



Financing Roads in Oregon


User Fees & Charges

Senate Interim Committee on Finance and Revenue

Mazen Malik

Oregon Legislative Revenue Office

November 2023



Financing Transportation in General

State, Federal, and local revenues

- Highways and local road (Federal Roads)
- Traffic Safety and pedestrian
- DMV (Driver and Moto Vehicles)
- Moving Goods, Motor Carriers (commercial Trucking)
- Heavy Rail (Commerce and Good)
- Moving people (Bussing)
- Public Transit (Inter and Intra City)
- Light Rail (Moving People)
- Aviation and Airports (Moving both goods and people)

How Should Roads Be Financed?

- Equity
 - Principle: users should pay in proportion to the costs they impose.
 - Users (different classes)
 - Costs
 - Planned expenditures for construction, ... , operation; or
 - Damage to the system (marginal cost)
 - Congestion costs. Pollution costs. (externalities)
- Economic Neutrality (no winners and losers)
- Cost Efficient (collection costs, efficient building, the right facilities)
- Economic Efficiency (highest utilization of resources)

Principles of Oregon Highway Finance (System)

- Public Finance (Government owned) system
- Financed through taxes and fees, Simulating Road user fee.
- Revenue are constitutionally restricted to be only used for constructing, improving, and maintaining roads.
- Road users (weight classes) are required constitutionally to pay in proportion to the costs for which they are responsible.

Oregon Road User Taxation

Oregon uses a four (out of five) instrument structure of road user fees

1. fuel tax
 - Gasoline 38 ¢ /Gallon as of 1/1/2022 (40¢ in 2024)
 - Use-fuel: Diesel, CNG and other (equivalent)
2. weight-mile tax
 - Table A and B
 - Flat fees
 - Road Use Assessment Fees
3. vehicle registration fee
 - Light
 - Heavy
4. Title fees
 - Other
 - Light
5. Operation ?? (Drivers)

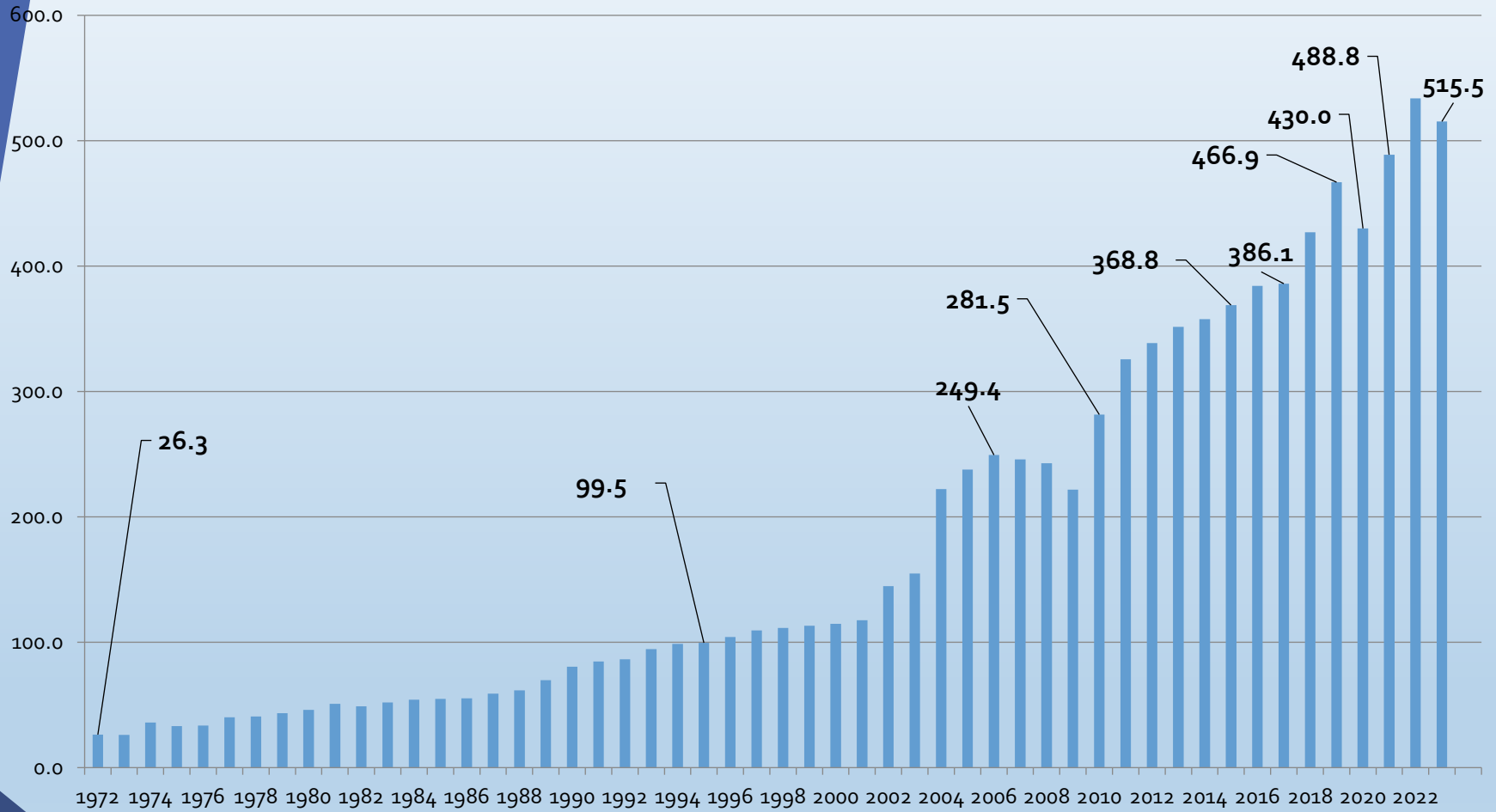
Oregon Road User Taxation instruments

(Traditionally known) as Fixed Element

- vehicle registration fee
 - pays for fixed and non direct use-related costs
 - Fees for cars and other light vehicles weighing 10,000 pounds or less (\$112) 1st increase in HB 2017, then tiered by MPG
 - Continues to be relatively low compared to other states.
 - Fees for heavy vehicles (above 10,000 lb) based on Gross weight (2000 lb increments) from \$344 to \$1295 no increase in HB 2017
 - New County Reg. Fee \$19/Y (\$38/BN) (Multnomah)
- Title Fees: (ownership) became **new** fixed cost component.
 - \$55 light, \$90 Heavy
 - \$77 light, \$27 salvage and duplicate Titles for light
 - Add (\$16) in 2018 by HB 2017 then tiered by MPG starting 2020

Vehicle Fees

(Registration, Titles and other DMV)



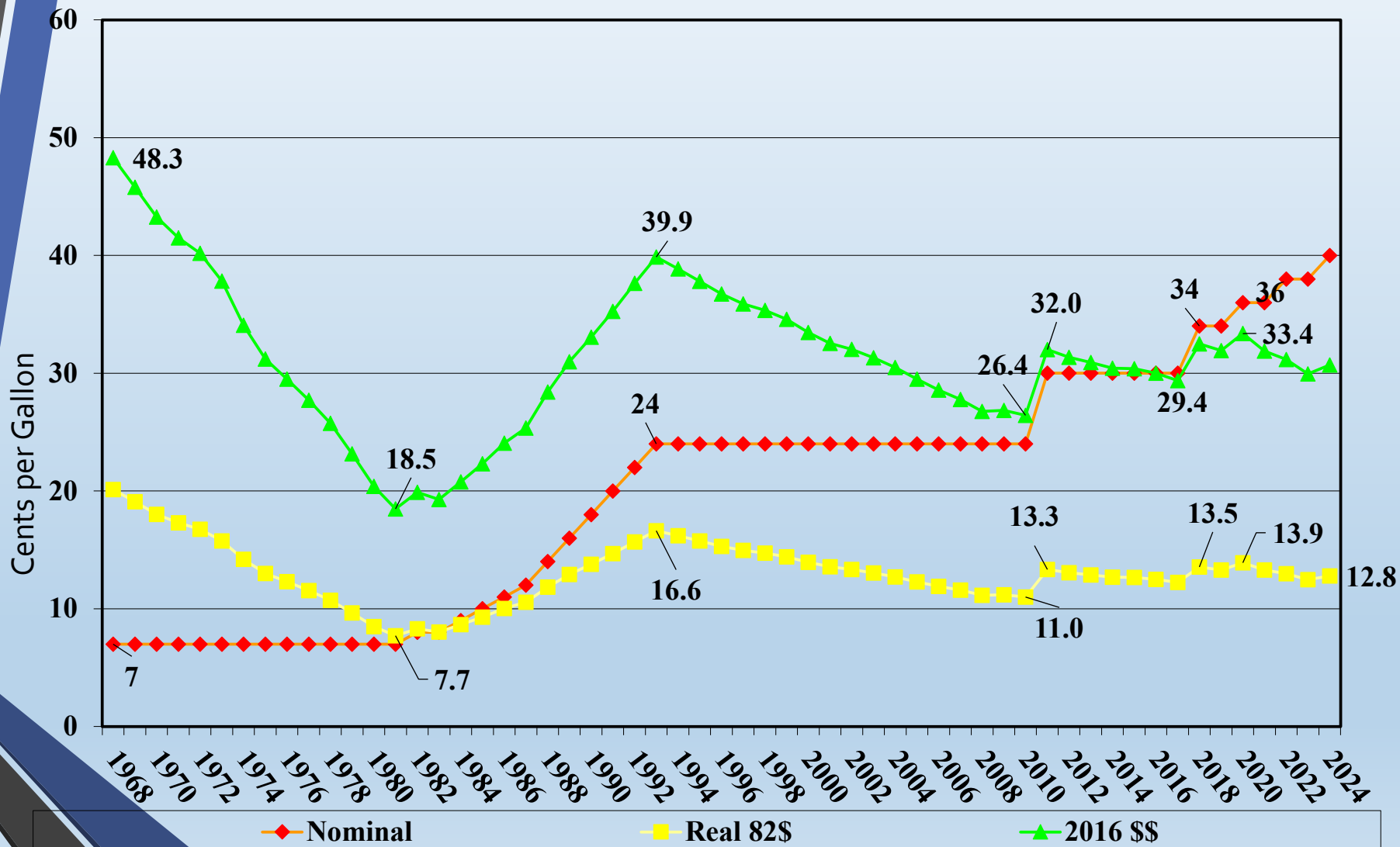
Oregon Road User Taxation instruments (Variable Element)

