

Transitioning Fuel Tax Revenue & Introducing A Road Service Fee

Reasons for the Proposal

- Anticipated decline in fuel sales revenue requiring alternate sources of revenue
- Avoid new sources of revenue being regressive
- Recoup revenue lost due to EV adoption

Proposed Solution

- Transition the fuel tax revenue over 35 years
- Allocate revenue requirements based on use and ability to pay
- Road service fee reflecting use, impact and use case
 - Road Service Fee = Distance x Rate

Benefits

- Uses existing infrastructure
 - Direct and proportional
 - Less regressive
 - May quicken EV adoption
 - Familiar
 - Transparent
 - Automated Discounts, Exemptions, Rebates & Grants
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Reasons for the Proposal

Anticipated decline in fuel sales revenue requiring alternate sources of revenue

Transition fuel tax revenue to related uses.

Vehicles should only be responsible for the revenue required for vehicle transportation infrastructure with some allowance for subsidizing initiatives that indirectly improve infrastructure conditions such as safety, emergency response, law enforcement and public transit. Vehicles only being owned by those with disposable income is no longer the case and in fact are often required to make a living.

Avoid new sources of revenue being regressive

Vehicles are, for many, a necessity to earn an income. Minimizing running costs should be the goal.

Revenue for other uses should be from sources closely tied to the expenses and disposable income.

Recoup revenue lost due to EV adoption

Charges on EVs should reflect their use of the transportation infrastructure.

Proposed Solution

Transition the fuel tax revenue over 35 years

1. New light vehicle sales are expected to be entirely EVs in the next 15 to 20 years due to legislation or choice.
2. Depending on how long vehicles last it will take another 20 years for revenue from the fuel tax to be effectively eliminated.
3. With exponential EV adoption if the transition takes place sooner the impact is offset by light vehicles not being the only source of fuel tax revenue and an option to shorten the transition period.

Allocate revenue requirements based on use and ability to pay

1. The federal government collects about \$5 billion in fuel taxes but only \$2.2 billion (44%) is returned to provinces and territories in the form of the federal gas tax fund.
 - No more than 44% of the federal portion should be transitioned to EVs.
 - Similarly the provincial portion should be adjusted even if it means an increase which will be offset by the 66% reduction in federal collection.
2. Of the 18 categories that the money from the federal gas tax fund may be used for only about one third are directly related to infrastructure used by EVs.
 - Revenue from EVs should reflect their use of the transportation infrastructure with some allowance for subsidizing initiatives that indirectly improve transportation such as safety, emergency response, law enforcement and public transit.
 - The fuel tax revenue currently supports numerous non transportation uses which is a regressive tax on people with low disposable income.
3. Revenue requirements that are regressive if collected from EVs include sports, recreation, tourism and airports. People with lower disposable income either don't use or use them less. These should be diverted to other sources that reflect use and ability to pay.

- Professional sports ticket sales and income taxes on those with more disposable income could subsidise other sports and recreation.
- The commercial recreation industry and income taxes on those with more disposable income could help support public recreation and related emergency services.
- Businesses that want tourism could and should support it.
- Industry that uses airports could take on more of the transportation infrastructure costs required in proportion to their use and benefit.

Road service fee reflecting use, impact and use case

Road Service Fee = Distance x Rate

1. **Distance** - The distance is the difference in odometer reading between fee payments.
 - Odometer readings are already being self reported and collected at registration renewal. With technological advances this could eventually be automated.
2. **Rate** - The rate is based on revenue required, location, vehicle class and commercial or other use
 - Location information is already being collected.
 - Vehicle class information is in the VIN.
 - Automatic adjustments could be made based on use cases such as commercial, diplomatic, veterans, and seniors. This would require new information collection that can be verified during tax audits or before first application.

Benefits

Uses existing infrastructure

Existing physical and online locations, process and methods for revenue and data collection will be used.

Direct and proportional

There is a direct correlation between distance driven and vehicle class to transportation infrastructure costs.

Less regressive

Low income households can be given relief based on actual road fee charged on their tax returns.

May quicken EV adoption

1. Because the road service fee is lower than paying the gas tax EV adoption becomes more attractive.
2. If the fee is spread over EVs and non EVs and made revenue neutral:
 - a. The fee at introduction could be lower.
 - b. The fee increases with time but could also increase with EV adoption.

