

Economic, Consumer Cost, and Pollution Impacts of Federal Energy Policy Changes on California

An Energy Policy Simulator analysis of impacts in California from the One Big Beautiful Bill Act (OBBBA) and energy policy decisions of the 119th Congress and Trump administration

October 2026

EXECUTIVE SUMMARY

The United States' energy policy framework has shifted dramatically during the second Trump administration and 119th Congress. Since January 2025, the federal government has changed legislative and regulatory policies, slowing clean energy deployment and increasing consumer costs.

Energy prices continue rising, worsening the affordability crisis facing Californians. The Energy Policy Simulator (EPS) modeled what federal policy decisions made since January 2025 mean for California's energy system and for families and businesses in near-term energy costs, public health, and jobs:

- California households will pay an additional \$100 billion for energy – an average of \$680 per household in 2035 and \$870 in 2040.
- Cutting policies that drive transportation sector innovation and efficiency will inflate California's gasoline prices 14 percent in 2035 and 27 percent in 2040, atop upward pressure from the Iran war.
- OBBBA and federal cuts to domestic manufacturing and innovation will cost California's economy 34,000 jobs per year on average over the next decade.
- Slowing down electrification and domestic energy manufacturing will lower GDP, spilling into other economic sectors. California's economy will lose \$7 billion in GDP in 2030, with annual losses growing to \$19 billion by 2040.
- Worsening local air pollution will raise California's healthcare costs by \$1.7 billion, with annual increases of \$150 million in 2035 and \$250 million in 2040, contributing to rising household costs alongside rising energy prices and goods inflation.

Our analysis focuses on seven key sets of federal policy changes:

- Passage of the One Big Beautiful Bill Act (OBBBA)
- U.S. Environmental Protection Agency's (EPA) reconsideration and repeal of Clean Air Act (CAA) §111 Greenhouse Gas (GHG) Standards, Mercury and Air Toxics Standards, and Clean Water Act Effluent Limitations Guidelines for electric power plants
- U.S. EPA's repeal of the Endangerment Finding and federal tailpipe emissions standards
- Passage of CAA §177 Congressional Review Act resolutions overturning approvals for state-level tailpipe emissions standards
- Administration actions to limit renewable energy development, especially onshore and offshore wind plants, including limitations on issuance of new permits
- U.S. Department of Energy (DOE) cancellations of hydrogen hub funding and easing of 45V tax-credit qualification for natural gas-based hydrogen
- U.S. EPA's cancellation of the \$7-billion *Solar for All* grant program

This analysis focused on energy policies. Impacts to energy prices from the Iran war are captured in the model's energy price forecasts. For example, the Strait of Hormuz blockade has raised gasoline prices, so policies that slow new electric vehicle (EV) sales will burden consumers with bigger gasoline bills than if the war had not taken place. We have not explicitly modeled specific tariffs; tariff and inflationary pressure on technology prices and consumer costs up to the start year are incorporated where our source data factors in those impacts.

Accordingly, the assessment of net change in costs from federal policies, particularly on households, is conservative.

California's state officials have options to help insulate their constituents from these impacts in meaningful ways: [Energy Innovation's state policy blueprint](#) lays out five no-regrets actions state and local governments can take until federal policies change.

- [Help hundreds of gigawatts of wind and solar projects](#) qualify for expiring tax credits under safe harbor rules by ensuring they are placed into service by the end of 2030 and pushing utilities to contract with and connect these resources quickly where they would save consumers money.
- [Remove barriers to additional clean energy deployment](#) by providing permitting certainty, improving the use of existing grid infrastructure, reducing soft costs, and cutting red tape for businesses and households to install clean energy.
- [Sustain momentum for electric transportation](#) through a mix of policies that will bolster the growing market for EVs and charging infrastructure.
- [Double down on efficiency and electrification for buildings and factories](#) by supporting technologies that provide clean efficient heat and cooling, and by adopting modern energy codes and standards; offer incentives and financing to level the playing field for energy saving measures.
- [Stimulate investment in new clean industries](#), such as modern, efficient heating equipment and industrial parks designed to reduce infrastructure costs and investment risks.

