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REPEALING FEDERAL TAILPIPE EMISSIONS STANDARDS WOULD RAISE HOUSEHOLD COSTS, HARM PUBLIC HEALTH, AND DAMAGE THE ECONOMY

A recent U.S. Environmental Protection Agency (EPA) proposal aims to repeal the EPA's own 2009 Endangerment Finding that underpins the federal government's ability to regulate greenhouse gas (GHG) emissions, while also repealing certain vehicle tailpipe emissions standards promulgated under this authority.

But repealing these standards threatens the budgets, public health, and welfare of Americans: It would force households to pay $310 billion more in energy costs, cause 700 premature pollution-related deaths annually, cut cumulative U.S. GDP by $710 billion and cost the domestic labor force an average of 110,000 jobs annually, all between 2026 and 2050.

Higher energy spending is not offset by lower upfront vehicle costs since electric vehicle prices are falling as deployment surges and battery costs decline, while the average new gasoline car price is slowly increasing over inflation as consumers choose larger vehicles.

Background

Since 1970, the EPA has executed its statutory authority under the Clean Air Act (CAA) to mitigate pollution from both stationary and mobile sources deemed to endanger public health, welfare, and the environment.[1] For decades, the EPA has adopted science-based standards in line with this authority to reduce harmful tailpipe pollution. These standards have grown stronger over time, driving U.S. automotive sector innovation while providing consumers with safer, cleaner, and more efficient transportation options. They have benefited the economy and cleaned the air while saving consumers money and creating jobs.

After the 2007 U.S. Supreme Court decision in *Massachusetts v. EPA* determined GHGs are air pollutants covered by the CAA, the EPA signed the Final Endangerment and Cause or Contribute Findings for six GHG pollutants from new motor vehicles. They concluded these pollutants cause or contribute to air pollution that endangers public health or welfare[2]—a finding backed by resounding consensus in the global scientific community.[3] Since 2010, the EPA has adopted updated standards to reduce GHGs from new models of light-, medium-, and heavy-duty vehicles (LDVs, MDVs, and HDVs, respectively). The EPA's 2024 standards, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles and Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles – Phase 3 ("existing standards"), were designed to further reduce harmful air pollutant emissions while benefiting society.

In August 2025, however, the EPA issued a proposed rule, Reconsideration of the Endangerment Finding and Greenhouse Gas Vehicle Standards,[4] to rescind their 2009 Endangerment Finding and repeal GHG emission standards from all new vehicles.

We used the open-source Energy Policy Simulator (EPS)—more information about how the EPS models work and are developed is available online—to model the impacts of this proposed rule, finding that repealing GHG tailpipe emission standards would significantly harm America's families, economy, public health, and welfare. Repealing these standards would result in 700 premature deaths annually from increased local pollution, cut cumulative U.S. GDP by $710 billion, and cost the domestic labor force an average of 110,000 jobs per year over the next 25 years. Simultaneously, by reducing investment in more efficient vehicles and increasing demand for gasoline, the EPA's proposal would cause U.S. households to pay $310 billion more on energy, for an average $83 per household per year over the next 25 years. In all, we find the Proposed Reconsideration conflicts with the EPA's responsibility to protect public health and welfare.

Repealing vehicle tailpipe GHG standards will hamper deployment of efficient electric vehicles

Federal emission standards for new vehicles level the playing field for all auto manufacturers, prompting them to continue investing in new technologies and finding innovative ways to reduce tailpipe pollution like criteria pollutants, air toxics, and GHGs. Automakers comply with these standards by deploying a mix of solutions across their models, including more efficient chassis; cleaner burning engines; advanced emissions controls; and alternatively fueled zero-emission vehicles (ZEV) like battery-electric, plugin-hybrid electric, and hydrogen fuel cell vehicles (BEV, PHEV, FCEV). The EPA estimated vehicle manufacturers would comply with the 2024 standard for LDVs and MDVs by boosting the combined share of BEV and PHEV sales to 68 percent by 2032, though this was a modeling output and not a policy requirement. The 2024 HDV rule would improve aerodynamics, reduce tire rolling resistance, and increase shares of ZEV sales across each heavy-duty truck class.

