

The Impact of ZEVs on State-Generated Transportation Revenues in California

Presentation to the
California Transportation Commission

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The question:

How will growing numbers of light-duty ZEVs impact state transportation revenues through 2040?

Methods

Projections

Projected future transportation revenue in California to 2040 using:

- Spreadsheet models
- Readily available data (i.e., US International Energy Agency)
- Widely-used assumptions

Key independent variables: state population, # of vehicles, VMT, gas and diesel fuel prices, and adoption rates for ICE vehicles and ZEVs

The taxes/fees projected

All taxes/fees collected by the State of California that met three criteria:

1. Collected from light-duty vehicle owners and users
2. Amount of revenue collected depends at least in part on the vehicle's fuel source (ICE or ZEV)
3. Proceeds are dedicated to transportation programs

Taxes and fees projected

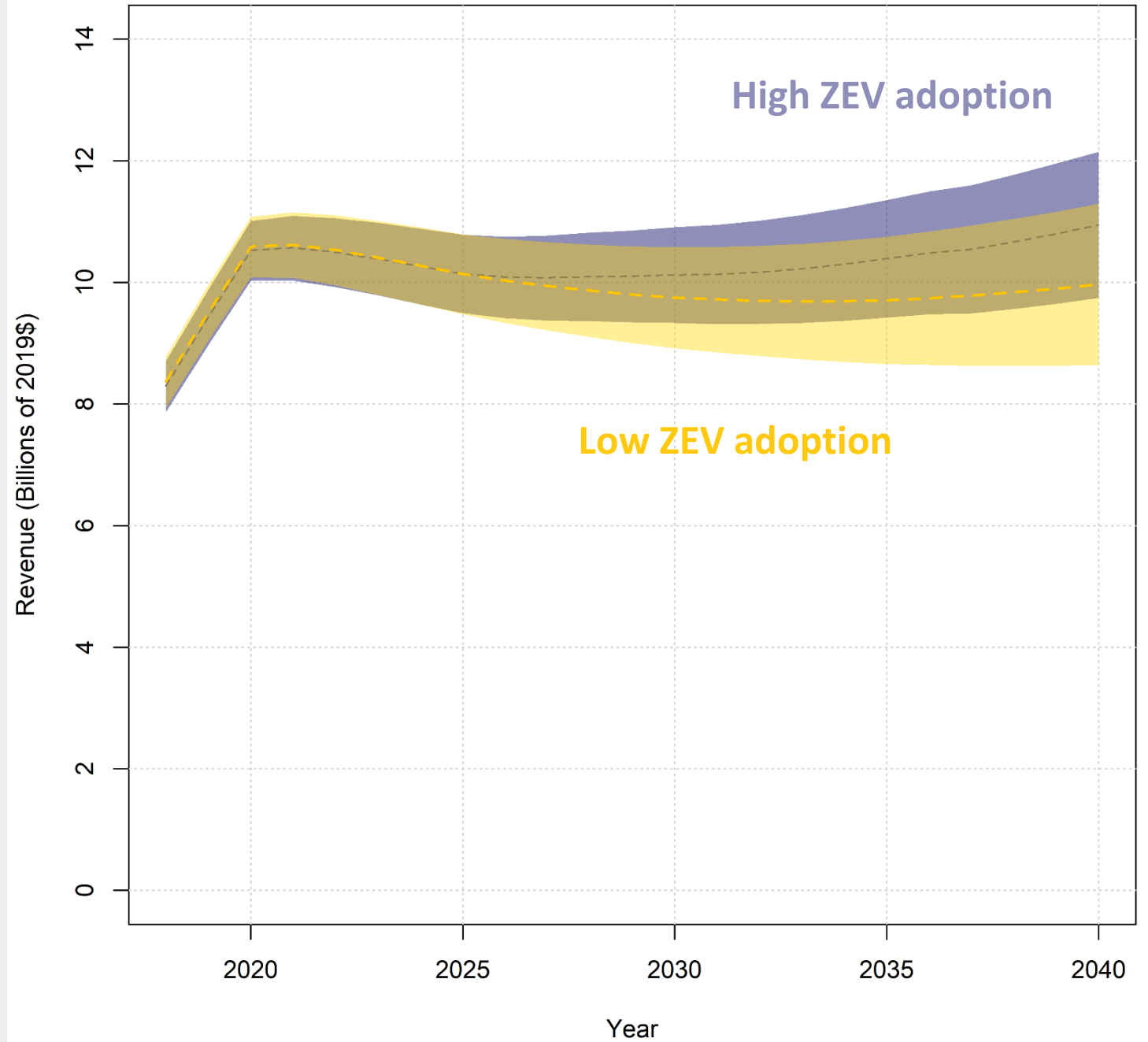
Gasoline taxes	
Base excise tax	30¢ per gallon
Swap excise tax	17.3¢ per gallon (effective 7/1/2019)
Diesel taxes	
Excise tax	36¢ per gallon
Swap sales tax	5.75% on purchase price
Vehicle fees (annual)	
Transportation Improvement Fee (TIF)	\$25 - \$175; rate depends on vehicle value
Road Improvement Fee (RIF)	\$100 per ZEV (effective 7/1/2020)