Fuel Taxes

- Gasoline (any fuel the chief use of which is for)
 - Propulsion of Motor Vehicle (38¢ since 1/1/2022)
 - Local Gas Taxes
 - Counties (Mult, Wash)
 - Cities (24)
- Diesel, CNG, & etc (Use fuel) . Used to
 - Propel a Motor Vehicle (38¢ since 1/1/2022)
- Fuel not used to propel. Refund or other funds.
 - Aviation, ATV, Snowmobile, or operating (lawnmower) fund.

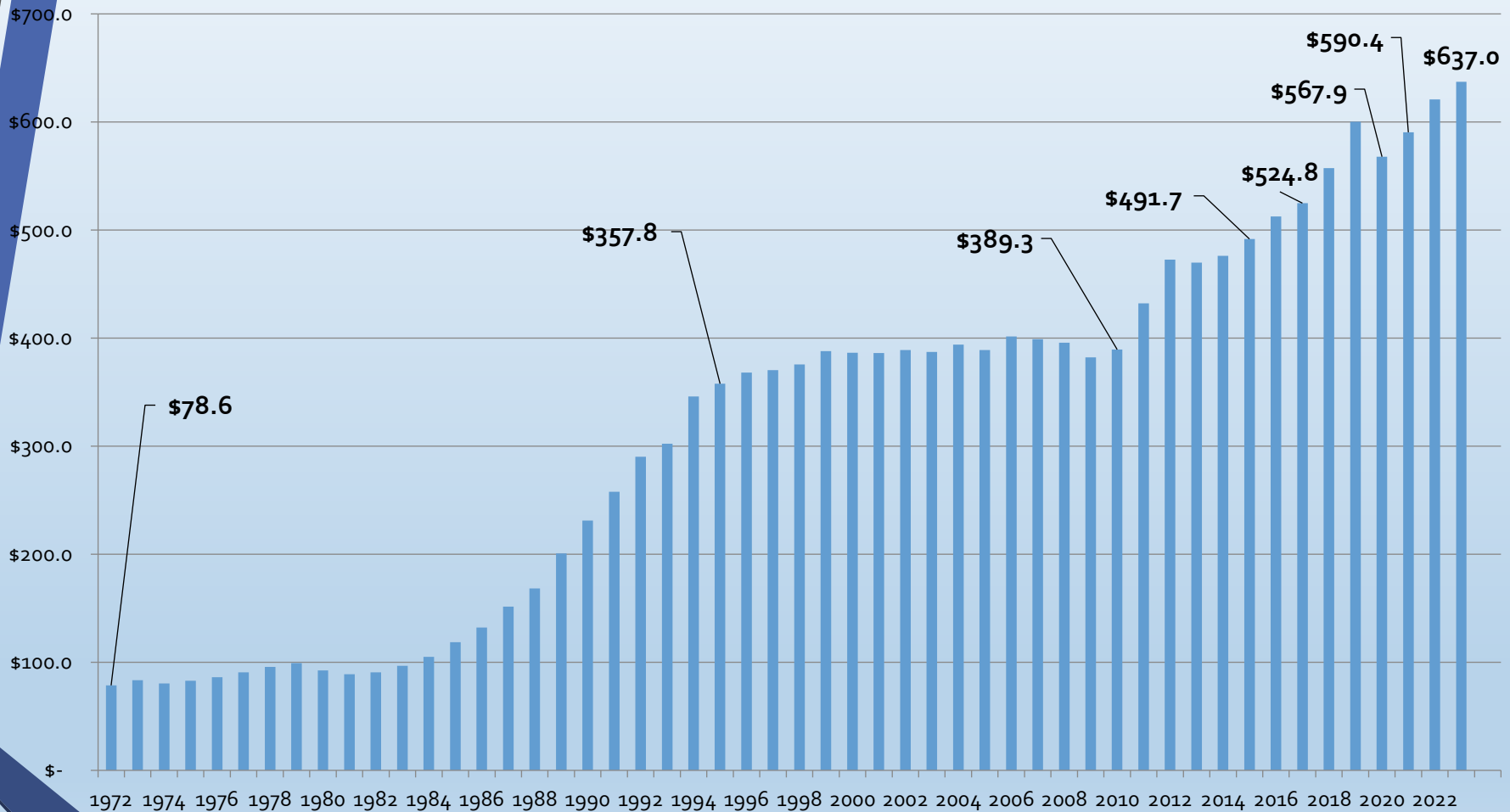
Motor Vehicle Fuel Tax Rates

38 Cents in 2022 going to 40 cents in 2024



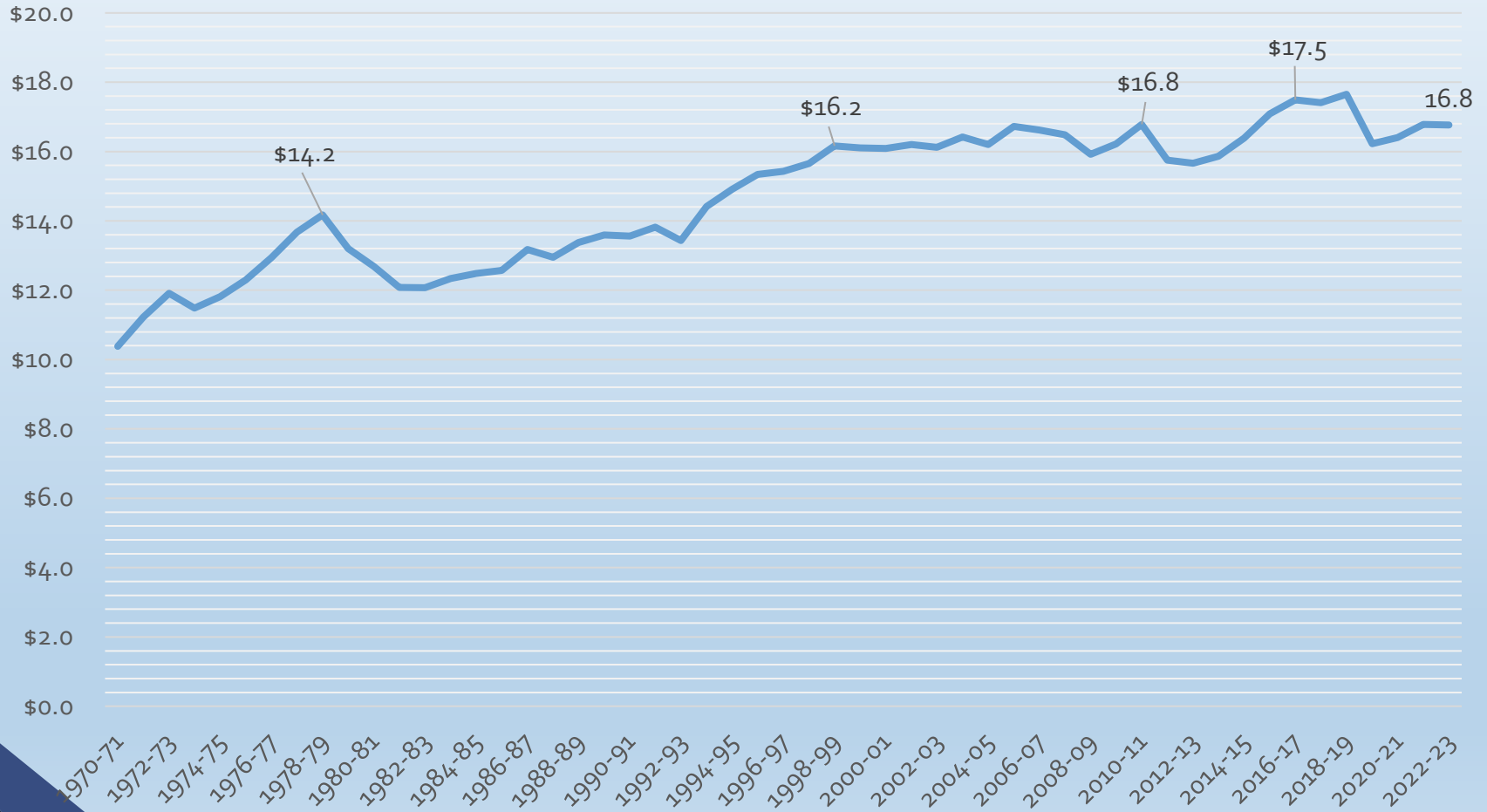
Fuel Tax Revenue (variable)

Millions of Dollars



Fuel Tax Revenue per penny

Millions of \$\$ per Penny of Tax



Oregon Road User Taxation instruments

(Variable by weight and distance since 1947)

Weight-Mile Taxes

reflecting 2022 rates

- **Table A: 26,000 to 80,000 Pounds**
 - Graduated Based on Weight
 - 7.2¢ per Mile @ 26 to 28,000 Pounds
 - 23.7¢ per Mile @ 78 to 80,000 Pounds
- **Table B: 80,000 to 105,500 Pounds**
 - Graduated based on Weight and Axles
- **In Lieu (Flat Fees)**
 - Log, Sand & Gravel, and Chip Trucks
- **Road Use Assessment Fee (RUAUF)**

In Lieu Taxes (Less Variable)

HB 2017 rates reflecting 2022 changes

- Flat Fees

- Log Trucks \$11 per Hundred pounds of declared weight
- Farm Trucks \$9 per Hundred pounds of declared weight
- Dump Trucks \$10.9 per Hundred pounds of declared weight
- Chip Trucks \$44.30 per Hundred pounds of declared weight

Biannual Review of FF to determine neutrality (ORS 825.482)

Log: 6.92% underpayment method 1, overpayment of approximately 1.71% under method 2. Dump: 44.77% underpayment. Chip: No one uses.

