ICE Millions	PHEV Millions	BEV Millions	Reg recovery		
								PHEV	BEV	Total
2021	3.80319	97.6%	1.5%	0.1%	3.7128	0.0588	0.0022	\$ 587,572	\$ 194,747	\$ 782,318
2022	3.86135	96.9%	2.1%	0.1%	3.7399	0.0803	0.0038	\$ 802,691	\$ 331,188	\$ 1,133,879
2023	3.91951	95.8%	2.8%	0.2%	3.7568	0.1086	0.0061	\$ 1,086,123	\$ 534,017	\$ 1,620,140
2024	3.97862	94.5%	3.7%	0.2%	3.7614	0.1460	0.0095	\$ 1,459,863	\$ 829,936	\$ 2,289,799
2025	4.03868	92.9%	4.8%	0.4%	3.7500	0.1950	0.0144	\$ 1,950,079	\$ 1,253,992	\$ 3,204,071
2026	4.09875	90.7%	6.3%	0.5%	3.7171	0.2587	0.0213	\$ 2,586,892	\$ 1,850,741	\$ 4,437,633
2027	4.15881	88.0%	8.2%	0.7%	3.6580	0.3404	0.0307	\$ 3,404,215	\$ 2,674,890	\$ 6,079,104
2028	4.21888	84.6%	10.5%	1.0%	3.5675	0.4437	0.0436	\$ 4,437,137	\$ 3,789,784	\$ 8,226,921
2029	4.27990	80.4%	13.4%	1.4%	3.4419	0.5719	0.0605	\$ 5,718,970	\$ 5,264,591	\$ 10,983,561
2030	4.33996	75.5%	16.8%	1.9%	3.2762	0.7270	0.0823	\$ 7,270,267	\$ 7,162,384	\$ 14,432,651
2031	4.40289	69.8%	19.3%	2.7%	3.0725	0.8517	0.1170	\$ 8,516,773	\$ 10,178,719	\$ 18,695,492
2032	4.46581	63.4%	21.7%	3.7%	2.8311	0.9708	0.1634	\$ 9,707,526	\$ 14,213,568	\$ 23,921,094
2033	4.53065	56.5%	23.7%	4.9%	2.5597	1.0742	0.2239	\$ 10,741,684	\$ 19,476,353	\$ 30,218,037
2034	4.59548	49.3%	25.0%	6.5%	2.2674	1.1511	0.3005	\$ 11,510,639	\$ 26,146,946	\$ 37,657,585
2035	4.66127	42.2%	25.6%	8.5%	1.9674	1.1933	0.3952	\$ 11,933,343	\$ 34,385,179	\$ 46,318,522
2036	4.72800	35.4%	25.3%	10.8%	1.6731	1.1965	0.5094	\$ 11,965,455	\$ 44,315,339	\$ 56,280,794
2037	4.79570	29.1%	24.2%	13.4%	1.3962	1.1610	0.6442	\$ 11,609,698	\$ 56,045,475	\$ 67,655,174
2038	4.86530	23.5%	22.4%	16.5%	1.1456	1.0914	0.8011	\$ 10,914,409	\$ 69,695,066	\$ 80,609,475
2039	4.93490	18.8%	20.2%	19.9%	0.9259	0.9952	0.9813	\$ 9,951,787	\$ 85,369,277	\$ 95,321,065
2040	5.00545	14.8%	17.6%	23.7%	0.7389	0.8815	1.1868	\$ 8,814,510	\$ 103,254,393	\$ 112,068,903
2041	5.07791	11.5%	15.0%	28.0%	0.5837	0.7593	1.4208	\$ 7,592,707	\$ 123,610,610	\$ 131,203,317
2042	5.15037	8.9%	12.3%	32.7%	0.4571	0.6360	1.6863	\$ 6,359,697	\$ 146,705,481	\$ 153,065,177
2043	5.22474	6.8%	9.9%	38.1%	0.3556	0.5177	1.9882	\$ 5,176,986	\$ 172,977,628	\$ 178,154,614
2044	5.29910	5.2%	7.7%	44.0%	0.2752	0.4083	2.3315	\$ 4,082,925	\$ 202,839,904	\$ 206,922,829
2045	5.37538	3.9%	5.8%	50.7%	0.2121	0.3103	2.7232	\$ 3,103,172	\$ 236,921,945	\$ 240,025,117
2046	5.45260	3.0%	4.1%	58.2%	0.1629	0.2247	3.1707	\$ 2,247,496	\$ 275,851,288	\$ 278,098,784
2047	5.53078	2.3%	2.7%	66.6%	0.1249	0.1517	3.6827	\$ 1,516,825	\$ 320,393,711	\$ 321,910,535
2048	5.61087	1.7%	1.6%	76.1%	0.0955	0.0906	4.2701	\$ 905,639	\$ 371,496,886	\$ 372,402,525
2049	5.69096	1.3%	0.7%	86.9%	0.0730	0.0404	4.9433	\$ 403,859	\$ 430,062,905	\$ 430,466,764
2050	5.77295	1.0%	0.0%	99.0%	0.0557	0.0000	5.7173	\$ -	\$ 497,402,466	\$ 497,402,466
<b>Total to 2035</b>								\$ 81,713,772	\$ 128,287,036	\$ 210,000,808
<b>Total to 2050</b>								\$166,358,938	\$3,265,229,409	\$3,431,588,347