To model the impacts of the EPA's proposed repeal of GHG tailpipe standards for LDVs, MDVs, and HDVs, we incorporated vehicle-technology sales shares from the EPA's 2024 standards[i] into the U.S. EPS model to project the effects on pollution, public health, welfare, and the economy.

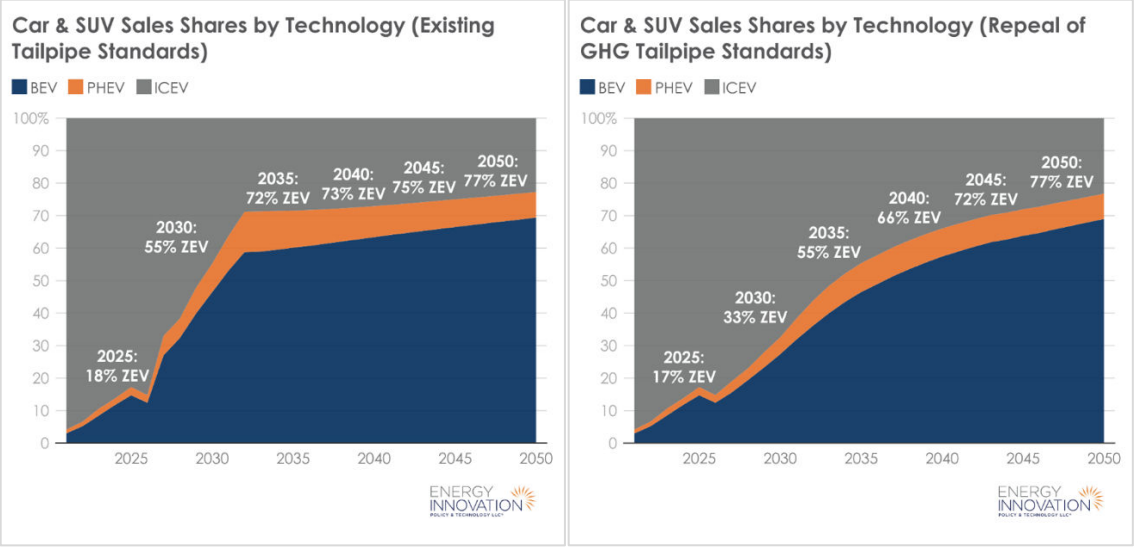


Figure 1. Comparison of sales shares by technology for light-duty passenger vehicles (cars and SUVs) under the 2024 GHG tailpipe standards versus repeal of all GHG tailpipe standards.

[i] We use assumptions and data from EPA's Regulatory Impact Analysis for both final 2024 rules, available here: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-multi-pollutant-emissions-standards-model and https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-standards-heavy-duty.

Figure 1 and Figure 2 show that repealing the tailpipe GHG standards would decrease year-over-year adoption rates of ZEVs (BEVs and PHEVs), increasing the number of internal combustion vehicles (ICEVs) on the road. ZEVs would make up just over 70 percent of new passenger LDV sales in 2035, compared to 55 percent in 2035 under the proposed repeal. ZEV deployment for other vehicles including vans, buses, and other heavy trucks, would experience a sharper decline without the rules, falling from around half of new sales to just under a fifth of new sales in 2035.[ii] Over time, the proposed repeal would lead to more ICEVs on the road and more harmful tailpipe emissions.