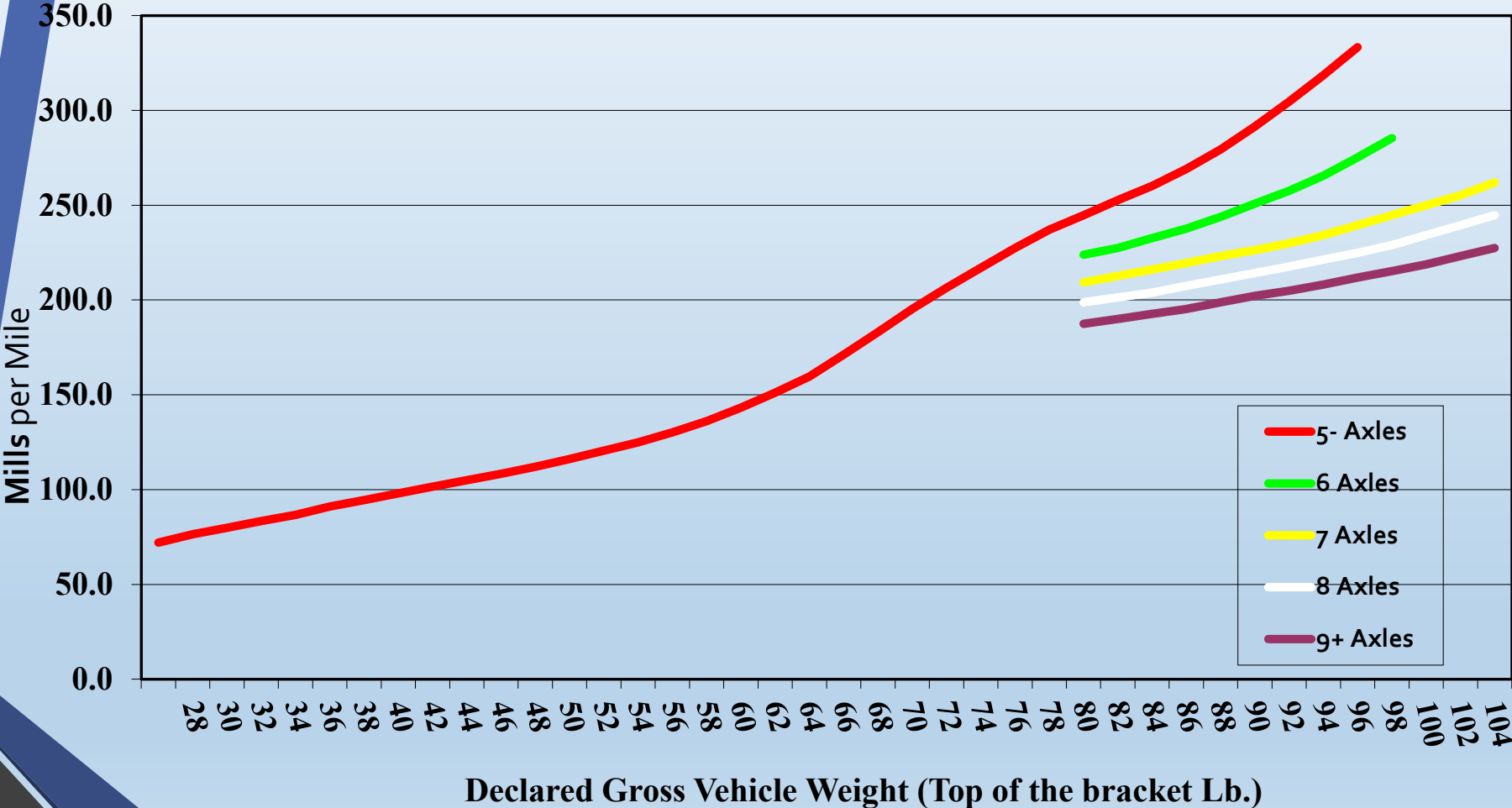
- Road Use Assessment Fee

- 10.3¢ per ESAL* Mile

equivalent single-axle load” means the relationship between actual or requested weight and an 18,000 pound single-axle load as determined by the American Association of State Highway and Transportation Officials Road Tests reported at the Proceedings Conference of 1962. (ORS 818.225)

Weight-Mile Tax Rates

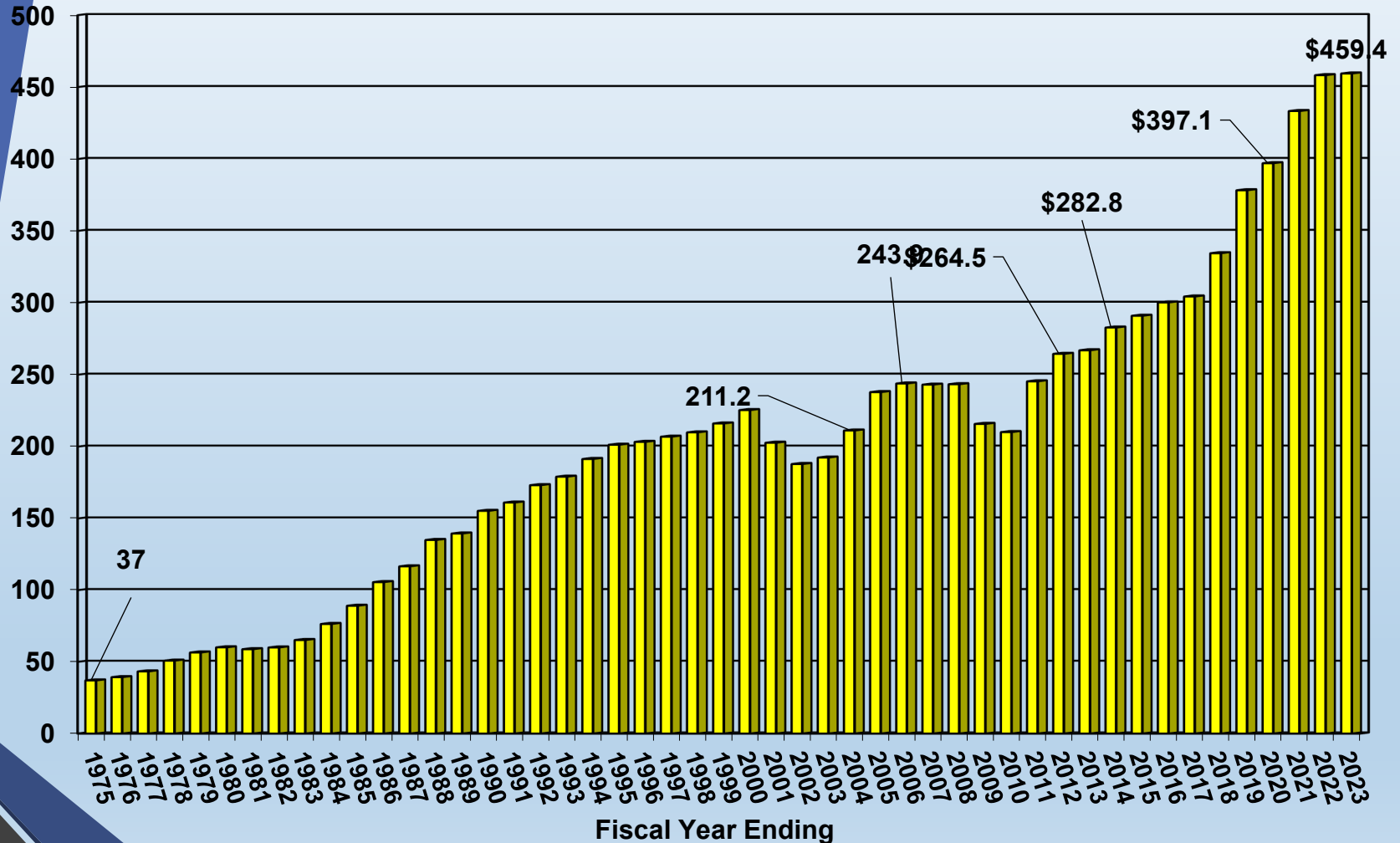
Adjusted for Current Law changes (HB 2017) reflecting 2022