Additionally, RMI's [Electricity Affordability Toolkit](#) includes over two dozen actions states can take to address rising electricity costs, and RMI's [State Permitting Power Tool](#) identifies permitting-related barriers and associated reforms to clean energy deployment and infrastructure projects.

While these actions cannot replace the pollution reductions and total affordability measures provided by strong federal policy, they can limit price increases, improve health, and add new capacity to the grid.

BACKGROUND AND RESULTS

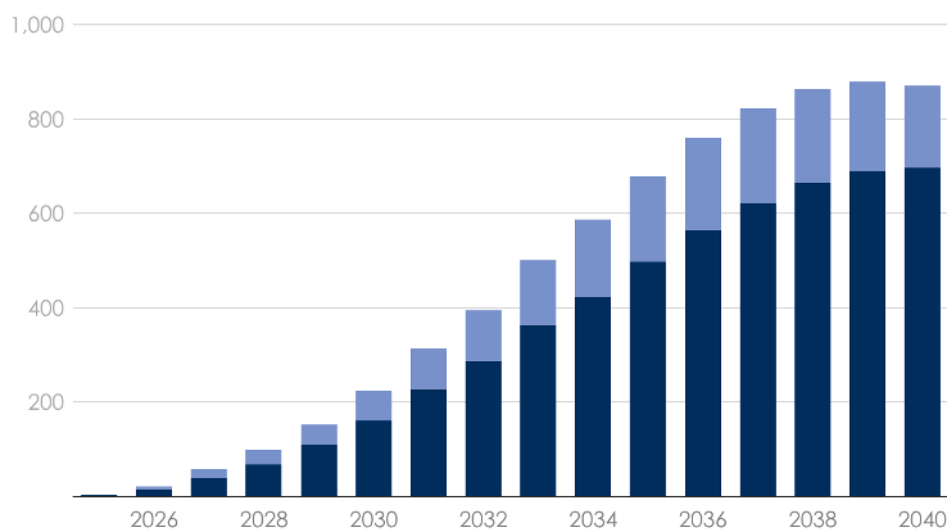
Energy Prices

Our modeling projects federal government policy changes will increase California households' annual energy spending by \$680 per household in 2035 and \$870 per household in 2040, with a cumulative \$7,200 increase over 15 years from 2026 to 2040. These increases are driven in part by an increase in gasoline prices of \$1.21 by 2040 alongside an 11 percent increase in natural gas retail rates and a 6 percent increase in electricity retail rates.

Change in California Annual Household Energy Spending

2026 forecast vs. January 2025 forecast, 2025 USD

■ vehicles ■ home appliances



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The U.S. is witnessing its biggest surge in electricity demand in decades. Load growth was roughly flat dating back to the early 2000s, but the rise of data centers, electrification, and expanded domestic manufacturing is straining the grid, pushing utilities, developers, market operators, and large energy users to build whatever they can to meet demand.

In tandem, many technology prices have increased. Combined-cycle gas turbine plants, for example, have shot up from between \$1,000 and \$1,400 per kilowatt (kW) for projects scheduled for completion in 2026-27 to over \$2,000/kW for recently commenced projects, according to [GridLab](#).

A global gas-turbine shortage compounds the problem, with [Wood Mackenzie](#) claiming six-year lead times on new orders as of April 2026. And orders for behind-the-meter (BTM) installations to power data centers will eat up a considerable share of generator-manufacturing capacity. [Cleanview](#) estimates 90 gigawatts (GW) of planned, BTM generation capacity in queue nationally. As a result of the turbine shortage and BTM demand for turbines, the bulk of new grid capacity being built to meet rising utility demand is solar, wind, and batteries. The U.S. Energy Information Administration projects that in [2025, 2026, and 2027](#), nearly 90 percent of new additions will be from these clean sources.

Trump administration and Congressional actions since January 2025 have exacerbated price increases. The rule changes for tax credits alone could double costs for new projects when tax credits expire, depending on the technology and other factors. Declining to issue permits for new facilities is also hampering how quickly projects can be deployed. Limiting the ability to build new clean energy increases fossil fuel dependence, which leads to price increases for fuels like natural gas as demand increases.