**Step 3:** Add the new revenue being generated from higher registrations \$3.4 billion (in 2050) as shown in Table (2).

**Step 4:** The resulting revenue change to the light fleet payment, requires adjusting the Heavy overpayment as the light vehicle pay less. This leaves a reduction of heavy payments of \$896 Million through the year 2035, extending to \$3.4 billion by 2050.

**Step 5:** The total impact to the Highway Fund is a reduction of \$2.7 Billion through the year 2035, extending to \$10.1 billion by 2050. The last column of Table 2 shows that summation.

Table 2 Impacts to the Highway Fund before considering Allowance Revenues.

Year	Fuel Gallons Reduction	Fuel Tax Reduction	Reg recovery Total	Weight Mile Adjustment	Total HF Revenue
2021	(101,576,925)	\$ (36,567,693)	\$ 782,318	\$ (17,892,687)	\$ (53,678,062)
2022	(113,392,685)	\$ (43,089,220)	\$ 1,133,879	\$ (20,977,671)	\$ (62,933,012)
2023	(129,159,521)	\$ (49,080,618)	\$ 1,620,140	\$ (23,730,239)	\$ (71,190,717)
2024	(146,366,630)	\$ (58,546,652)	\$ 2,289,799	\$ (28,128,426)	\$ (84,385,279)
2025	(166,998,632)	\$ (66,799,453)	\$ 3,204,071	\$ (31,797,691)	\$ (95,393,072)
2026	(189,216,572)	\$ (75,686,629)	\$ 4,437,633	\$ (35,624,498)	\$ (106,873,494)
2027	(215,282,770)	\$ (86,113,108)	\$ 6,079,104	\$ (40,017,002)	\$ (120,051,005)
2028	(254,683,150)	\$ (101,873,260)	\$ 8,226,921	\$ (46,823,169)	\$ (140,469,508)
2029	(301,032,362)	\$ (120,412,945)	\$ 10,983,561	\$ (54,714,692)	\$ (164,144,076)
2030	(355,791,688)	\$ (142,316,675)	\$ 14,432,651	\$ (63,942,012)	\$ (191,826,037)
2031	(427,709,261)	\$ (171,083,704)	\$ 18,695,492	\$ (76,194,106)	\$ (228,582,318)
2032	(510,638,535)	\$ (204,255,414)	\$ 23,921,094	\$ (90,167,160)	\$ (270,501,480)
2033	(603,036,299)	\$ (241,214,520)	\$ 30,218,037	\$ (105,498,241)	\$ (316,494,724)
2034	(704,517,080)	\$ (281,806,832)	\$ 37,657,585	\$ (122,074,623)	\$ (366,223,870)
2035	(809,426,446)	\$ (323,770,579)	\$ 46,318,522	\$ (138,726,028)	\$ (416,178,085)
2036	(916,837,315)	\$ (366,734,926)	\$ 56,280,794	\$ (155,227,066)	\$ (465,681,198)
2037	(1,019,322,070)	\$ (407,728,828)	\$ 67,655,174	\$ (170,036,827)	\$ (510,110,481)
2038	(1,113,914,293)	\$ (445,565,717)	\$ 80,609,475	\$ (182,478,121)	\$ (547,434,363)
2039	(1,198,856,190)	\$ (479,542,476)	\$ 95,321,065	\$ (192,110,706)	\$ (576,332,117)
2040	(1,273,045,357)	\$ (509,218,143)	\$ 112,068,903	\$ (198,574,620)	\$ (595,723,860)
2041	(1,336,320,449)	\$ (534,528,180)	\$ 131,203,317	\$ (201,662,431)	\$ (604,987,294)
2042	(1,389,269,299)	\$ (555,707,719)	\$ 153,065,177	\$ (201,321,271)	\$ (603,963,813)
2043	(1,432,672,656)	\$ (573,069,063)	\$ 178,154,614	\$ (197,457,224)	\$ (592,371,673)
2044	(1,467,692,760)	\$ (587,077,104)	\$ 206,922,829	\$ (190,077,137)	\$ (570,231,412)
2045	(1,495,434,119)	\$ (598,173,647)	\$ 240,025,117	\$ (179,074,265)	\$ (537,222,795)
2046	(1,517,027,612)	\$ (606,811,045)	\$ 278,098,784	\$ (164,356,131)	\$ (493,068,392)
2047	(1,533,496,215)	\$ (613,398,486)	\$ 321,910,535	\$ (145,743,975)	\$ (437,231,926)
2048	(1,545,740,301)	\$ (618,296,121)	\$ 372,402,525	\$ (122,946,798)	\$ (368,840,393)
2049	(1,554,554,859)	\$ (621,821,944)	\$ 430,466,764	\$ (95,677,590)	\$ (287,032,770)
2050	(1,560,588,038)	\$ (624,235,215)	\$ 497,402,466	\$ (63,416,375)	\$ (190,249,124)
<b>Total to 2035</b>	<b>(5,028,828,555)</b>	<b>\$ (2,002,617,301)</b>	<b>\$ 210,000,808</b>	<b>\$ (896,308,246)</b>	<b>\$ (2,688,924,739)</b>
<b>Total to 2050</b>	<b>(25,383,600,088)</b>	<b>\$ (10,144,525,914)</b>	<b>\$3,431,588,347</b>	<b>\$(3,356,468,783)</b>	<b>\$(10,069,406,350)</b>