Weight-Mile Tax Revenue

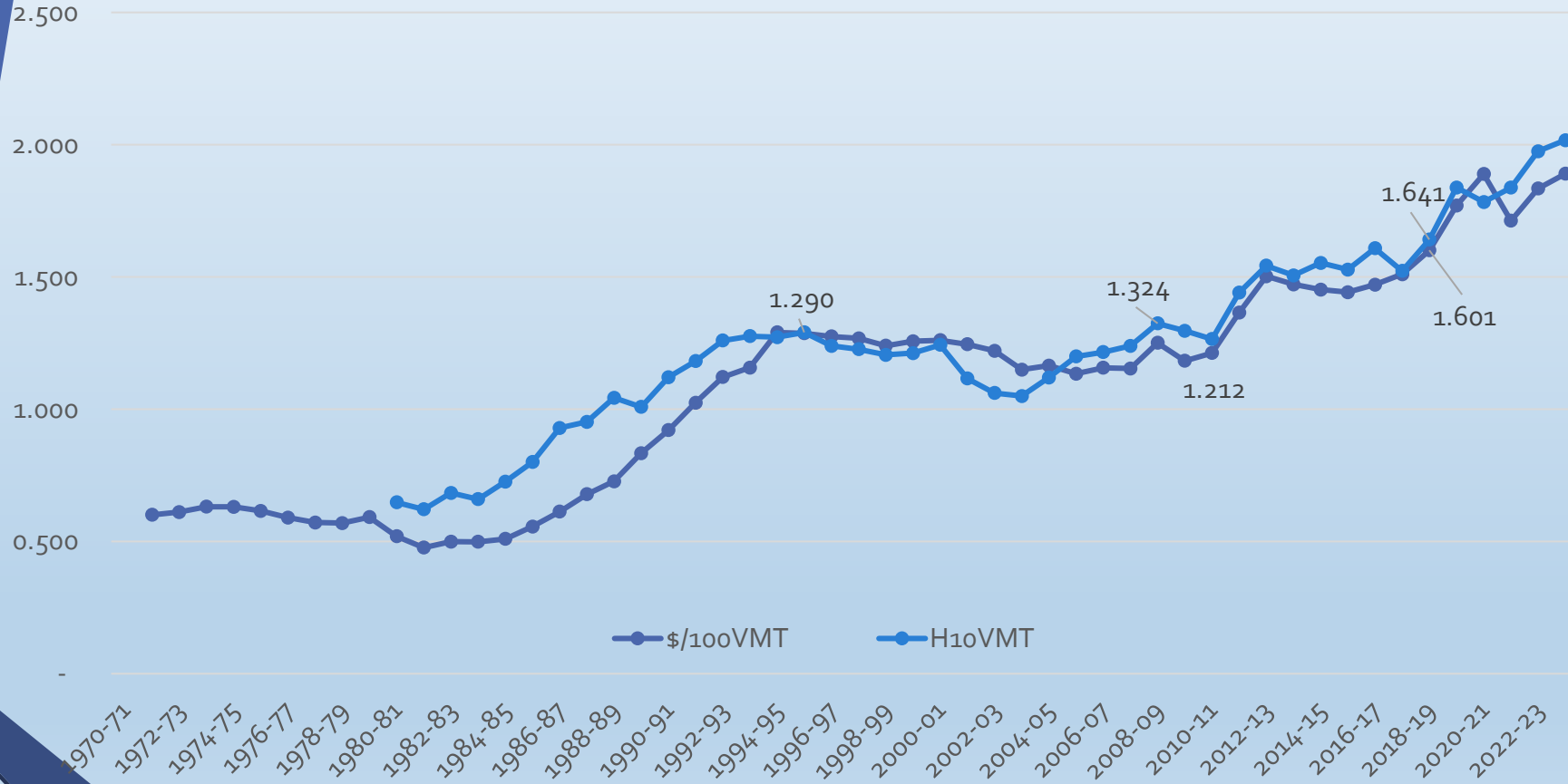
(including FF & RUAf)

Millions of Dollars



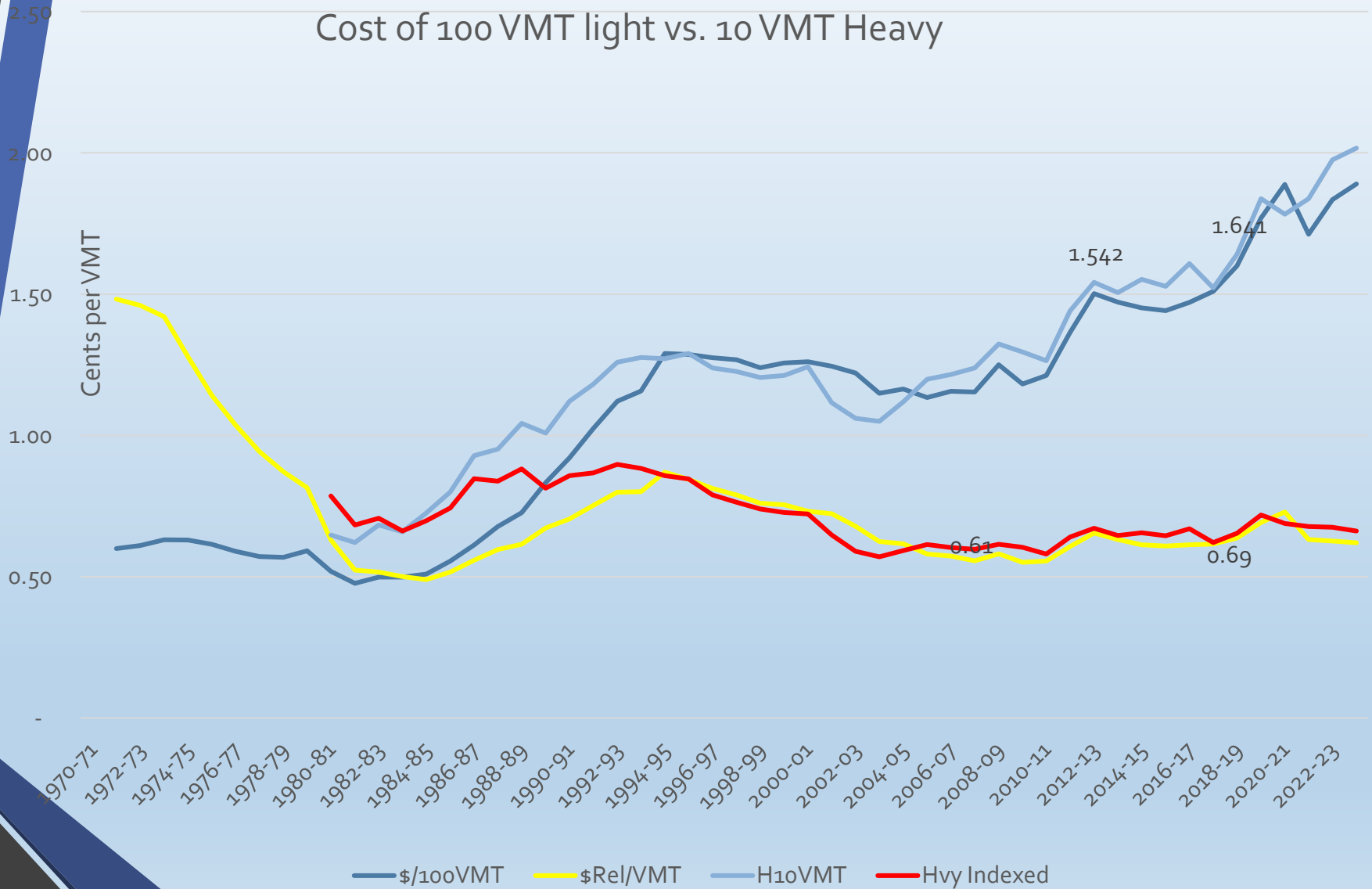
How effective is the pricing system?

Cost of 100 VMT light vs. 10 VMT Heavy



The pricing system in constant \$\$

Cost of 100 VMT light vs. 10 VMT Heavy



October 2023 Forecast

State Highway Fund Revenue Summary

(\$ Millions)	2021-23	2023-25	2025-27	2027-29	2029-31
Motor Fuels (w/ triggered increases)					
Gross	\$ 1,321.0	\$ 1,400.3	\$ 1,389.2	\$ 1,345.8	\$ 1,306.5
Net Apportionable	\$ 1,252.8	\$ 1,328.1	\$ 1,314.8	\$ 1,269.8	\$ 1,229.0
CCD					
Gross	\$ 1,013.1	\$ 1,061.3	\$ 1,103.2	\$ 1,120.4	\$ 1,139.0
Net Apportionable	\$ 910.9	\$ 958.5	\$ 993.7	\$ 1,003.8	\$ 1,014.6
DMV					
Gross	\$ 953.5	\$ 977.6	\$ 1,016.4	\$ 1,060.6	\$ 1,105.4
Net Apportionable	\$ 634.2	\$ 645.4	\$ 660.6	\$ 679.4	\$ 696.7
Total (w/ triggered increases)					
Gross	\$ 3,287.6	\$ 3,439.1	\$ 3,508.8	\$ 3,526.8	\$ 3,551.0
Net Apportionable	\$ 2,797.9	\$ 2,932.0	\$ 2,969.2	\$ 2,953.0	\$ 2,940.3

Cumulatively, gross revenues are \$125.5M above the prior forecast and \$123.5 M above in net revenues through FY 2031

Highway Fund Distributions

Different Packages different distributions

Recipient	Base	OTIA	Bridge*	Misc.	HB 2001	HB 2017
State	60.05%	50%	57.53%	0%	50%	50%
Counties	24.38%	30%	25.48%	60%	30%	30%
Cities	15.57%	20%	16.99%	40%	20%	20%
State	60.05%	50%	57.53%	0%	50%	50%

Oregon Constitution

second level (Connection) system Design

- (Tools) Revenue dedicated to construction, ..., operation of road systems
 - Any tax levied on motor vehicle fuel,
 - Any charge for ownership or operation of motor vehicles.
- (System) State Imposed User Fee Structure
 - Vehicle classes pay in proportion to costs incurred on their behalf.