Our modeling finds that by pushing up natural gas demand, recent policies will raise gas prices paid by California power plant operators by 47 percent by 2040 versus 2025 levels. If not for the policies, we forecast operators would have seen only a 5.4 percent increase over the same timeline as the grid shifted towards renewables. Prices paid by homeowners will follow suit, with policy changes raising consumer natural gas prices by 11 percent and electricity rates by 6 percent in 2040 versus the counterfactual.

Repealing electrification policies in the transportation sector will significantly boost demand for refined petroleum products. This results in a 70¢ increase in gasoline prices in 2035 and a \$1.21 increase in 2040 because of greater demand (in 2025 USD). These increases would be in addition to any continued price increases from the Iran war.

OBBBA aimed to increase oil and gas leasing on federal lands and waters as more supply pushes prices lower. However, it is unclear if oil majors will drill more in response to more frequent auctions; the first

Select Gas Plant Capital Costs

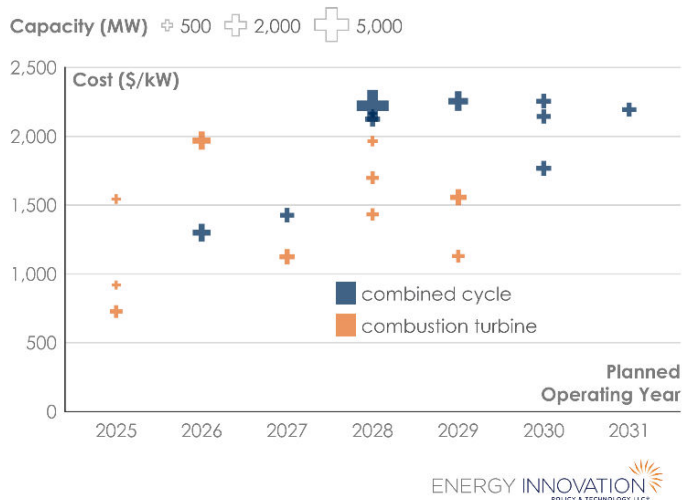


Chart: Energy Innovation • Source: GridLab

three auctions following OBBBA yielded underwhelming interest, including one auction generating only a single bid.¹

Even under an optimistic assessment of increased oil and gas output as a result of OBBBA, our modeling finds that the increased supply will lower national crude and wholesale natural gas prices by less than 0.4 and 0.7 percent in 2035, respectively. These price reductions from additional leasing are included in all reported price changes.

However, this supply increase is far less than the increased demand for these fuels resulting from policy changes since January 2025, with the net result being an increase in oil and natural gas prices as discussed above.

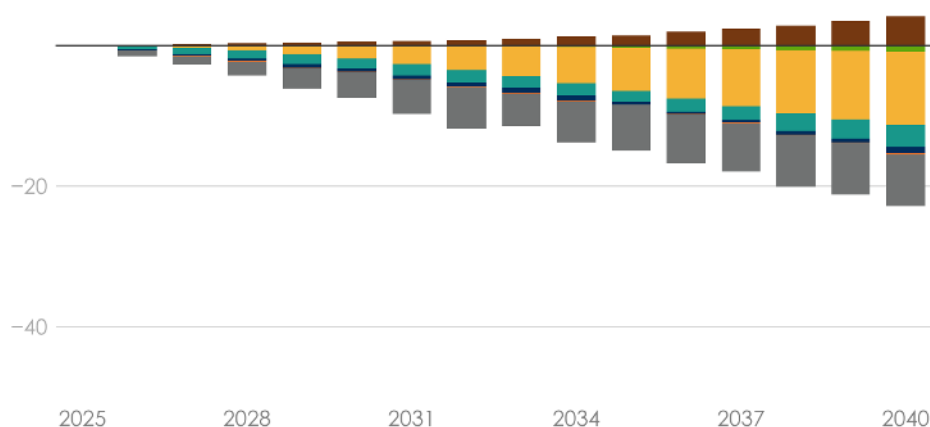
The Economy and Labor Market

Repealing tax credits and rules aimed at driving American innovation threatens the U.S.' budding clean-energy manufacturing base and labor force, with a net loss in GDP in all years as federal policies slow down electrification and domestic energy manufacturing. **Our modeling finds California's economy will lose \$7 billion in GDP in 2030, with annual losses growing to \$19 billion by 2040. These GDP impacts will cost California 32,000 jobs in 2030, with annual losses growing to 72,000 jobs lost by 2040.**

