

MTI Research Snaps:



The Impact of COVID-19 on California Transportation Revenues

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The question:

How might COVID-19 affect state-generated transportation revenues through 2030?

Taxes and fees projected (SB1 package)

Fuel taxes

Gasoline excise tax	Base excise of 30¢/gallon + swap excise of 17.3¢/gallon (effective 7/1/2019)
Diesel excise tax	36¢ per gallon
Diesel swap sales tax	5.75% on purchase price

Vehicle fees (annual)

Transportation Improvement Fee (TIF)	\$25 - \$175; rate depends on vehicle value
Road Improvement Fee (RIF)	\$100 per ZEV (effective 7/1/2020)

Sources of highway and transit funding in California, FY 16-17

Federal	\$7.4 billion	22%
State	\$5.7 billion	20%
Local	\$16.6 billion	58%

Methods

- Projected state-generated revenue used to fund transportation (SB1 package of gas excise tax, diesel sales and excise taxes, RIF, and TIF)
- Used spreadsheet models and readily available data (i.e., US Energy Information Administration)
- Projected revenue for 5 scenarios + a baseline

The scenarios

- Compared a “baseline” scenario that assumes a world without COVID-19 to 5 possible recovery scenarios
- The scenarios are designed to reflect a range of possible futures (not to predict what will happen)
- The scenarios assume different trajectories through 2030 of:
 - Rates of economic recovery affecting fuel consumption and vehicle purchases
 - Levels of policy support to stimulate vehicle purchases, including ZEVs

High/medium/low trajectories chosen for key variables in the recovery scenarios:

Variables	Scenario		
	High-revenue	Medium-revenue	Low-revenue
Gas consumption (volume)			
Depth of “bottom” (% of pre-COVID-19 weekly consumption)	50%	50%	50%
Date recovery begins	June 1, 2020	July 1, 2020	August 1, 2020
Date when recovery level is reached	Dec. 31, 2021	Dec. 31, 2024	Dec. 31, 2030
Recovery level, as % of pre-COVID-19 consumption	100%	100%	90%
Vehicle registrations annual growth rate	1.9% (highest year-to-year growth rate for 2008-2017)	0.8% (mean year-to-year growth rate for 2008 - 2017)	0.5% (lowest year-to-year growth rate for 2008-2017)
ZEV registrations annual growth rate	Meet CA target of 1.5 million ZEVs by 2025 and 5 million by 2030	+50,000 per year (2018-19 rate)	+15,000 per year (2014-15 rate)
Vehicle value	EIA rate (same as the baseline)	5% under EIA rate	10% under EIA rate

Trajectories chosen for key variables in the recovery scenarios:

Recovery scenarios	Gas consumption	Vehicle registrations	ZEV registrations	Vehicle value
Fast w/ZEV stimulus	High	High	High	High
Moderate	Medium	Medium	Medium	Medium
Moderate w/ZEV stimulus	Medium	Medium	High	Low
Moderate w/stagnated vehicle market	Medium	Low	Low	Medium
Slow	Low	Low	Low	Low

Note: See table on previous slide for definitions of the high, medium, and low trajectories for each variable.

Total revenue, all scenarios (billions of 2020 \$s)