**Step 6:** During the period from 2021 to 2050, HB 2020 charges a price for the allowance to emit CO<sub>2</sub>. That price will be charged on fuel emission based on emission factors of fuel type (Diesel and Gasoline). For the price of allowances, I Once again adopted the price forecast reported by the BEAR report. The price that was considered for the purpose of these estimates was the medium price of the WCI (Western Climate Initiative). However, those prices were reported in constant dollars, so they were adjusted to reflect current dollar prices. It is worth noting that the Med WCI allowance prices were relatively close to the Core price estimates (If Oregon did not Join the WCI).

The revenue generated from the sale of allowances and credited to the Transportation Decarbonization Fund reaches \$14 billion in 2035 and extends to \$32 billion by 2050.

Table 3 Revenue from Allowances by Light and Heavy payments.

Year	Transportation Allowances Qty		Allowance Price WCI Med	Transportation Allowance Revenues		Transp Decarb Fund (TDCF) Total	Heavy Over (under) payment
	Light Fleet	Med&heavy		Light Fleet	Med&heavy		
2021	14,387,861	4,902,314	\$ 22.87	\$ 329,034,940	\$ 112,110,655	\$ 441,145,595	\$ (11,410,112)
2022	14,279,723	4,901,757	\$ 26.01	\$ 371,377,037	\$ 127,481,455	\$ 498,858,493	\$ (12,198,923)
2023	14,120,159	4,896,123	\$ 29.55	\$ 417,300,774	\$ 144,697,790	\$ 561,998,563	\$ (12,661,808)
2024	13,916,824	4,880,621	\$ 33.62	\$ 467,906,166	\$ 164,094,391	\$ 632,000,557	\$ (12,865,765)
2025	13,652,247	4,855,380	\$ 38.23	\$ 521,908,334	\$ 185,615,121	\$ 707,523,454	\$ (12,491,446)
2026	13,356,530	4,824,739	\$ 43.44	\$ 580,252,056	\$ 209,602,679	\$ 789,854,735	\$ (11,556,647)
2027	13,020,808	4,792,382	\$ 49.38	\$ 642,944,067	\$ 236,639,208	\$ 879,583,274	\$ (9,644,109)
2028	12,632,520	4,781,652	\$ 56.10	\$ 708,657,584	\$ 268,240,538	\$ 976,898,122	\$ (5,290,936)
2029	12,181,734	4,770,946	\$ 63.74	\$ 776,496,170	\$ 304,112,799	\$ 1,080,608,969	\$ 1,542,287
2030	11,655,291	4,760,264	\$ 72.45	\$ 844,436,297	\$ 344,885,378	\$ 1,189,321,676	\$ 11,875,309
2031	10,974,416	4,749,606	\$ 77.73	\$ 853,063,299	\$ 369,196,341	\$ 1,222,259,640	\$ 26,963,642
2032	10,194,457	4,738,971	\$ 83.41	\$ 850,271,240	\$ 395,255,100	\$ 1,245,526,340	\$ 46,507,724
2033	9,329,309	4,728,361	\$ 89.50	\$ 834,982,515	\$ 423,193,010	\$ 1,258,175,525	\$ 70,903,863
2034	8,382,445	4,717,774	\$ 96.05	\$ 805,145,970	\$ 453,148,997	\$ 1,258,294,967	\$ 100,826,406
2035	7,404,781	4,707,211	\$ 103.09	\$ 763,364,557	\$ 485,269,962	\$ 1,248,634,519	\$ 135,652,296