Change in California GDP by Sector

2026 forecast vs. January 2025 forecast, billion 2025 USD

Coal, Oil, & Gas Agriculture Electric Utilities Manufacturing Construction
Government Other



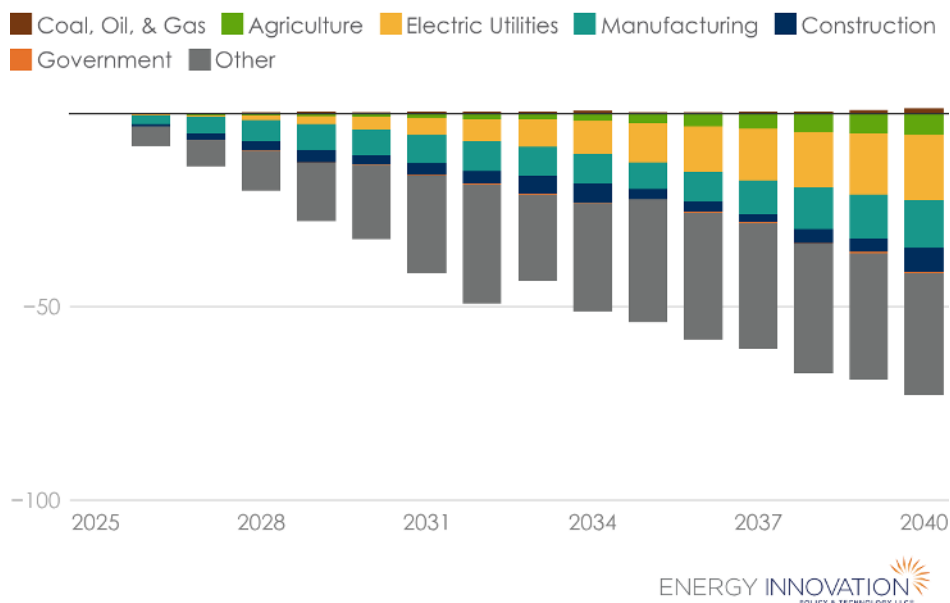
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¹ Our July 2025 modeling of OBBBA estimated a summed 3.3 million acres would be leased between these three auctions; the auctions yielded successful bids on only approximately 1.1 million bids between the two Big Beautiful Gulf auctions. The Big Beautiful Cook Inlet auction yielded no interest. Separately, a June lease sale in the Arctic National Wildlife Refuge yielded bids on only five of 58 offered tracts, for a total of \$3.7 million in revenue, with no bids from oil majors.

The “other” category represents output from the rest of the economy, in fields like trade, transportation, hospitality, real estate, finance, education, and healthcare.

Change in California Jobs by Sector

2026 forecast vs. January 2025 forecast, thousand jobs



Utilities will expand more slowly due to impeded electrification despite the AI data center demand increases. Coal, oil, and gas production and refining jobs increase by a peak of 1,400 new jobs in 2040, but these job gains are much smaller than losses across the rest of the economy.

Notably, the impact of faster fossil industry growth and slowed utility industry growth are more significant in GDP terms than employment terms, since these sectors are less labor intensive than other sectors like construction and manufacturing.

Electricity Capacity and Generation

Federal policy changes result in 33 GW less capacity added in California through 2040 than in the January 2025 policies forecast, including 25 GW less wind and 4.8 GW less battery storage.

