

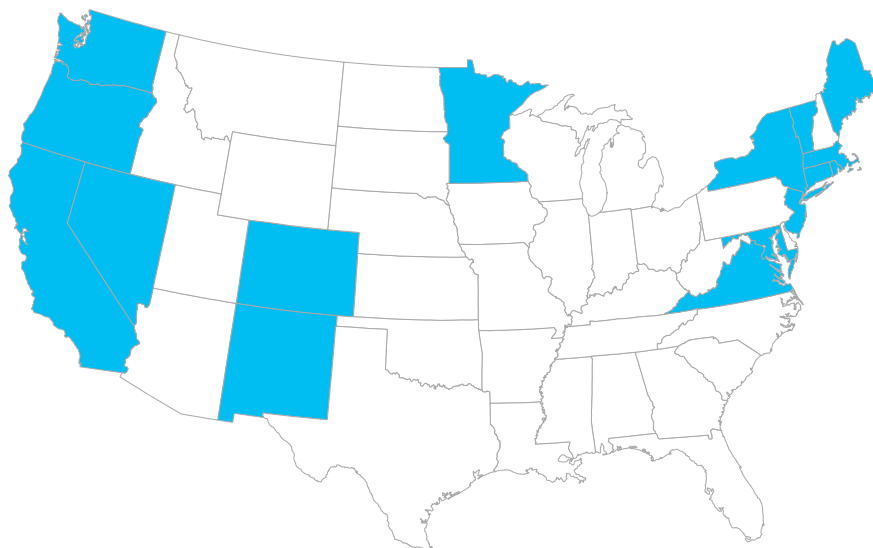


BRG Policy Brief

The Effect of Zero-Emission Vehicle Policies on Dedicated Highway Infrastructure Funding in Nevada

In 2020, California Governor Gavin Newsom issued an executive order requiring all new passenger vehicles sold in the state to be zero-emission (ZEV) by 2035.¹ The order also sets the goal that new medium-and heavy-duty vehicles sold in California should be zero-emission by 2045. Seventeen states, including Nevada, previously followed California's vehicle standards under Section 177 of the federal Clean Air Act. Thus, Nevada and other states are likely to adopt (or have already adopted) ZEV policies similar to California's to phase out sales of internal combustion vehicles.

U.S. States That Have Adopted California's Vehicle Standards under Section 177 of the Federal Clean Air Act



Source: California Air Resources Board, "States that have Adopted California's Vehicle Standards under Section 177 of the Federal Clean Air Act" May 13, 2022. Delaware and Pennsylvania were not included as adopters of ZEV policies.

Construction and maintenance of transportation infrastructure in the United States is funded primarily with revenues derived from federal and state excise taxes on gasoline and diesel fuel. When zero emission vehicles replace vehicles with internal combustion engines, the demand for gasoline – and, hence, federal and state fuel tax revenues – goes away. Thus, the adoption of ZEV policies likely will have a profound impact on transportation infrastructure, jobs, and personal income. The impact will be more substantial for adopting states with high fuel excise tax rates (e.g., Washington, Illinois, Pennsylvania, and New Jersey) than for states with low fuel excise tax rates (e.g., New Mexico).

In this brief, we quantify the annual amount of fuel excise revenue lost in Nevada resulting from the adoption of a ZEV policy. Assuming state and federal fuel excise tax rates remain at their current levels, the main driver of the estimate will be changes in fuel consumption. We constructed our estimates of future