2036	6,404,665	4,696,671	\$ 110.66	\$ 708,719,507	\$ 519,718,423	\$ 1,228,437,930	\$ 175,755,802
2037	5,448,982	4,686,156	\$ 118.79	\$ 647,282,163	\$ 556,666,329	\$ 1,203,948,492	\$ 219,560,751
2038	4,564,443	4,675,663	\$ 127.53	\$ 582,104,155	\$ 596,288,053	\$ 1,178,392,208	\$ 266,338,235
2039	3,766,877	4,665,194	\$ 136.93	\$ 515,793,187	\$ 638,798,480	\$ 1,154,591,667	\$ 315,512,813
2040	3,066,211	4,654,749	\$ 147.03	\$ 450,834,344	\$ 684,401,919	\$ 1,135,236,263	\$ 366,535,765
2041	2,463,897	4,644,327	\$ 157.90	\$ 389,040,399	\$ 733,322,327	\$ 1,122,362,726	\$ 419,060,763
2042	1,954,642	4,633,928	\$ 169.58	\$ 331,468,018	\$ 785,821,031	\$ 1,117,289,049	\$ 472,980,097
2043	1,531,416	4,623,553	\$ 182.14	\$ 278,937,403	\$ 842,150,097	\$ 1,121,087,501	\$ 528,245,597
2044	1,183,751	4,613,201	\$ 195.64	\$ 231,588,748	\$ 902,525,181	\$ 1,134,113,930	\$ 584,973,281
2045	901,703	4,602,872	\$ 210.19	\$ 189,526,966	\$ 967,467,206	\$ 1,156,994,172	\$ 643,508,838
2046	675,088	4,592,566	\$ 225.82	\$ 152,446,780	\$ 1,037,082,640	\$ 1,189,529,420	\$ 704,014,402
2047	494,693	4,582,283	\$ 242.65	\$ 120,035,627	\$ 1,111,875,315	\$ 1,231,910,942	\$ 766,940,251
2048	352,412	4,572,024	\$ 260.74	\$ 91,887,587	\$ 1,192,106,542	\$ 1,283,994,129	\$ 832,588,186
2049	241,084	4,561,787	\$ 280.21	\$ 67,553,086	\$ 1,278,238,081	\$ 1,345,791,167	\$ 901,416,554
2050	154,874	4,551,573	\$ 301.16	\$ 46,642,099	\$ 1,370,760,629	\$ 1,417,402,728	\$ 973,887,865
<b>Total to 2035</b>				\$ 9,767,141,007	\$ 4,223,543,424	\$ 13,990,684,430	\$ 306,151,783
<b>Total to 2050</b>				\$ 14,571,001,077	\$ 17,440,765,676	\$ 32,011,766,753	\$ 8,477,470,985

While the fuel consumption is going down for the light fleet matching the electrification levels of the light fleet, the Heavy fleet continues the profile of general decline in fuel as assumed by the BEAR report. The result is that the light fleet will approach low levels of payments as the electrification of the fleet approaches 100% in 2050. This dichotomy in fuel emissions of the two fleets, results by 2041 in virtually flipping the level of payments between the light and heavy fleets. This change in pattern changes the amounts that needs to be recovered from the Cost Responsibility proportions. TDCF projects carry a different cost responsibility (28% for Heavy) than the general highway project mix (34%) (Table 3). It is not clear what mix of projects will the revenue form HB 2020 be spent on, but assuming the same project mix and the cost responsibility of 28%, then adjustments to the heavy payments will need to be done.