Highway Cost Allocation Study(HCAS)

- Cost responsibility study to determine a fair share that each class of road users should pay for the maintenance, operation, and improvement of the state's highway system
- The HCAS establishes "fair share". It does not establish the tax system or tools to accomplish this goal.
- Recent studies have been asked to recommend rate changes
- Oregon conducted 23 studies starting 1937, Conde McCullough
- All studies prior to 1999 were conducted by ODOT
- In early 1999, the study was transferred to the Department of Administrative Services (DAS), Office of Economic Analysis (State Economist) . Done by consultants.
- Constitutionally required every two year (IX section 3a).
- ORS 366.506(4) requires a report on the results of the study or examination of data shall be **submitted to the legislative revenue committees** and the legislative committees with primary responsibility for transportation by January 31 of each odd-numbered year.

Basic Approach of Study

- Allocate projected expenditures (responsibilities) to vehicle classes.
- Attribute projected revenues (tax payments) to vehicle classes.
- Calculate equity ratio (= revenue forecast/expenditures allocated) for each class or group of vehicles:
 - Ratio <1 : Underpayment
 - Ratio $=1$: Class pays its “fair share”
 - Ratio >1 : Overpayment
 - Current (2023 Study) 1.358 Heavy, and 0.878 light

HCAS results

Share of Cost Responsibility			
Declared Weight	2019	2021	2023
1 to 10,000	67%	70%	72%
10,001 to 26,000	4%	4%	3%
26,001 and up	29%	27%	24%
Total	100%	100%	100%

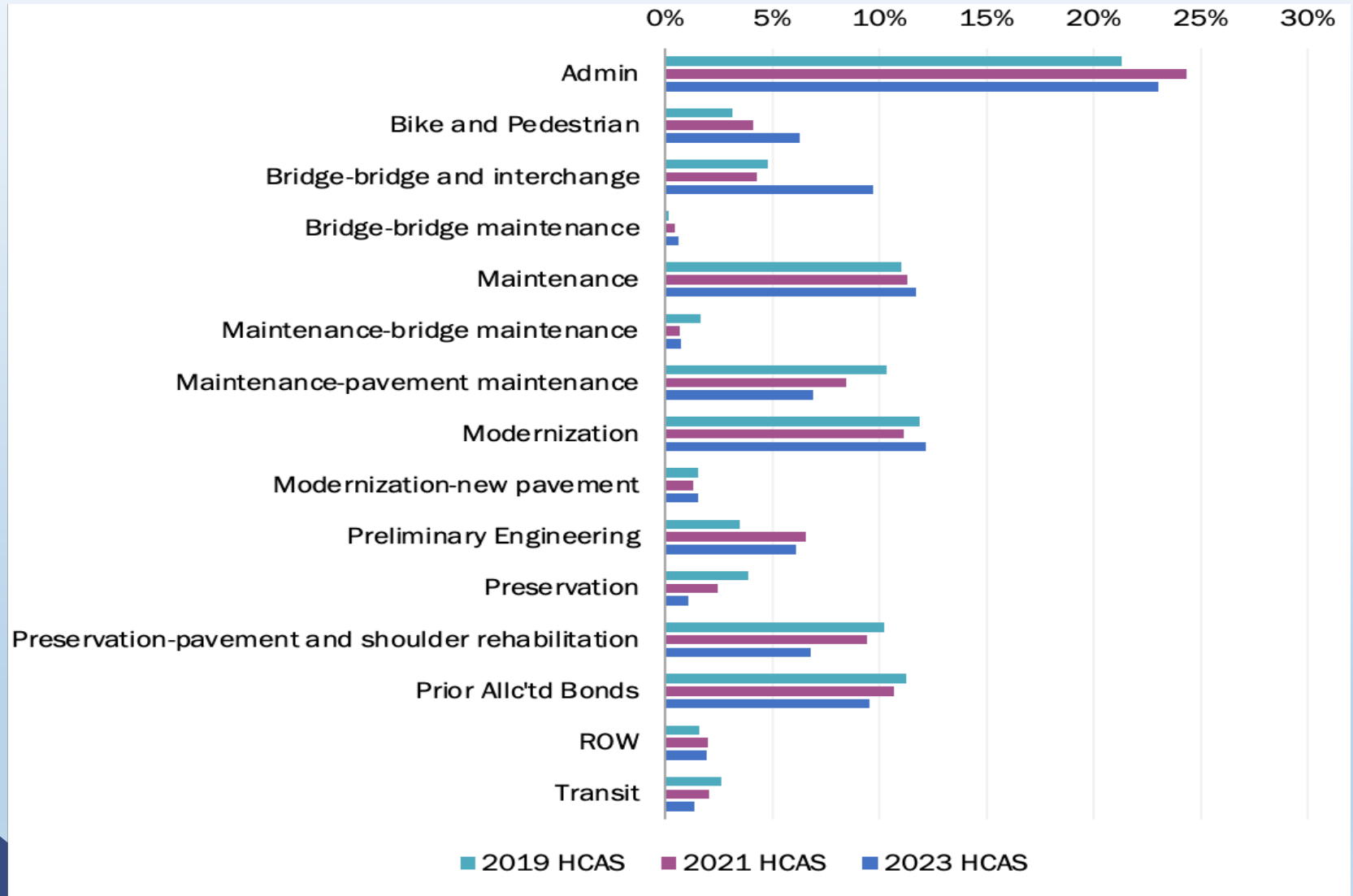
Cost responsibility for basic vehicles has grown over time.

Declared Weight	2023 VMT (in millions)	2023 Cost Responsibility (in millions)	2023 User Fees (in millions)	2021 Equity Ratio (Full Fee)*	2023 Equity Ratio (Full Fee)*
1 to 10,000	32,319	\$1,662	\$1,021	0.928	0.878
10,001 to 26,000	723	\$75	\$57	1.065	1.076
26,001 and up	2,144	\$548	\$521	1.107	1.358
Total	35,186	\$2,285	\$1,598	1.000	1.000

- Each biennium has a new mix of project investments (Federal \$\$)
- Pavement factors (new data source)
- Full implementation of HB 2017 rates

Costs by Work Type 2019-2023

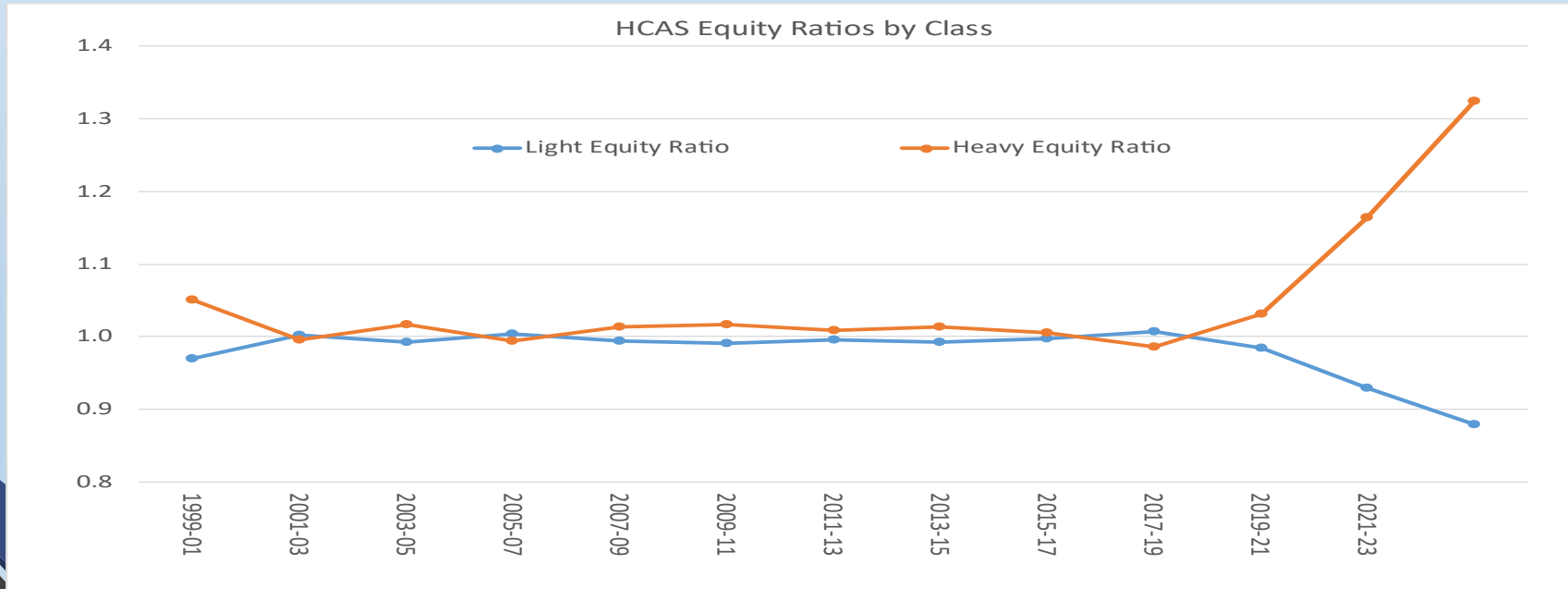
All expenditures (state, Federal and local)



Equity Ratio over time

Basic vehicles –
Under 10,000 lbs.
Heavy vehicles –
Over 10,000 lbs.