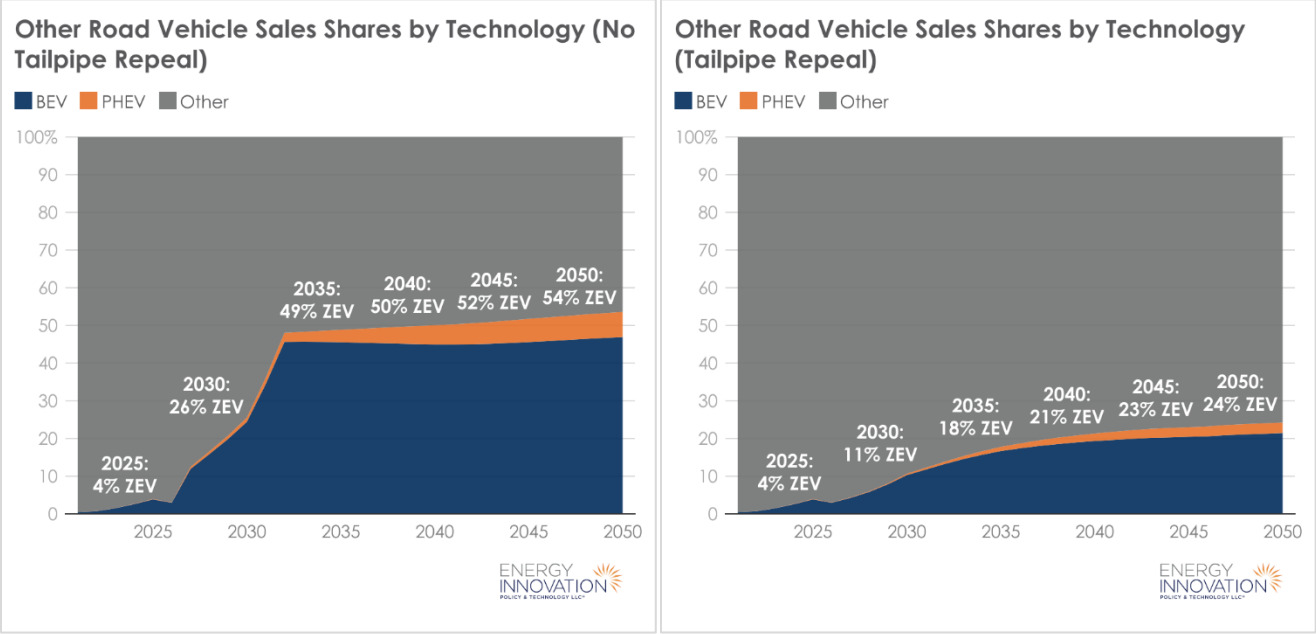
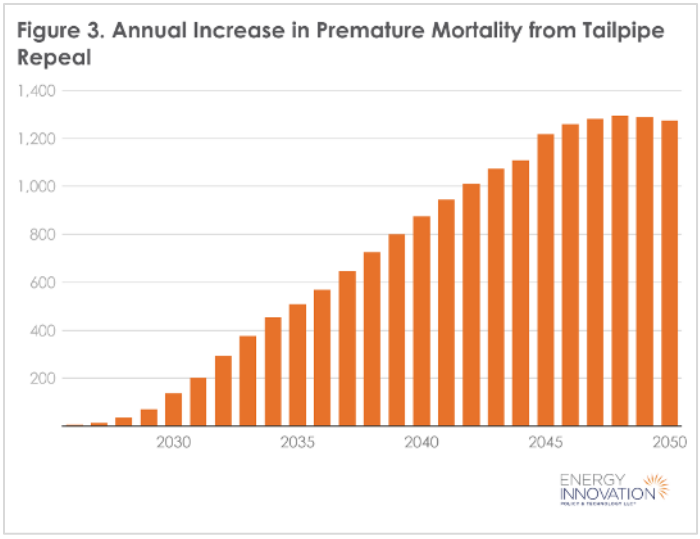


Figure 2. Comparison of sales shares by technology for vehicles other than passenger LDVs (including vans, buses, and heavy trucks) under the 2024 GHG tailpipe standards versus repeal of all GHG tailpipe standards.