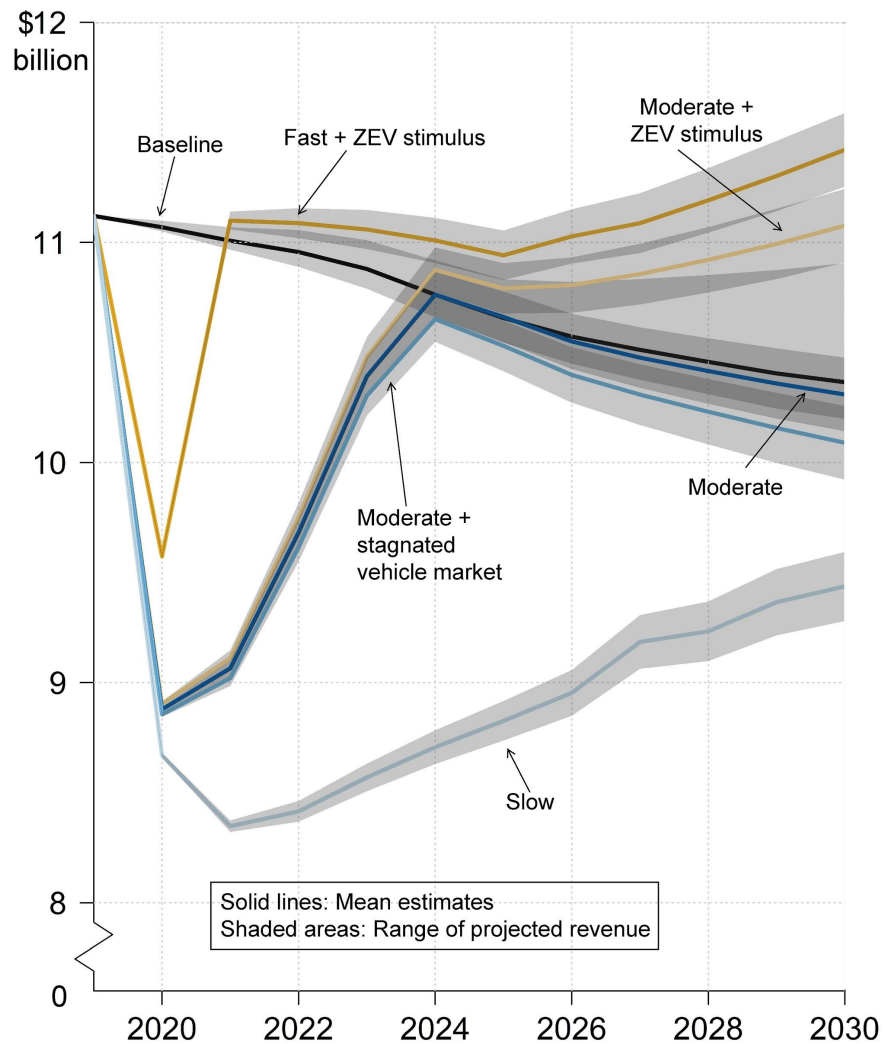
Mean projected revenue in 2030 ranges from \$9.4B to \$11.4 B

Mean cumulative projected revenue from 2020 to 2030 varies by scenario:

- Baseline: \$118 billion
- Slow: \$98 billion (- 17%)
- Fast w/ZEV stimulus: \$121 billion (+ 3%)