Equity Ratio, Full-Fee		
	Basic	Heavy
2011	1.00	1.01
2013	0.99	1.01
2015	1.00	1.00
2017	1.01	0.99
2019	0.98	1.03
2021	0.93	1.16
2023	0.88	1.32



HB 2017 of the 2017 session

Transportation Package

Revenue Review

Innovative Transportation Package raise \$700 million per year (\$500 highway)

Some traditional, some innovative, and some new taxes

Increases Commonly considered in packages:

- State **gas tax** (motor fuel and use fuel)
 - 30¢ per gallon goes to 40¢ (by 2024)
 - **Reg Fees:** \$13 in addition to the current \$43 January 1/2018 to December 31st/2019 (\$56)
 - **Title Fees:** Adds a surcharge of \$16 to the current title fee of \$77 / \$90 for heavy vehicles. on January 1 / 2018 to December 31st, 2019 (\$93)

Vehicle Fees Innovative Titles

On January 1/2020 a new way of treating Vehicle fees that is based on MPG rating (tiered).

Electric vehicle Title fee. tiered structure based on fuel-economy

- Alternative – adopt a higher Title fee for electric vehicles

- change the Fixed Cost **Title** (buy in) fee in alignment to (potential) use of the road
 - The fee is variable (tiered) and based on MPG rating starting on January 1/2020
 - 0-19 MPG, \$21
 - 20-39 MPG, \$26
 - Over 40 MPG, \$36
 - Electric vehicles, \$110
 - The variable MPG **Title** surcharge is increased on January 1/2022
 - 0-19 MPG, \$24
 - 20-39 MPG, \$29
 - Over 40 MPG, \$39
 - Electric vehicles, \$115

Vehicle Fees Innovative registration

On January 1/2020 a new way of treating Vehicle fees that is based on MPG rating (tiered).

Alternative for flat registration fee - Tiered based on fuel-economy

- Then change the recovery (**registration**) fee in alignment to use (responsibility) of the road (sec 32-37)
 - The fee is variable and based on MPG rating starting on January 1/2020
 - 0-19 MPG, \$18
 - 20-39 MPG, \$23
 - Over 40 MPG, \$33
 - Electric vehicles, \$110 unless the owner has registered the vehicle in the OReGO program.
 - The variable MPG fee is increased on January 1/2022
 - 0-19 MPG, \$20
 - 20-39 MPG, \$25
 - Over 40 MPG, \$35
 - Electric vehicles, \$115 unless the owner has registered the vehicle in the OReGO program.

Increases The weight mile and Flat fees by **53.3%** in four increments 2018, 2020, 2022, and 2024.

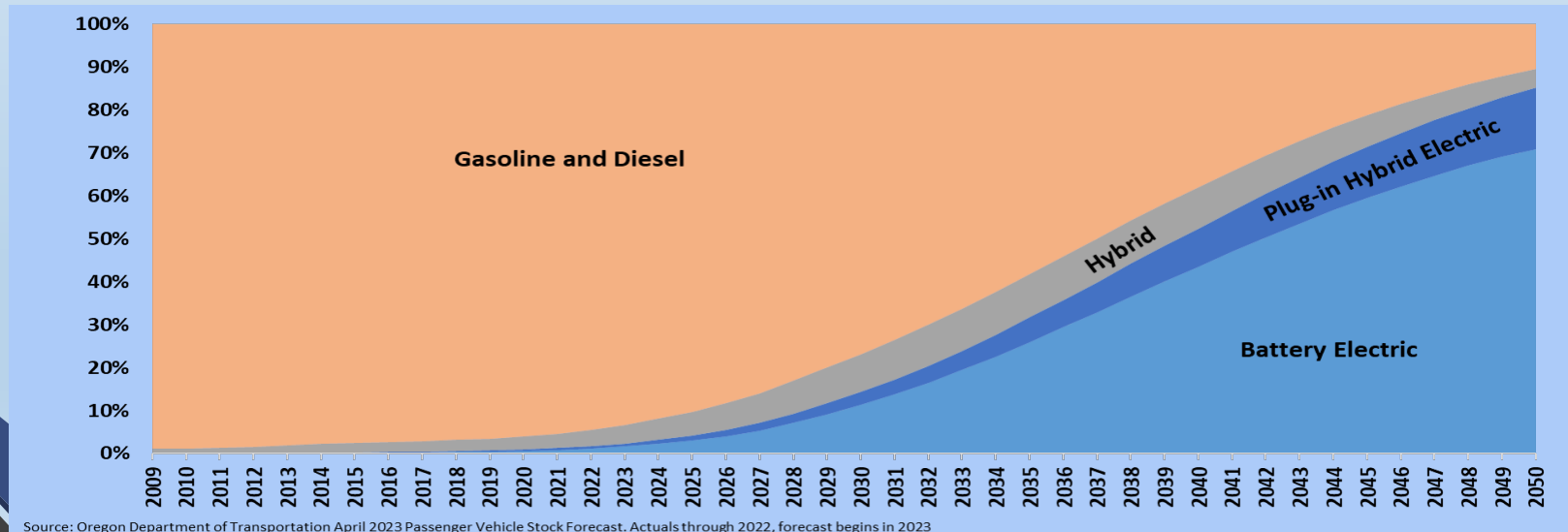
Cost responsibility aligned at : **62.87% light** and **37.13% heavy.**

Rest of the responsibility Picture For HB 2017

Section 75 study to answer the question

Does the alternative fee (Tiered based on fuel-economy) pay the cost responsibility of different propulsion Modes of light vehicles?

- OTC studies and reports on the different vehicles contributions to cost by 2023 (Electric, Hybrids, Etc.) section 75.



Results – Current conditions

		Baseline		
Vehicle Class		Annual User Fees	Scaled Equity Ratio	Registration Fees
N/A	Under 20 MPG	476,073,558	1.0568	\$63
N/A	20 to 39 MPG	512,016,447	0.7781	\$68
N/A	40 MPG and over	23,776,496	0.5883	\$78
EV	N/A	8,651,039	0.6664	\$158
Basic Vehicle Subtotal		1,020,517,540		
All Vehicle Total		1,598,121,340		

Equity Ratios Defined

<1.0 = Underpayment

1.0 = Equity

>1.0 = Overpayment

- Lowest MPG class overpays relative to the higher MPG classes
- Increasing fuel efficiency generally increases underpayment

Achieving Parity Between Types

Adjust Annual Registration Fees holding the Under 20 MPG registration fee constant at current rate

Alternative Rates					
Vehicle Class		Annual User Fees	Scaled Equity Ratio	Registration Fees	Change from Current Fees
N/A	Under 20 MPG	476,073,558	0.9355	\$63	\$0
N/A	20 to 39 MPG	695,249,001	0.9353	\$176	\$108
N/A	40 MPG and over	42,688,291	0.9350	\$274	\$196
EV	N/A	13,710,764	0.9350	\$300	\$142
Basic Vehicle Subtotal		1,227,721,614			
All Vehicle Total		1,805,325,413			

- Equity ratios increase yielding over \$200 million per year in additional revenue
- MPG classes over 20 and EV's see even larger fee increases to maintain equity

New Taxes by HB 2017

Administered by the Department of Revenue (DOR)

- **Privilege Tax:** A tax on dealer's sales of New vehicles in Oregon. 0.5% of retail price. Not a highway fund source, thus can be used to do other endeavors not on the highway. Dealers have the choice to show it on sales receipt, 1/1/18. **\$35 million/year**
 - \$12 million to the **Zero-Emission Incentive Fund** to provide rebates for the purchase of light-duty zero-emission or plug-in hybrid electric vehicles. The balance to the **Connect Oregon Fund**. Later changed to permanent (HB 2065, 2021), and the amounts changed to percentages 45% and 55% (SB1558, 2022).
- **Use Tax:** a tax equivalent to the privilege tax on vehicles bought outside of Oregon. This is considered highway Fund revenue and goes to the Highway Fund 1/1/18. **\$8million/year**
 - Vehicle Use tax –consumers and dealers. All verified by DMV before registration and title. 75% coming from the consumer payments rather out-of-state dealers.

HB 2017 New Taxes

Administered by the DOR

Bicycle Excise tax: a \$15 flat fee imposed on new bicycles at the point of sale with price higher than \$200. Almost **\$1 million/year**

proceeds of the excise tax on bicycles, net of administrative and enforcement expenses go to Connect Oregon Fund for the purposes of grants for bicycle and pedestrian transportation projects.

Payroll Tax: Employee paid payroll tax **of 0.1% of wages earned in Oregon**

Directs employers to withhold the tax and deduct it from wages. report and pay withholding to the Oregon Department of Revenue. file an annual report of the tax paid by employees with Oregon Department of Revenue. Penalizes employers for failure to withhold the tax from wages. **\$120 million in 2022.**

- **90%** to mass transit and transportation districts in proportion to the amount of tax paid, in counties where no district exists, and federally recognized tribal governments, provided no entity receives less than \$100,000.
- **5%** to Public transportation districts, counties where no district exists, and federally recognized tribal governments for competitive grants.
- **4%** for intercity public transportation service providers to improve service between communities.
- **1%** for a public transportation technical resource center to assist in rural areas.