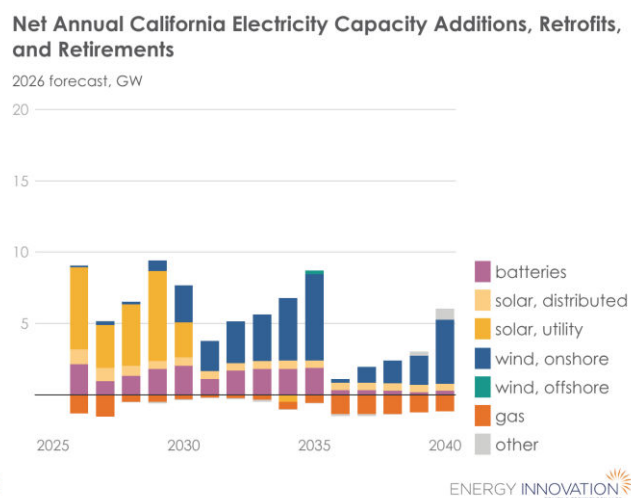
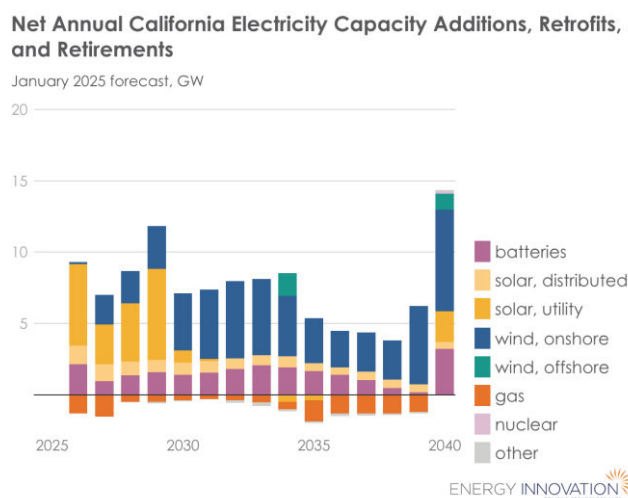
The §45Y and §48E production and investment tax credits for wind and solar projects now terminate in 2027 (though a safe-harbor period allows developers to collect tax credits on projects that both commenced construction by July 4, 2026, and come online by December 31, 2030). Additionally, OBBBA modified provisions related to sourcing materials from Foreign Entities of Concern, increasing the complexity of these requirements. For other technologies – like geothermal, nuclear, and hydroelectric – new projects have until the end of 2033 to commence construction to receive full 45Y/48E credit values, but this analysis finds these technologies do not replace the lost solar and wind capacity as result of modified tax credits.

The safe-harbor provision has created a temporary deployment boom as developers pull construction timelines forward to ensure qualification for lucrative tax benefits before the final deadline in 2030. Estimates from [Wood Mackenzie](#) and [Crux Climate](#) in early 2026 estimate that nationally, 170–210 GW of safe-harbored renewables will be deployed by 2030, with 85–90 percent being solar projects.² The [EIA](#) reports 314 GW of national utility-scale wind and solar plants currently on the grid, so safe-harbored projects alone could expand America’s total solar and wind grid capacity by 54–66 percent.

In addition to OBBBA, regulatory actions have significantly hampered clean energy deployment. Over the last year and a half, the EPA weakened or proposed to repeal several power plant rules, including the Mercury and Air Toxics Standards, GHG power plant rules, and Effluent Limitation Guideline rules. These rules would have forced the dirtiest power plants to reduce emissions of toxic air pollution, capture or eliminate carbon dioxide (CO₂) emissions, and limit discharge of toxic chemicals in wastewater. Unraveling these rules allows coal and gas power plants to continue polluting at unsafe levels and reduces demand for new clean technologies.

In parallel, the Trump administration has made efforts to halt renewables projects, such as [adding](#) new permitting review layers, [withdrawing](#) the Outer Continental Shelf from disposition for wind energy leasing, [issuing](#) stop-work orders on wind projects, and using taxpayer dollars to pay energy companies to cancel wind projects.

The current policies scenario sees less clean energy deployment by 2030 with 26 GW of new solar and 4 GW of new wind online in California from 2026 to 2030, compared with 25 GW of new solar and 11 GW of new wind under January 2025 policies.



Between 2030 and 2040, California adds 17 GW less onshore wind, 5 GW less grid battery, and 2.5 GW less offshore wind capacity under current policies than it would have under January 2025 policies.

² Crux Climate reported 170 GW of safe-harbored generation capacity as of February 2026, including 147 GW solar and 23 GW wind. Wood Mackenzie reported between 216 and 240 GWdc of safe-harbored solar as of April 2026, which we convert to estimated GWac here.