More ICEVs on the road will exacerbate pollution and harm public health

The EPS forecasts transportation data through 2050 using service demand projections from the U.S. Energy Information Administration (EIA). Based on these forecasts, we find the repeal of tailpipe GHG emission standards would increase the number of ICEVs on the road and therefore increase the accumulation of other designated air pollutants, such as particulate matter (PM), nitrogen oxides (which form secondary PM and interact with sunlight to form harmful ground-level ozone, O_3) and sulfur oxides (which also form secondary PM).



These pollutants accumulate in the air, especially around roadways, causing increased rates of

[ii] We find FCEVs will make up less than 0.005 percent of passenger LDV sales and 0.5 percent of all other vehicle sales and therefore do not break them out from the ICEV category in Figure 1 or Figure 2.

bronchitis, asthma, heart attacks, cardiovascular diseases, and other health problems. Elevated levels of these pollutants can increase emergency room visits, hospital admissions, and premature mortality. Children, the elderly, and people living in areas with high levels of air pollution are especially susceptible.[5] As shown in Figure 3, our model finds repealing tailpipe GHG emission standards would cause an average of 700 annual premature deaths from 2026 to 2050.[iii]

Repealing tailpipe GHG emission standards will raise household energy bills by increasing demand for oil and reducing the availability of energy-efficient electric vehicle models

Repealing these standards would increase dependence on petroleum products, driving higher oil demand and inflating gas prices. We use the U.S. EIA's Annual Energy Outlook "Reference" and "Alternative Transportation" scenarios[6] to estimate the percent price impact per percent change in fuel demand and apply this ratio to the change in demand from our vehicle fuel use forecast. As shown in Figure 4, we find gasoline prices will increase moderately in the near-term (¢6 /gal in 2030) and more significantly in the long-term (¢20/gal in 2035, ¢36/gal in 2040, ¢46/gal in 2045, ¢31/gal in 2050). As a result, households with gasoline vehicles will see year-over-year inflation of their energy expenses, with the average U.S. household spending as much as $400 more on gasoline by 2043.