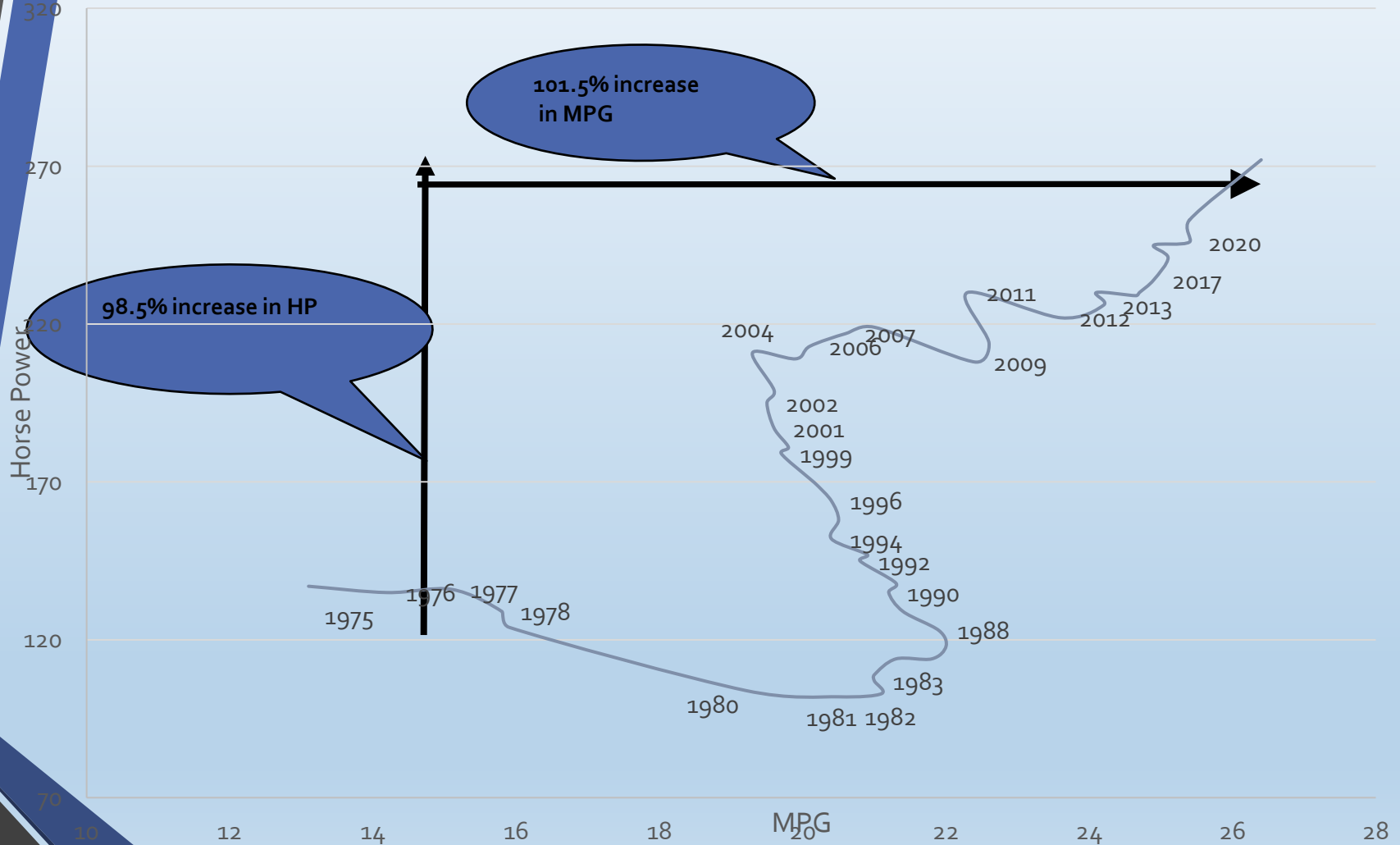
Road Use Fees

- Roadway tolling
- Per-mile road user charges (RUC)
- Fair Pricing
- Fixed and variable (congestion)
- The coming change in 10 years.

Things are no longer staying the same

Change in MPG and Engine power

FUEL Economy and Horse Power 1975 to 2022



Source: EPA Trends Report

Oregon Started Road User Fee Task Force (RUFTF), 22 years ago in (2001)



Legislative Purpose

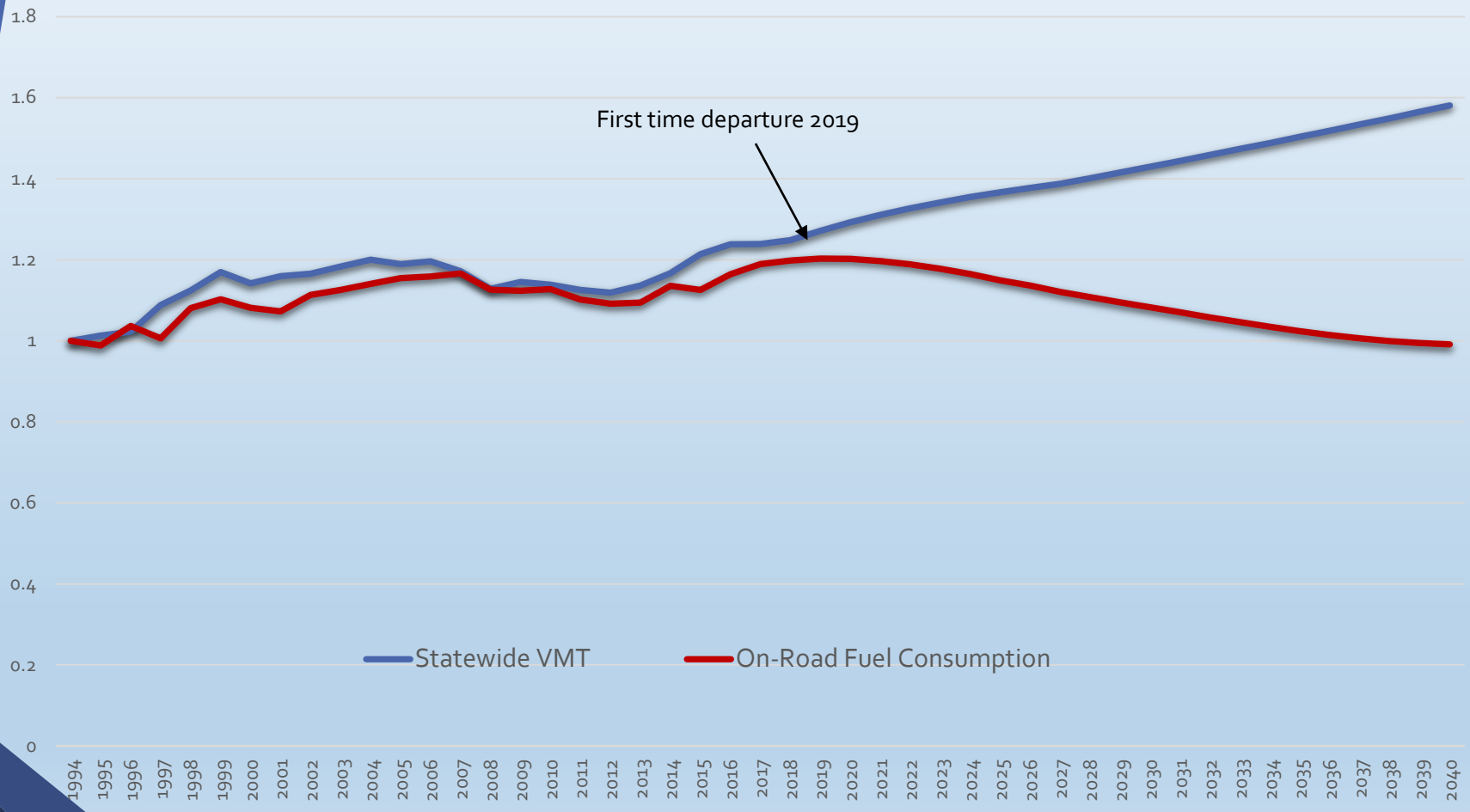
“Develop a design for revenue collection for Oregon’s roads and highways that will replace the current system for revenue collection.”

See: ORS 184.843

We already have the per mile (and weight) system for heavy trucks. So, for now, we are looking for a substitute of light vehicle fuel

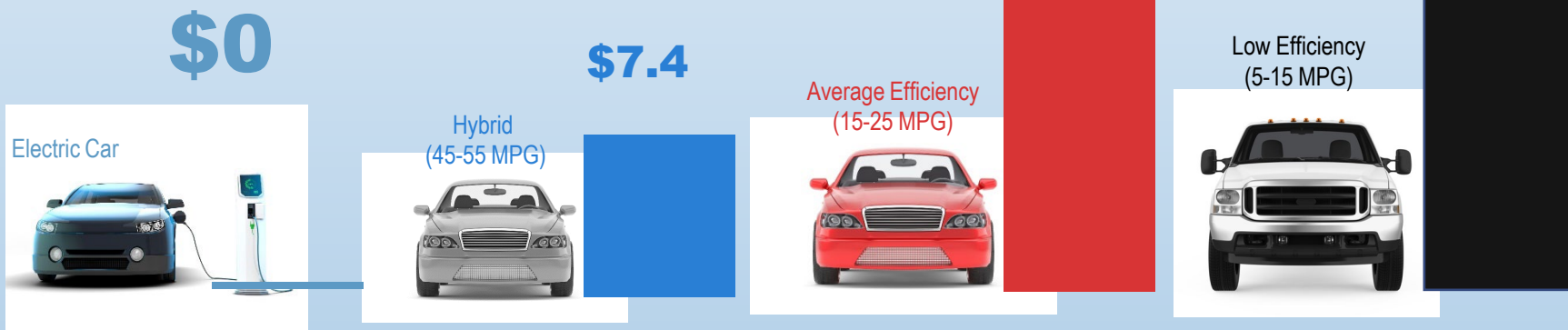
Forecasting a Departure from VMT

VMT and Fuel Consumption indexed to scale



Fuel efficiency is increasing.