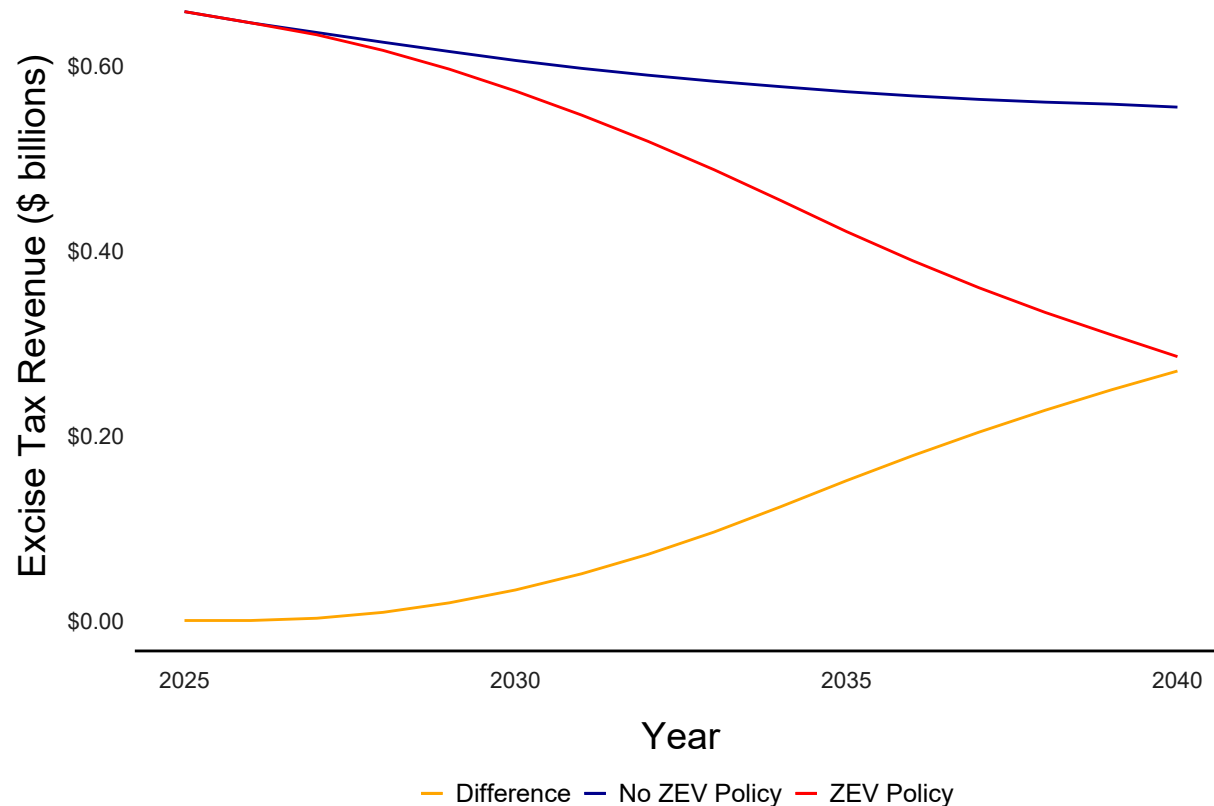
¹Executive Department, State of California, "Executive Order N-79-20" (September 23, 2020). <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>

fuel consumption, with and without a ZEV policy, using California data and a model similar to the one constructed by the California Air Resources Board (CARB).² We then apply the predicted annual rates of change in fuel consumption in California to other states considering similar policies. The predicted level of fuel consumption in each state is multiplied by the most recent state and federal fuel excise tax rates. The sum of these two numbers yields the estimated annual reduction in fuel excise tax revenues caused by the adoption of a ZEV policy.³

Because fuel tax revenues are the primary source of funds for the construction and maintenance of transportation infrastructure, the initial impact of the policy will involve a dramatic reduction in funding dedicated to maintaining a state's transportation infrastructure. Moreover, because the statutory allocation of federal highway funds to states is influenced heavily by the ultimate source of federal fuel excise tax collections, the loss of state fuel tax revenues will be magnified by the loss of federal Highway Trust Fund allocations to Nevada.

We estimate that fuel excise tax revenue in Nevada will decline by \$1.7 billion as a result of a ZEV policy. The decline will be greatest in later years due to the gradual phase-out of internal combustion vehicles.

Nevada's Annual Decline in Fuel Excise Tax Revenue (Federal & State)
2025 – 2040 (\$ billions)



²The results and the methodology of the CARB model were described in CARB's Statement of Regulatory Impact.

³These estimates rely upon California data and experience. California may not always be a reasonable proxy for all other states adopting ZEV policies.

Of the states bordering Nevada, some may adopt a ZEV policy. Compared to its neighbors, Nevada will experience the third largest loss of fuel excise tax revenue.

Total Decline in Fuel Excise Tax Revenue (Federal & State)

Nevada and Neighboring States

2025 –2040 (\$ billions)

	No ZEV Policy	ZEV Policy	Difference
California	\$166.53	\$137.05	\$29.48
Oregon	\$17.61	\$14.49	\$3.12
Nevada	\$9.51	\$7.82	\$1.68
Arizona	\$20.45	NA	NA
Idaho	\$8.88	NA	NA
Utah	\$4.85	NA	NA
Total	\$227.83	\$159.37	\$34.28

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Dr. Kevin W. Christensen uses economics to provide insights and answers to public policy and business questions. On public policy matters, he has estimated the economic and tax revenue impact of proposed infrastructure investments, tax changes, and regulatory rules. He has advised clients in the oil and gas, pharmaceutical, biotechnology, medical device, banking, automobile finance, wholesale distribution, transportation, consumer packaged goods (CPG), agriculture, building materials, tourism, and gaming industries.

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