

March 11, 2022

**To** Representative Steve Elkins  
**From** Matt Burress, Legislative Analyst (matt.burress@house.mn)  
**Subject** HF 523 – H0523A1 amendment and revised information

This memo accompanies an amendment to HF 523 (Elkins) and provides a requested update to road usage charge estimates.

## HF 523

For a general overview of the proposal, there is a separate bill summary.<sup>1</sup> To briefly summarize, though, the bill establishes a road usage charge on electric vehicles (EVs) that replaces the current \$75 annual surcharge on EV registration. The road usage charge is calculated based on vehicle miles traveled (VMT), the state motor fuels tax rate, and “analogous fuel economy” of non-electric vehicles. Analogous fuel economy is determined using national data on vehicle miles per gallon for five vehicle classifications (sedan/wagon, car-based SUV, truck-based SUV, minivan/van, and pickup truck). Thus the analogous fuel economy for a particular electric vehicle is the miles per gallon average among non-electric vehicles in the matching vehicle classification and model year.

## Amendment

The changes to HF 523 in the H0523A1 amendment are to:

- eliminate an implementation surcharge and revises allocation of road usage charge revenue (to deposit a portion in the vehicle services operating account for administrative costs and payments to account management providers);
- create a three-year phase-in, so that the per-mile rate is reduced to 50% in the first year and 75% in the second year (reaching 100% in third year and thereafter);
- clarify the data to use in determining real-world fuel economy (primarily to account for any lags in data availability);
- shift implementation dates out by one year, so that imposition of the charge would begin July 1, 2023; and
- make technical changes.

## Motor Fuels Tax Information

For some context, the table below lists a few example impacts of the current state motor fuels tax under existing rates. (The examples are chosen only for illustrative purposes.) As can be

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<sup>1</sup> It is available at: <https://www.house.leg.state.mn.us/hrd/bs/92/hf0523.pdf>.

observed, the effective rate of the motor fuels tax on a per mile basis depends on the vehicle’s fuel economy.

**Motor Fuels Tax Examples**

VMT	Effective Rate (in cents/mile)	Motor Fuels Taxes
<b>At 19 MPG</b>		
10,000	\$1.583	\$150.0
11,500	\$1.583	\$172.5
13,500	\$1.583	\$202.5
<b>At 25 MPG</b>		
10,000	\$1.140	\$114.0
11,500	\$1.140	\$131.1
13,500	\$1.140	\$153.9
<b>At 30 MPG</b>		
10,000	\$0.950	\$95.0
11,500	\$0.950	\$109.3
13,500	\$0.950	\$128.3
<p><b>Notes</b>                      “VMT” is vehicle miles traveled.                      “MPG” is miles per gallon (i.e., the fuel economy for an example vehicle).                      Amounts exclude a petroleum tank release cleanup fee.</p>		

**Usage Charge Calculation**

The following information is intended to convey a general sense of the nature and scope of road usage charges under HF 523, as proposed to be amended.

**Calculation components.** The first table summarizes usage charge calculation elements as imposed on a per-mile basis (without accounting for (1) an adjustment factor applied to vehicles that are not enrolled in charge management, or (2) an implementation surcharge that is removed in the amendment). Note that a specific electric vehicle would fall into one of the vehicle classes, with the charge calculation performed using the corresponding per mile rate (which is designed to reflect equivalent real-world fuel economy as estimated on average for that class of vehicle).

### Road Usage Charge Basis

Vehicle Class	Est. 2021 Real-World MPG	Base Usage Charge Rate (in cents/mile)
Sedan/wagon	31.7	\$0.899
Car-based SUV	30.5	\$0.934
Truck-based SUV	24.0	\$1.188
Minivan/van	26.2	\$1.088
Pickup truck	19.4	\$1.469
<b>Notes</b>		
Usage charge rates are in cents.		
"MPG" is miles per gallon.		
Uses preliminary 2021 EPA estimates for real-world fuel economy.		
Excludes the adjustment factor or implementation surcharge in HF 523.		

**Scenarios.** Below are some example road usage charge scenarios under the bill. Charges are shown for two vehicle model years, at various miles of travel for both vehicles enrolled in charge management (i.e., those that have mileage tracked and billing handled through a third-party provider) and unenrolled vehicles (in which charges are calculated based on an estimated statewide average for vehicle miles traveled). The examples exclude an implementation surcharge and are calculated as fully phased in.