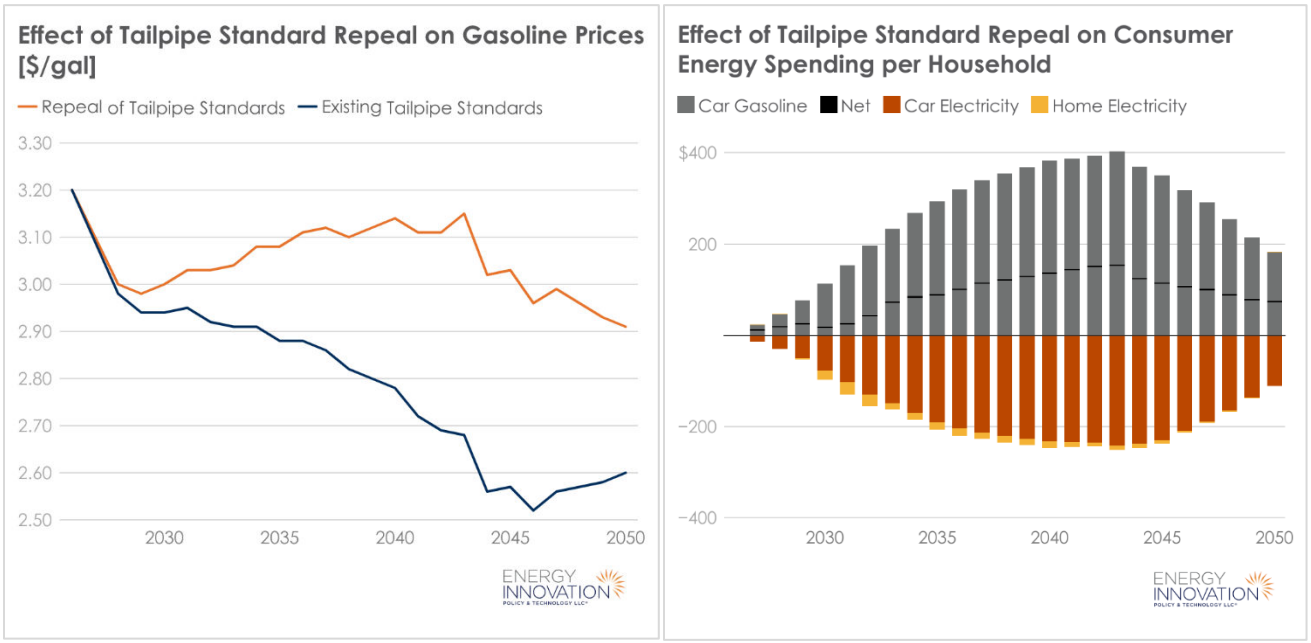
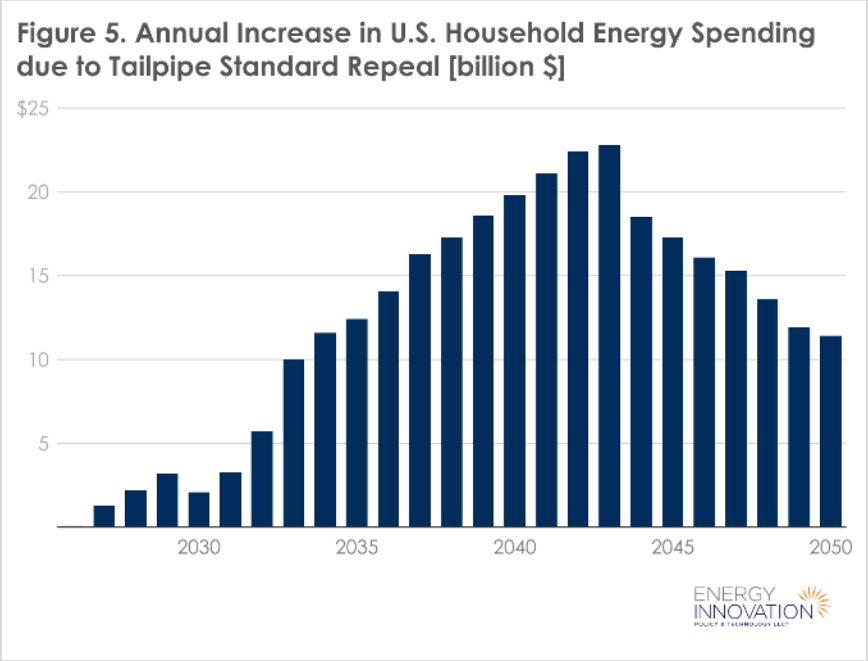


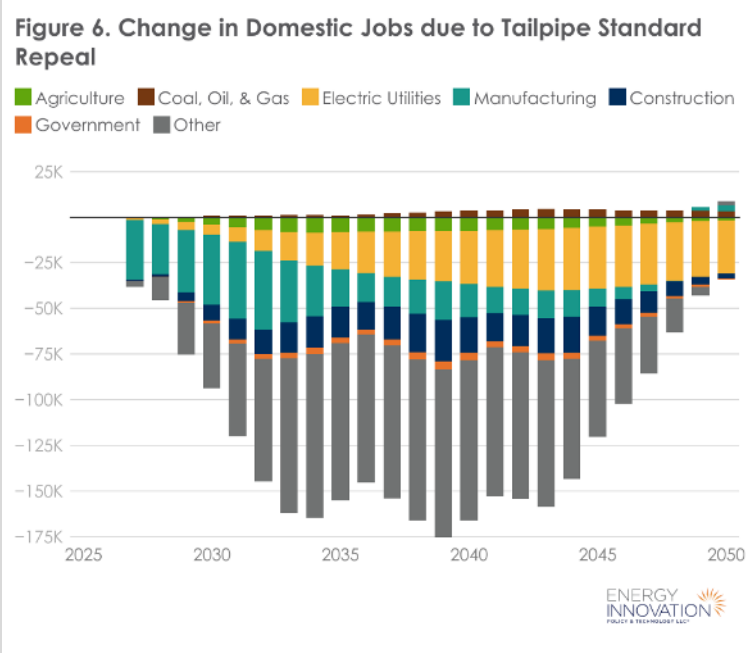
Figure 4. Impacts of the repeal of tailpipe standards on gasoline prices and consumer spending per household, 2025-2050.