Ex: Monthly fuel-tax paid for 1,000 Miles Driven



The background of the slide features a blue sign with white symbols. On the left, there is a stylized 'EV' symbol with a plug icon. On the right, there is a stylized 'HYD' symbol with a water tap icon. Below these symbols is a white arrow pointing upwards. The sign is mounted on a metal pole against a clear blue sky.

The world is changing.

Transportation Emissions could be responsible for 40% of total.

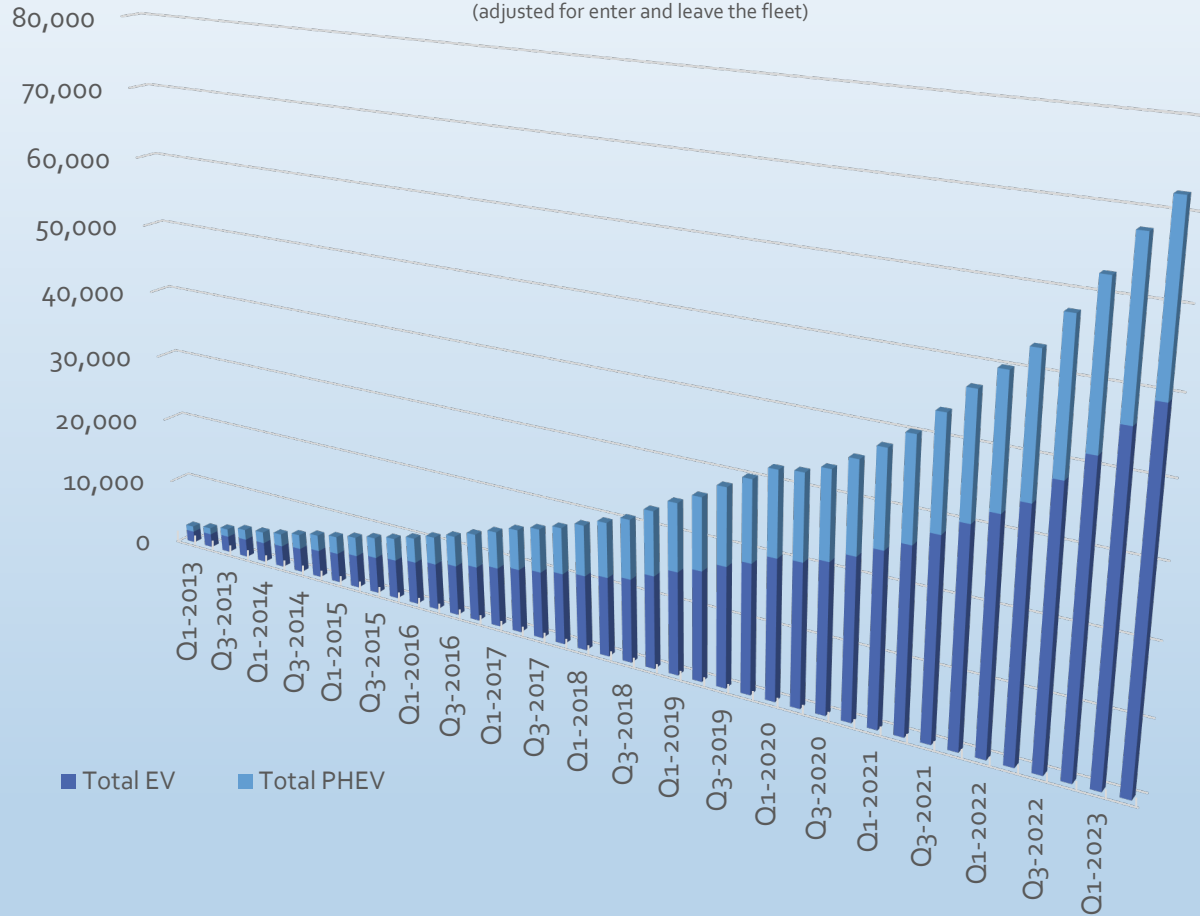
Electrification is seen as the solution.

The future of fuel tax-based funding is likely to become Unsustainable with transition to EV's.

**Transportation funding
needs to Adapt.**

Electric Vehicle & Plug-in Hybrids Registrations in Oregon

(adjusted for enter and leave the fleet)



M. Malik

LRO

November 2023

Oregon established a voluntary program in 2015



Two pilots in 2008, and 2012.

Then a voluntary opt-in program in 2015. OReGO

In 2020 Vehicles can opt in in lieu of higher registration Fees for Higher MPG vehicles

Enhanced Registration Fees

Effective January 1, 2022, passenger vehicle registration rates.

Tiers	4-year reg	4-year reg, joins RUC
0-19 mpg	\$252	\$252
20-39 mpg	\$272	\$272
40+ mpg	\$312	\$172
Electric Vehicle	\$632	\$172

EV enrollments, are currently about 48% of the enrolled vehicles. People seem to prefer the road usage charge over the registration surcharge.

Our transportation funding system needs to modernize.

Oregon Introduces
1st State Fuel Tax
in U.S.

1932

Oregon Levies 1st
Weight-Mile Tax

1993

Oregon Begins
Nation's 1st
RUC Program

2021

1919

U.S. Institutes 1st
Federal Fuel Tax

1947

Congress Approves
Last Federal Fuel
Tax Increase

2015

13 States Introduce
RUC Legislation

Road usage charge (RUC) & other funding methods

Road Usage Charge is:

- A base rate that all users pay (\$0.019/mile)
- Not variable by time of day/unlike tolls
- Applicable to the entire system/
- **Tolls:** are for specific projects. No weight (2000lb) increments.

The future of road usage charge:

- Potential to be a platform for congestion pricing and flexible taxation



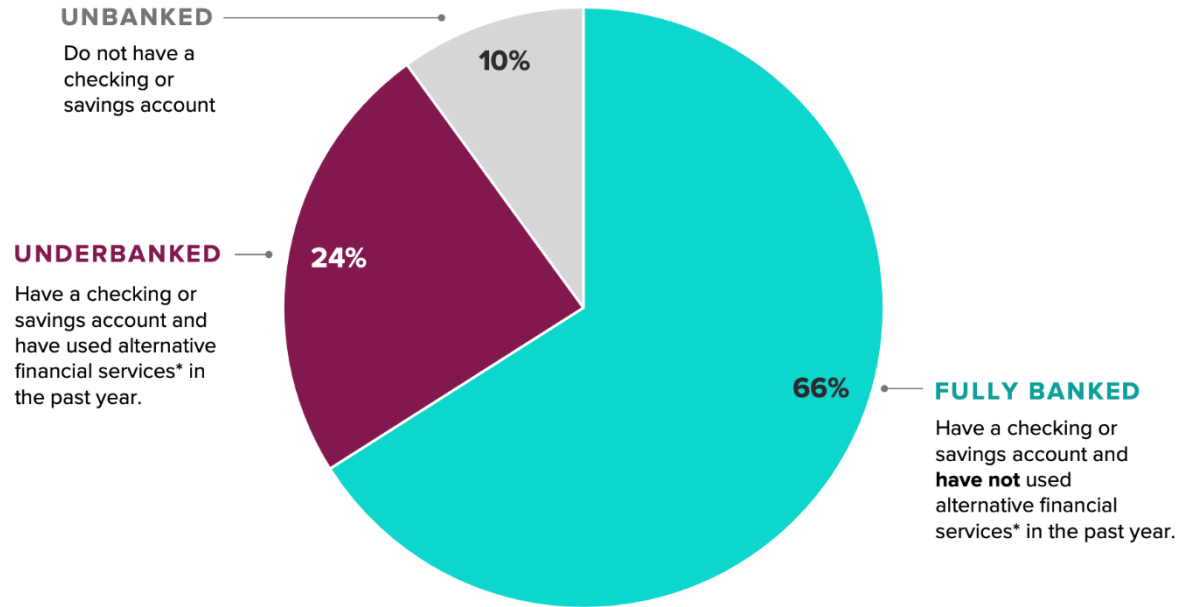
Impediments and constraints

- Collection costs 25% and 40% (economies of scale)
- Privacy concerns, government tracking
- The unbanked and underbanked
- Paying taxes separate from price
- General Acceptance
- Political Acceptance and Adoption
- Negating the advantage of MPG improvements
- Number of payers (776 May), down from 1100 (7y)
- 361 EV, 90 Hybrid, 3 PHEV, 103 Gasoline
- Frequency of payment and prepay
- Perceptions of users and payers
- Compliance and enforcement
 - (only if they exceed \$125 today), but no need now



Almost One-Quarter of the U.S. Public is Underbanked

Share of U.S. adults who are fully banked, underbanked, and unbanked



MORNING CONSULT

*Using alternative financial services is defined as purchasing a money order, paying bills or cashing a check through a service other than a bank or credit union in the past year.

Poll conducted July 29 - August 1, 2021, among 4,400 U.S. adults, with a margin of error of +/-2%.

Contact Info:

Mazen Malik

Legislative Revenue Office (LRO)

State Capitol Building Rm 160,
900 Court St. NE,
Salem, Oregon 97301

Phone: 503-986-1260

Email: mazen.g.malik@oregonlegislature.gov