**Step 7:** Because there is no mechanism of reducing the allowance prices or refunding the revenue payments, then the adjustments must be done in the payments of fees and taxes that go to the main highway fund. If that happens then an amount equal to \$306 million has to be adjusted by 2035, extending to \$8.5 Billion in 2050.

**Step 8:** The total results of all these adjustments to the highway fund are likely to reach reductions of about \$3 billion in 2035, and \$18.55 billion in 2050. Table (4) summarizes all the additions and subtractions to show the total effects in the last column of the table.

Table 4 Changes and adjustments to revenue going to the Highway Fund Including Allowance Revenues.

Year	Fuel Tax Reduction	Reg recovery Total	Subtotal HF Revenue	Weight Mile Adjustment (HF)	Weight Mile Adjustment (TDCF)	Weight Mile Adjustment (Total)	Total HF Revenue
2021	\$ (36,567,693)	\$ 782,318	\$ (35,785,374)	\$ (17,892,687)	\$ 11,410,112	\$ (6,482,576)	\$ (42,267,950)
2022	\$ (43,089,220)	\$ 1,133,879	\$ (41,955,342)	\$ (20,977,671)	\$ 12,198,923	\$ (8,778,748)	\$ (50,734,090)
2023	\$ (49,080,618)	\$ 1,620,140	\$ (47,460,478)	\$ (23,730,239)	\$ 12,661,808	\$ (11,068,431)	\$ (58,528,909)
2024	\$ (58,546,652)	\$ 2,289,799	\$ (56,256,853)	\$ (28,128,426)	\$ 12,865,765	\$ (15,262,662)	\$ (71,519,515)
2025	\$ (66,799,453)	\$ 3,204,071	\$ (63,595,381)	\$ (31,797,691)	\$ 12,491,446	\$ (19,306,244)	\$ (82,901,626)
2026	\$ (75,686,629)	\$ 4,437,633	\$ (71,248,996)	\$ (35,624,498)	\$ 11,556,647	\$ (24,067,851)	\$ (95,316,847)
2027	\$ (86,113,108)	\$ 6,079,104	\$ (80,034,004)	\$ (40,017,002)	\$ 9,644,109	\$ (30,372,893)	\$ (110,406,896)
2028	\$ (101,873,260)	\$ 8,226,921	\$ (93,646,339)	\$ (46,823,169)	\$ 5,290,936	\$ (41,532,233)	\$ (135,178,572)
2029	\$ (120,412,945)	\$ 10,983,561	\$ (109,429,384)	\$ (54,714,692)	\$ (1,542,287)	\$ (56,256,979)	\$ (165,686,363)
2030	\$ (142,316,675)	\$ 14,432,651	\$ (127,884,025)	\$ (63,942,012)	\$ (11,875,309)	\$ (75,817,321)	\$ (203,701,346)
2031	\$ (171,083,704)	\$ 18,695,492	\$ (152,388,212)	\$ (76,194,106)	\$ (26,963,642)	\$ (103,157,748)	\$ (255,545,960)
2032	\$ (204,255,414)	\$ 23,921,094	\$ (180,334,320)	\$ (90,167,160)	\$ (46,507,724)	\$ (136,674,884)	\$ (317,009,205)
2033	\$ (241,214,520)	\$ 30,218,037	\$ (210,996,482)	\$ (105,498,241)	\$ (70,903,863)	\$ (176,402,104)	\$ (387,398,586)
2034	\$ (281,806,832)	\$ 37,657,585	\$ (244,149,247)	\$ (122,074,623)	\$ (100,826,406)	\$ (222,901,030)	\$ (467,050,277)
2035	\$ (323,770,579)	\$ 46,318,522	\$ (277,452,057)	\$ (138,726,028)	\$ (135,652,296)	\$ (274,378,325)	\$ (551,830,381)
2036	\$ (366,734,926)	\$ 56,280,794	\$ (310,454,132)	\$ (155,227,066)	\$ (175,755,802)	\$ (330,982,869)	\$ (641,437,001)