EV Adoption ↑ Fee ↑ Non EV Costs ↑ EV Adoption ↑
3. If EV adoption is quicker than planned, another 20 years remain to quicken the transition. When 100% of sales are EVs the impact on tax revenue is at most 4% that first year. However it will be less because of the revenue transition to the fee. This rate of fee increase can be adjusted to account for adoption rate.
4. Due to known constraints on EV availability maximum short term adoption rates can be predicted and hence transition plans can be updated accordingly.

Familiar

Toll collections for road use, such as the 407, already exist. The difference being that the road service fee can not be avoided.

Transparent

The amount of revenue from EVs and its use can be accounted for.

Automated Discounts, Exemptions, Rebates & Grants

1. They can occur at fee collection and as a tax return.
2. They can be automatically determined and received by some groups, such as seniors, without applying.
3. Automation can occur by tagging accounts where information does not already exist or there are exceptions.

Fuel Tax to Road Fee Transition Examples

Transition period: 35 years	20,000 km/yr	Honda Civic 6.5 L/100 km			20,000 km/yr	Ford F150 10.2 L/100 km		
Annual rate increase 11.02 %	Midsize Cars				Pickup Truck			
Federal 10¢/L, 4¢/L + Provincial	1st Year		35th year		1st Year		35th year	
Newfoundland and Labrador	0.05 ¢/km	10 \$/yr	1.72 ¢/km	345 \$/yr	0.06 ¢/km	12 \$/yr	2.09 ¢/km	418 \$/yr
Prince Edward Island	0.03 ¢/km	7 \$/yr	1.20 ¢/km	240 \$/yr	0.05 ¢/km	11 \$/yr	1.85 ¢/km	370 \$/yr
Nova Scotia	0.05 ¢/km	9 \$/yr	1.66 ¢/km	332 \$/yr	0.06 ¢/km	11 \$/yr	1.98 ¢/km	396 \$/yr
New Brunswick	0.04 ¢/km	8 \$/yr	1.36 ¢/km	271 \$/yr	0.06 ¢/km	11 \$/yr	1.98 ¢/km	397 \$/yr
Quebec (3)	0.05 ¢/km	11 \$/yr	1.90 ¢/km	380 \$/yr	0.07 ¢/km	14 \$/yr	2.47 ¢/km	494 \$/yr
Ontario	0.05 ¢/km	9 \$/yr	1.61 ¢/km	321 \$/yr	0.05 ¢/km	11 \$/yr	1.87 ¢/km	373 \$/yr
Manitoba	0.04 ¢/km	9 \$/yr	1.56 ¢/km	312 \$/yr	0.05 ¢/km	10 \$/yr	1.84 ¢/km	367 \$/yr
Saskatchewan	0.05 ¢/km	9 \$/yr	1.63 ¢/km	325 \$/yr	0.06 ¢/km	11 \$/yr	1.94 ¢/km	388 \$/yr
Alberta	0.04 ¢/km	9 \$/yr	1.50 ¢/km	299 \$/yr	0.05 ¢/km	10 \$/yr	1.73 ¢/km	347 \$/yr
British Columbia								
Vancouver Area	0.07 ¢/km	14 \$/yr	2.41 ¢/km	481 \$/yr	0.09 ¢/km	18 \$/yr	3.21 ¢/km	643 \$/yr
Victoria Area	0.06 ¢/km	11 \$/yr	1.95 ¢/km	390 \$/yr	0.07 ¢/km	14 \$/yr	2.50 ¢/km	500 \$/yr
Rest of province	0.05 ¢/km	9 \$/yr	1.59 ¢/km	319 \$/yr	0.06 ¢/km	11 \$/yr	1.94 ¢/km	388 \$/yr
Yukon	0.03 ¢/km	6 \$/yr	1.05 ¢/km	211 \$/yr	0.03 ¢/km	7 \$/yr	1.14 ¢/km	228 \$/yr
Northwest Territories					0.00 ¢/km	0 \$/yr		
Served by highways	0.04 ¢/km	8 \$/yr	1.35 ¢/km	269 \$/yr	0.04 ¢/km	8 \$/yr	1.34 ¢/km	267 \$/yr
Not served by highways	0.03 ¢/km	6 \$/yr	1.07 ¢/km	213 \$/yr	0.04 ¢/km	8 \$/yr	1.34 ¢/km	267 \$/yr
Nunavut	0.03 ¢/km	6 \$/yr	1.07 ¢/km	213 \$/yr	0.04 ¢/km	8 \$/yr	1.34 ¢/km	267 \$/yr