We find repealing existing tailpipe standards will impose a total of $310 billion in higher energy costs on U.S. households between 2025 and 2050, as shown in Figure 5, largely due to higher reliance on ICEVs and higher gas prices. That amounts to an additional $83 annually for 25 years. This increase accounts for reduced spending on electricity to power electric vehicles as ZEV deployment slows, as well as the knock-on effect of slightly decreased spending on electricity for appliances as overall grid demand decreases and power prices fall marginally.

[iii] The EPS uses the EPA's Technical Support Document: Estimating the Benefit per Ton of Reducing PM2.5 Precursors from 17 Sectors to translate higher pollution to adverse health outcomes.



Repealing existing tailpipe standards will hinder U.S. manufacturing, costing hundreds of thousands of jobs



Steadily declining battery prices and increasing consumer demand for ZEVs is spurring new manufacturing around the world, including the U.S.—annual investment in ZEV, battery, and fueling-equipment manufacturing increased 15x from Q1 of 2020 to Q1 of 2025 across the country.[7]

Repealing longstanding tailpipe GHG emissions standards will reduce domestic consumption of ZEVs, dampening plans for new manufacturing and harming the U.S. economy. We find the EPA's proposed tailpipe standard repeal would reduce GDP by $33 billion annually within ten years and $710 billion cumulatively through 2050, while eliminating an average of 110,000 jobs in each year during that period. In the near term, manufacturing will see the biggest losses (with 38,000 jobs lost inside five years). We forecast job losses will peak around 2039 at 175,000, while being only marginally offset by increases in fossil fuel exploration, extraction, and refining.

Endnotes

[1] U.S. Environmental Protection Agency, "Timeline of Major Accomplishments in Transportation, Air Pollution, and Climate Change," Transportation, Air Pollution, and Climate Change, November 2024, https://www.epa.gov/transportation-air-pollution-and-climate-change/timeline-major-accomplishments-transportation-air.
[2] U.S. EPA, "Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act," Climate Change, February 27, 2025, https://www.epa.gov/climate-change/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a.
[3] National Academies of Sciences, Engineering, and Medicine, "Effects of Human-Caused Greenhouse Gas Emissions on U.S. Climate, Health, and Welfare," *National Academies Press*, ahead of print, 2025, https://doi.org/10.17226/29239.
[4] U.S. EPA, "Proposed Rule: Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards [Docket EPA-HQ-OAR-2025-0194; FRL-12715-01-OAR]," available at: https://www.federalregister.gov/documents/2025/08/01/2025-14572/reconsideration-of-2009-endangerment-finding-and-greenhouse-gas-vehicle-standards.
[5] U.S. EPA, "Research on Health Effects from Air Pollution," Air Research, June 11, 2025, https://www.epa.gov/air-research/research-health-effects-air-pollution.
[6] U.S. Energy Information Administration, *Annual Energy Outlook 2025 Case Descriptions* (2025), https://www.eia.gov/outlooks/aeo/assumptions/case_descriptions.php.
[7] MIT Center for Energy and Environmental Policy Research Rhodium Group, "Clean Investment Monitor," 2023, https://www.cleaninvestmentmonitor.org.