Results from 2 scenarios compared

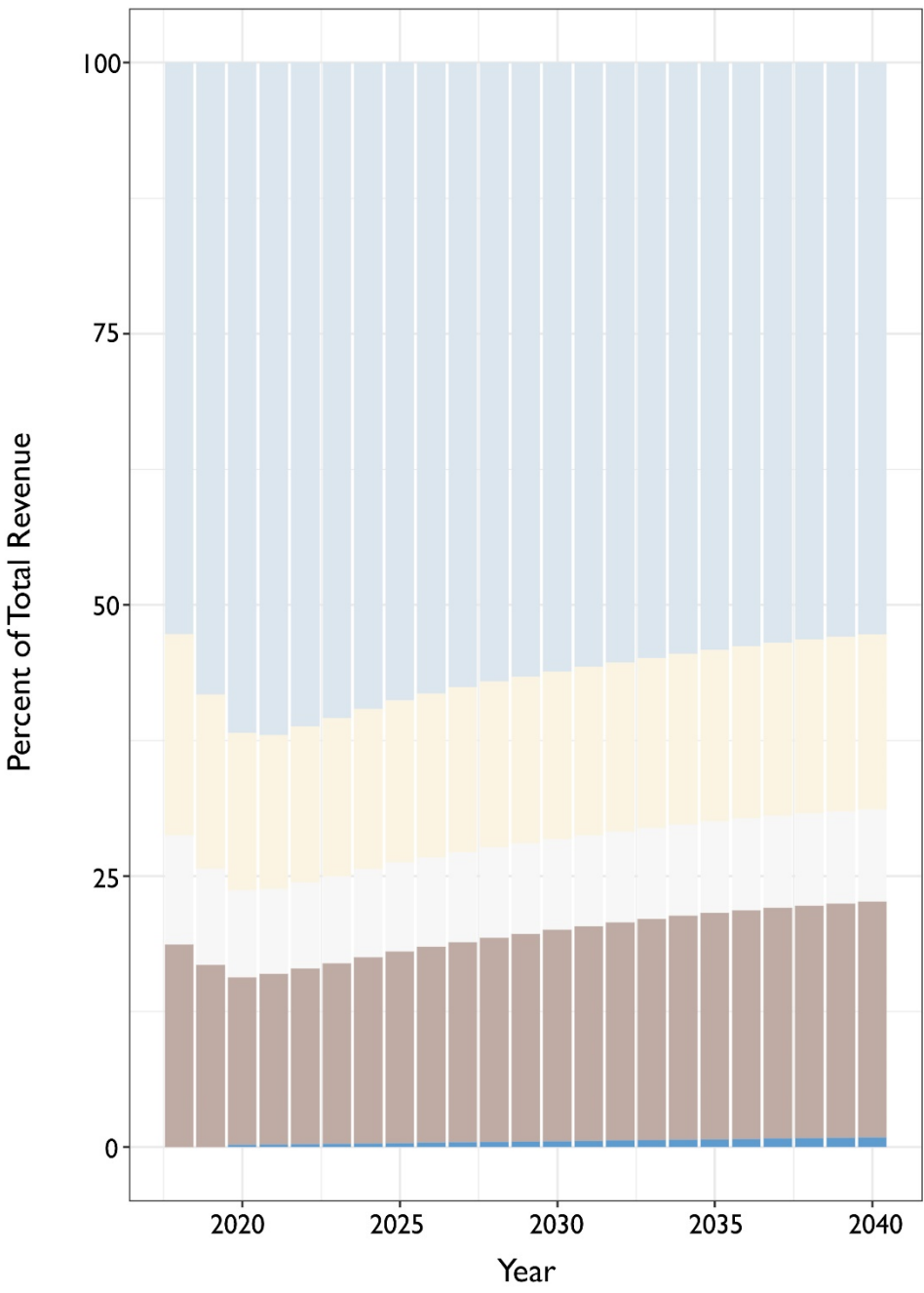
1. Low-adoption scenario:
ZEV ownership grows at the historical rate of net increase (~ 26,000 vehicles per year)
2. High-adoption scenario:
California reaches its goal of 5 million ZEVs by 2030