Calculations (20,000 km/year)
 Table - Federal + Provincial combined
 Efficiency L/km (EPA)
 Fuel Used L = Efficiency x Distance
 Fuel cost \$ = Fuel used x cost
 Fee Rate \$/km = Fuel Tax x Efficiency
 Fee \$/year = Rate x Distance
 Fee - sales taxes not included
 Electricity \$/km - Wh/km x \$0.13/kWh
 Electricity - sales tax included
 Fuel - Fuel tax + sales tax

Midsize Car - 2021 Honda Civic
 Efficiency 6.5 L/100 km
Gasoline \$1,800/year
 1,300 L/year @\$1.354/L
 Calgary \$1.211
 Vancouver 1.496/L (2021/04/13)
EV Electricity \$500/year + fee
 Estimated @ \$0.025/km (\$0.13/kWh)
 Quebec \$0.073/kWh
 Saskatchewan \$0.182/kWh
Road Service Fee \$280/year + sales tax (see table)

Pickup Truck Standard - 2021 Ford F150
 Efficiency 10.2L/100 km
Diesel \$2,500/year
 2,040 L/year @\$1.235/L
 Halifax \$1.11
 Vancouver 1.36/L (2021/04/13)
EV Electricity \$1,000/year + fee
 Estimated @ \$0.05/km (\$0.23/kWh)
 Quebec \$0.073/kWh
 Saskatchewan \$0.182/kWh
Road Service Fee \$340/year + sales taxes

Re: EVs & Fuel Tax Revenue

Good day,

EV adoption is growing with options being added every quarter. Using an estimate of 37 million vehicles on the roads of which 200,000 are EVs their impact on fuel taxes revenue is at most 0.6%. EVs are not widely used for long distances reducing the impact further. An estimated 1.5 million vehicles are added each year. If these were all EVs and the same number of non EVs were taken off the road the impact on fuel tax based revenue would at most be 4% the first year.

Within 15 to 20 years 100% of sales in some vehicle classes will be EVs due to legislation or choice. Depending on vehicle lifespan, there will be another 20 years of fuel tax revenue. Together these provide for a revenue transition period of 35 to 40 years.

The proposal is to transition the fuel tax to a road service fee and other taxes over 35 years starting at 1/35th the current fuel tax based revenue and increase this each year by up to 11.02% for 35 years.

Road Service Fee = Vehicle Distance x Rate

- **Road Fee Rate = Required Transportation Revenue/35** (35 year transition period)
 - Required revenue is for transportation and direct related expenses
 - Non transportation portion of the fuel tax is to be transitioned to other sources based on use and ability to pay
- Increase the fee each year by up to 11.02% to complete transition in 35 years
- As **EV Adoption** ↑ **Lost Revenue** ↑ **Revenue Required** ↑ **Rate** ↑
- As **EV Adoption** ↑ **Fee Revenue** ↑ **Revenue Transitions** ↑
- Eventually **Fee Revenue** ≈ **Revenue Required**
- If non EVs are also charged the Fee to encourage EV adoption
 - The EV rate could be lowered accordingly
 - **The fee is tiny compared to fuel price fluctuations** (the impact is psychological)
E.g. Honda Civic gasoline cost \$1,625, Road service fee \$10 the 1st year
 - Acts as peer pressure to adopt EVs as they get cheaper with more choices
 - Rate applied to non EVs could be increased each year at a lower rate
 - As **EV Adoption** ↑ **Fee** ↑ **Non EV Costs** ↑ **EV Adoption** ↑
- **Implementation by vehicle class** could take into account EV alternatives and their costs

I hope this proposal will be adopted and have provided further details in a PDF.

Thank you for your time,

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Founder of Hike For Happiness

A Mental Health Fundraiser

<http://hikeforhappiness.ca/>

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