2037	\$ (407,728,828)	\$ 67,655,174	\$ (340,073,654)	\$ (170,036,827)	\$ (219,560,751)	\$ (389,597,578)	\$ (729,671,233)
2038	\$ (445,565,717)	\$ 80,609,475	\$ (364,956,242)	\$ (182,478,121)	\$ (266,338,235)	\$ (448,816,356)	\$ (813,772,598)
2039	\$ (479,542,476)	\$ 95,321,065	\$ (384,221,411)	\$ (192,110,706)	\$ (315,512,813)	\$ (507,623,518)	\$ (891,844,930)
2040	\$ (509,218,143)	\$ 112,068,903	\$ (397,149,240)	\$ (198,574,620)	\$ (366,535,765)	\$ (565,110,385)	\$ (962,259,625)
2041	\$ (534,528,180)	\$ 131,203,317	\$ (403,324,863)	\$ (201,662,431)	\$ (419,060,763)	\$ (620,723,195)	\$ (1,024,048,057)
2042	\$ (555,707,719)	\$ 153,065,177	\$ (402,642,542)	\$ (201,321,271)	\$ (472,980,097)	\$ (674,301,368)	\$ (1,076,943,911)
2043	\$ (573,069,063)	\$ 178,154,614	\$ (394,914,449)	\$ (197,457,224)	\$ (528,245,597)	\$ (725,702,822)	\$ (1,120,617,270)
2044	\$ (587,077,104)	\$ 206,922,829	\$ (380,154,275)	\$ (190,077,137)	\$ (584,973,281)	\$ (775,050,418)	\$ (1,155,204,693)
2045	\$ (598,173,647)	\$ 240,025,117	\$ (358,148,530)	\$ (179,074,265)	\$ (643,508,838)	\$ (822,583,103)	\$ (1,180,731,633)
2046	\$ (606,811,045)	\$ 278,098,784	\$ (328,712,261)	\$ (164,356,131)	\$ (704,014,402)	\$ (868,370,533)	\$ (1,197,082,794)
2047	\$ (613,398,486)	\$ 321,910,535	\$ (291,487,951)	\$ (145,743,975)	\$ (766,940,251)	\$ (912,684,226)	\$ (1,204,172,177)
2048	\$ (618,296,121)	\$ 372,402,525	\$ (245,893,595)	\$ (122,946,798)	\$ (832,588,186)	\$ (955,534,983)	\$ (1,201,428,579)
2049	\$ (621,821,944)	\$ 430,466,764	\$ (191,355,180)	\$ (95,677,590)	\$ (901,416,554)	\$ (997,094,144)	\$ (1,188,449,324)
2050	\$ (624,235,215)	\$ 497,402,466	\$ (126,832,749)	\$ (63,416,375)	\$ (973,887,865)	\$ (1,037,304,240)	\$ (1,164,136,989)
<b>Total to 2035</b>	<b>\$ (2,002,617,301)</b>	<b>\$ 210,000,808</b>	<b>\$(1,792,616,493)</b>	<b>\$ (896,308,246)</b>	<b>\$ (306,151,783)</b>	<b>\$ (1,202,460,030)</b>	<b>\$ (2,995,076,523)</b>
<b>Total to 2050</b>	<b>\$ (10,144,525,914)</b>	<b>\$3,431,588,347</b>	<b>\$(6,712,937,567)</b>	<b>\$(3,356,468,783)</b>	<b>\$ (8,477,470,985)</b>	<b>\$ (11,833,939,768)</b>	<b>\$(18,546,877,335)</b>

I hope that gives a clearer idea to the effects of HB 2020 on highway funding. In short, the highway fund revenues available for distributions between the State, Cities and Counties, will lose about 1/2 of its value through 2050. If no remedy is implemented by 2050, the highway program will be half its size by 2051 and will primarily be operating on the federally funded portion. Clearly, several strategic choices need to be made if the intent is to preserve the financial system for funding transportation in Oregon while implementing a Cap and Trade Program.