Manufacturing

In California, E2's project tracking shows \$800 million in announced cancelled, closed, or down-sized clean energy investment since January 2025 across eight projects.

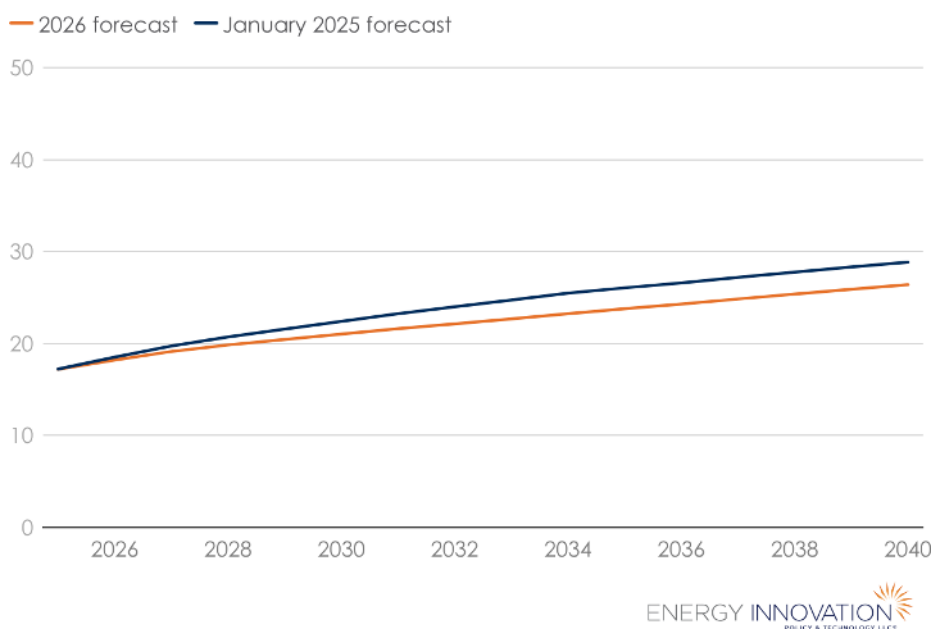
Project cancellations are driven in large part by federal policy changes, including reduced demand for clean energy technologies and OBBBA modifications to the 45X advanced manufacturing tax credit, which provides tax credits for producing certain materials (e.g., battery cells and modules) meeting domestic content and sourcing requirements. OBBBA also terminated the credit for wind components early, phased out the critical minerals credit, and tightened the credit qualification for batteries.

Buildings

Federal policy changes reduce distributed solar deployment in California by 2.4 GW through 2040.³

OBBBA terminated the §25D federal tax credit, which offered incentives for homeowners to invest in new, efficient, clean technologies. It also ended the §48E federal tax credit which provided funding for commercial building owners who invested in rooftop solar. Lastly, the EPA terminated its national \$7-billion *Solar for All* competitive grant program, which aimed to expand solar deployment within low-income and disadvantaged communities. Together, these changes result in less rooftop solar being deployed in California.

California Distributed Solar Capacity, GW



³ We model a loss of the full 4 GW in distributed solar deployment [projected](#) from *Solar for All* termination, as only [1 percent](#) of the obligated funds were drawn down by grantees before cancellation. We find another 17 GW of solar deployment lost as a result of 25D and 48E tax-credit early termination.

Transportation

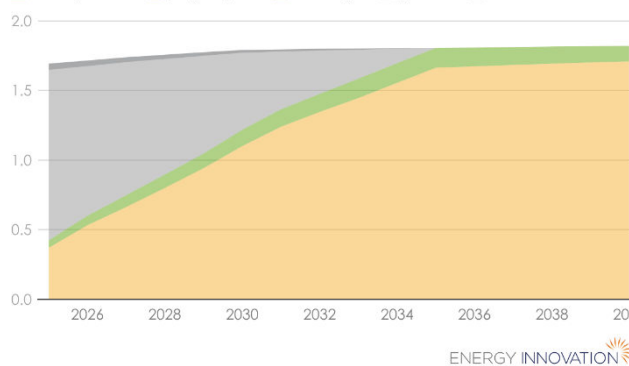
Federal policy changes significantly reduce California's sales of zero-emission vehicles. Passenger car EV sales now comprise 39 percent of new car/SUV sales in 2035, versus earlier projections of 100 percent. The modeling similarly finds California sales of new zero-emission trucks fall from 40 percent to 6.1 percent in 2035.