### Annual Road Usage Charge Examples (Without Phase-In)

Vehicle Class	Unenrolled Vehicle (11,500 mi.) <sup>a</sup>	Enrolled Vehicle (10,000 mi.) <sup>a</sup>	Enrolled Vehicle (11,500 mi.) <sup>a</sup>	Enrolled Vehicle (13,500 mi.) <sup>a</sup>
<b>2021 Model Year EV</b>				
Sedan/wagon	\$125	\$90	\$103	\$121
Car-based SUV	\$129	\$93	\$107	\$126
Truck-based SUV	\$158	\$119	\$137	\$158 [\$160] <sup>b</sup>
Minivan/van	\$147	\$109	\$125	\$147
Pickup truck	\$191	\$147	\$169	\$191 [\$198] <sup>b</sup>
<b>2020 Model Year EV</b>				
Sedan/wagon	\$125	\$90	\$103	\$121
Car-based SUV	\$137	\$100	\$115	\$135
Truck-based SUV	\$160	\$120	\$138	\$160 [\$162] <sup>b</sup>
Minivan/van	\$162	\$122	\$140	\$162 [\$164] <sup>b</sup>

Vehicle Class	Unenrolled Vehicle (11,500 mi.) <sup>a</sup>	Enrolled Vehicle (10,000 mi.) <sup>a</sup>	Enrolled Vehicle (11,500 mi.) <sup>a</sup>	Enrolled Vehicle (13,500 mi.) <sup>a</sup>
Pickup truck	\$193	\$148	\$171	\$193 [\$200] <sup>b</sup>
<p><b>Notes</b></p> <p><sup>a</sup> Miles shown in parentheses are example vehicle miles traveled used to calculate the resulting road usage charges. For the Unenrolled Vehicle scenarios, the miles are examples of average statewide VMT.</p> <p><sup>b</sup> Amounts shown in brackets are “raw” amounts that would apply absent the cap for vehicles that are enrolled in usage charge management, using an assumption of 11,500 statewide average VMT. See HF 523, sec. 4, subd. 2 (d).</p> <p>Uses preliminary 2021 EPA estimates for real-world fuel economy.</p> <p>Amounts do not use a phase-in.</p> <p>Amounts do not reflect the cap on year-to-year increases for a combination of the registration tax and the road usage charge.</p> <p>Amounts do not include an implementation surcharge.</p>				

**Phase-in.** As noted previously, the H0532A1 amendment adds a phase-in schedule. The following table provides a couple of example scenarios for the phase-in. Please note that the national fuel economy data is updated annually; the estimates below use preliminary data for 2021 vehicles and will vary across vehicle model years.

**Road Usage Charge Phase-In Examples**

Vehicle Class	<i>First Year: At 50% Rate</i>		<i>Second Year: At 75% Rate</i>	
	Charge	Change from Current Law	Charge	Change from Current Law
<b>Unenrolled 2021 Model Year EV (11,500 mi.)<sup>a</sup></b>				
Sedan/wagon	\$74	(\$1)	\$99	\$24
Car-based SUV	\$76	\$1	\$102	\$27
Truck-based SUV	\$90	\$15	\$124	\$49
Minivan/van	\$84	\$9	\$116	\$41
Pickup truck	\$106	\$31	\$149	\$74
<b>Enrolled 2021 Model Year EV (11,500 mi.)<sup>a</sup></b>				
Sedan/wagon	\$52	(\$23)	\$78	\$3
Car-based SUV	\$54	(\$21)	\$81	\$6
Truck-based SUV	\$68	(\$7)	\$102	\$27
Minivan/van	\$63	(\$12)	\$94	\$19
Pickup truck	\$84	\$9	\$127	\$52

Vehicle Class	<i>First Year: At 50% Rate</i>		<i>Second Year: At 75% Rate</i>	
	Charge	Change from Current Law	Charge	Change from Current Law
<p><b>Notes</b></p> <p><sup>a</sup> Miles shown in parentheses are example vehicle miles traveled used to calculate the resulting road usage charges.</p> <p>Charge amounts are for a one-year period.</p> <p>Change from Current Law is the difference between the road usage charge and the existing registration surcharge on EVs.</p> <p>Uses preliminary 2021 EPA estimates for real-world fuel economy.</p> <p>Amounts do not reflect the cap on year-to-year increases for a combination of the registration tax and the road usage charge.</p> <p>Amounts do not include an implementation surcharge.</p>				

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