Findings

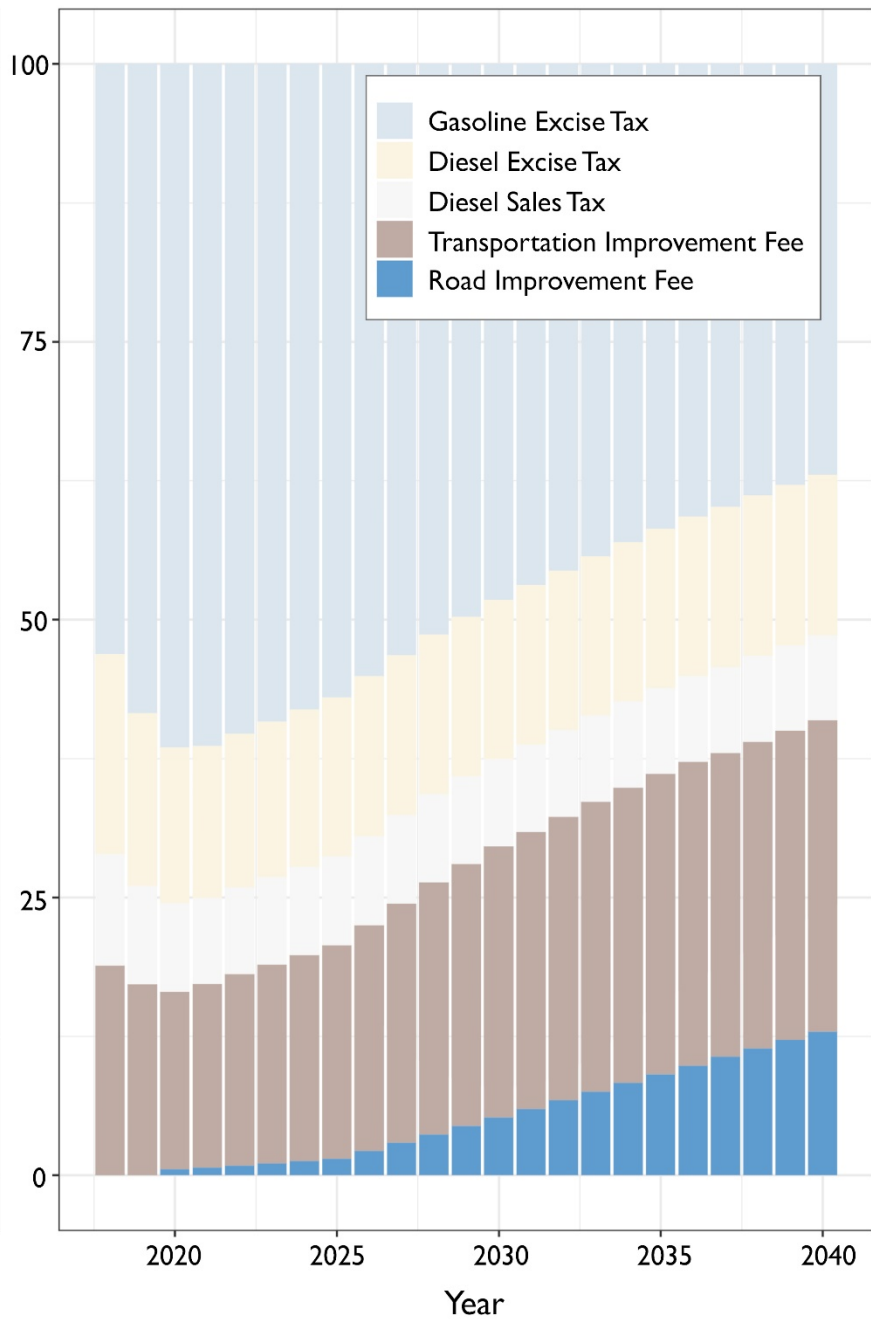
Total revenue, both scenarios



Total revenue, by source

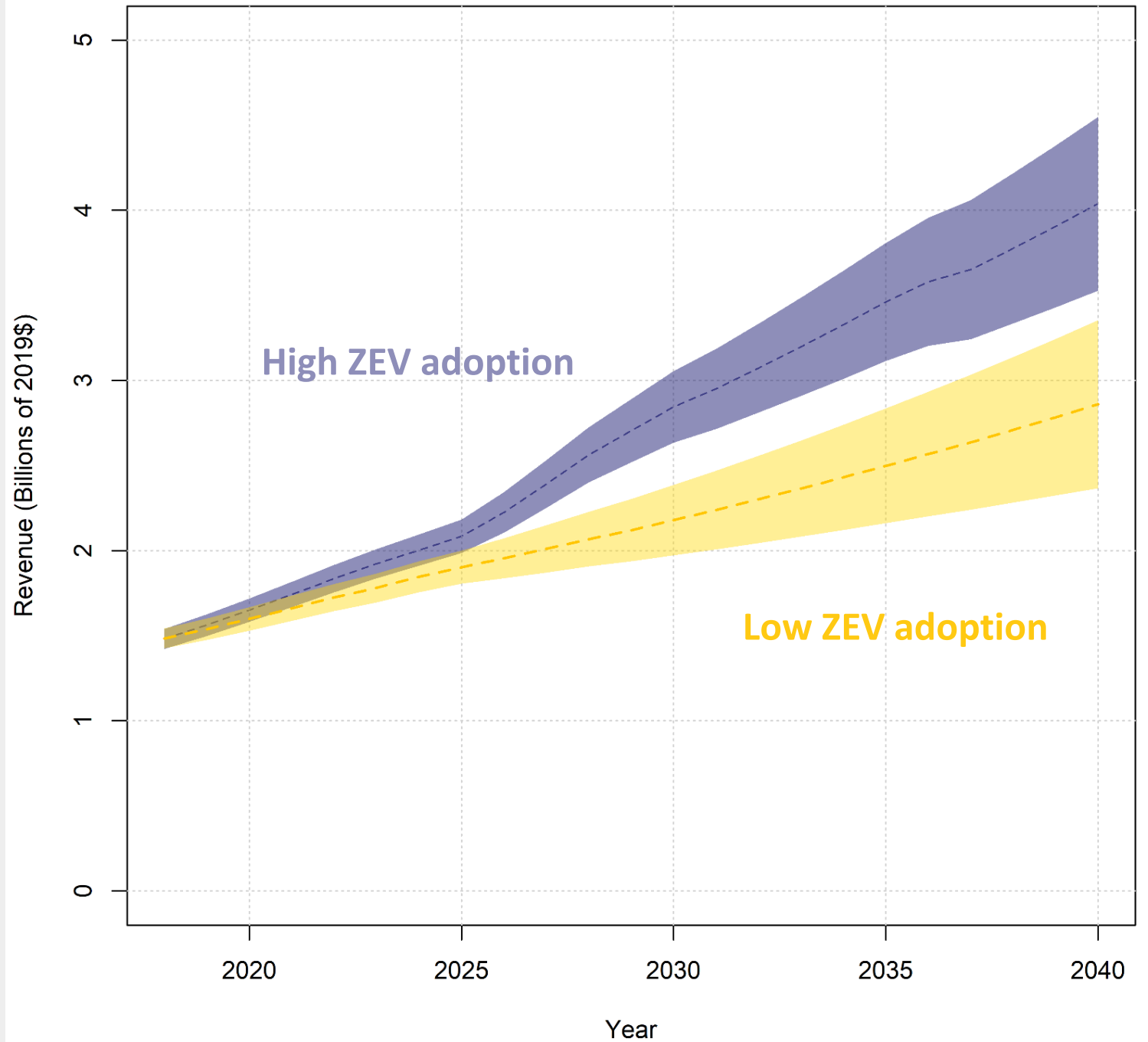


Low Adoption Scenario

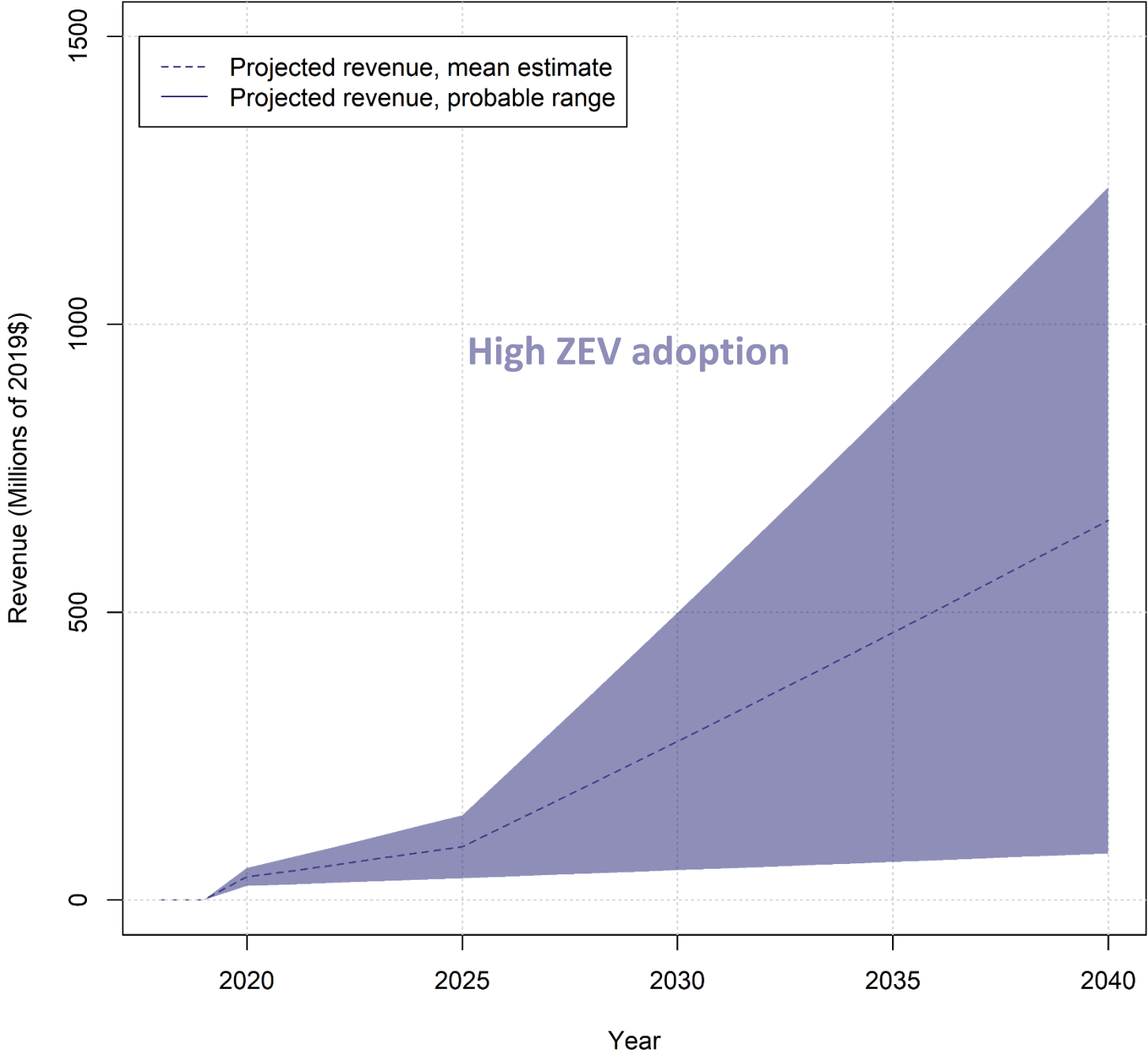


High Adoption Scenario

TIF revenue



RIF revenue



Note: Revenue from the low ZEV adoption scenario is too small to show.

Conclusions

Summary of findings on revenues

- Total revenue in 2040 will fall somewhere between \$8.3 and \$12 billion
- Revenues are likely to be higher under the high-adoption scenario, because CA collects annual vehicle fees as well as fuel taxes
- If ZEV prices fall much faster than anticipated, revenue could fall below these projections

Want to learn more?

Reports:

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

MTI, July 2019.

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

MTI, October 2018

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