Lines = mean projections

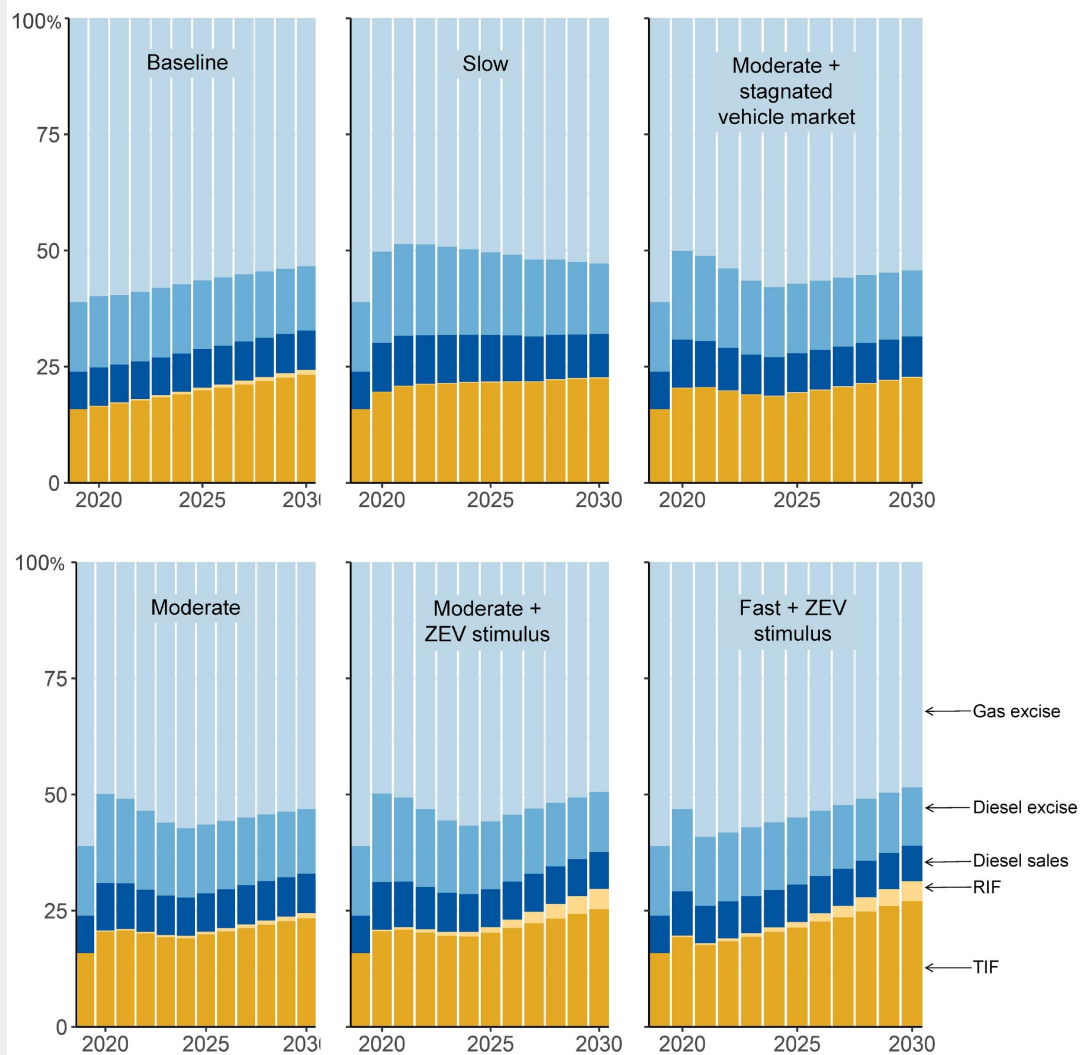
Shaded bands = range of projected revenue



Total revenue, by source, all scenarios

- Gasoline taxes generate the most revenue in all scenarios
- Scenarios with more ZEVs earn a noticeably higher percent of revenue from vehicle fees (RIF + TIF)

Note: In some scenarios, the RIF (on ZEVs) is too small to see



Conclusion

- Total revenue raised varies considerably among the scenarios. E.g. in 2030:
 Slow-recovery: \$9.4 billion
 vs.
 Fast-recovery+ZEV-stimulus: \$11.4 billion
- Cumulative revenue from 2020 - 2030 varies by more than \$20 billion
- Gasoline taxes generate the most revenues in all scenarios
- User fees levied on ZEVs could potentially replace and or even exceed lost gasoline sales tax revenue

Resources

MTI reports

[*The Impact of COVID-19 on California Transportation Revenue*](#)

May 2020

[*The Impact of ZEV Adoption on California Transportation Revenue.*](#)

July 2019

[*The Future of California Transportation Revenue.*](#)

October 2018

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The Impact of COVID-19 on California Transportation Revenues

View the full report at: <http://transweb.sjsu.edu/research/2018>

Tune in for the next MTI Research Snap webinar “Mitigation v. Adaptation, Combating Climate Change through Transportation and Land-use Planning” on June 4, 2020 at 10 a.m.!

Have a suggestion for a webinar topic you’d like to see featured?

Email irma.garcia@sjsu.edu