Sales of zero-emission vehicles drop due to lower incentives and rolled back standards. OBBBA terminated clean vehicle tax credits that provided up to \$7,500 for new or leased clean passenger vehicles and up to \$40,000 for clean commercial vehicles, while also eliminating any non-compliance penalties for vehicles failing to meet National Highway Traffic Safety Administration corporate average fuel economy standards. Congress also rescinded the EPA's waiver for California's tailpipe CO₂ rules and later the EPA rescinded its tailpipe CO₂ rules for cars and trucks, all of which cause a significant decrease in new clean vehicles.

New California Passenger LDV Sales, January 2025 Forecast

Million vehicles

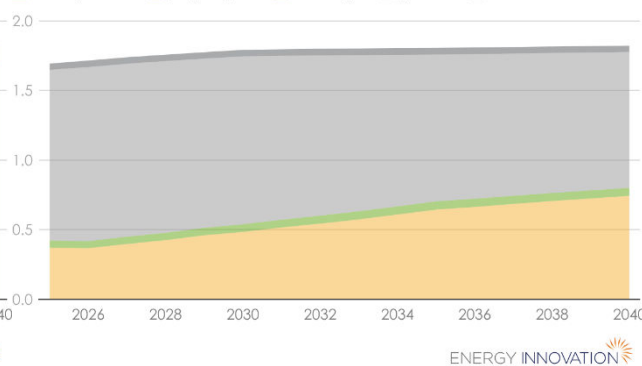
battery electric plugin hybrid natural gas gasoline diesel



New California Passenger LDV Sales, 2026 Forecast

Million vehicles

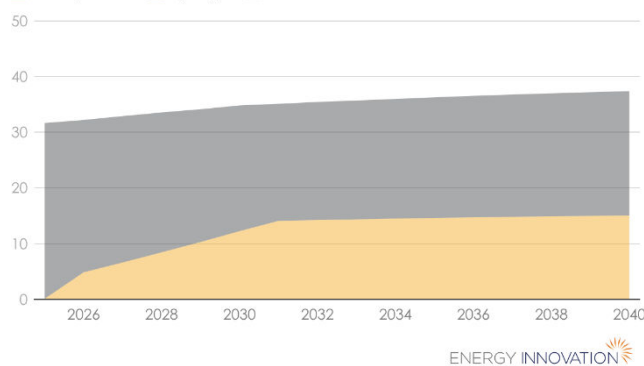
battery electric plugin hybrid natural gas gasoline diesel



New California Freight HDV Sales, January 2025 Forecast

Thousand vehicles

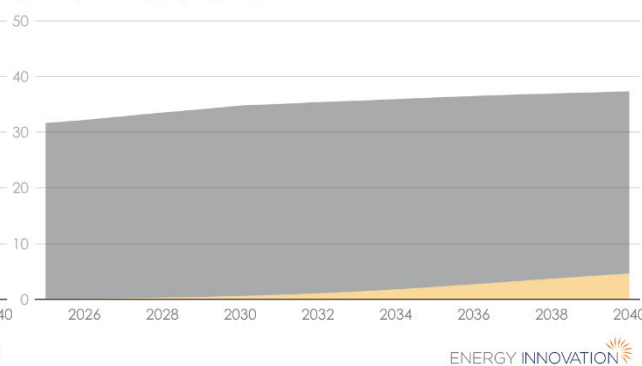
battery electric hydrogen diesel



New California Freight HDV Sales, 2026 Forecast

Thousand vehicles

battery electric hydrogen diesel



Hydrogen

OBBA modified the end date for the 45V clean-hydrogen tax credit – projects must now commence construction before 2028 to qualify, rather than 2033. The modified credit timeline favors hydrogen derived from CCS-equipped natural gas (blue), which is quicker to build than electrolytic hydrogen capacity, and was expected to gradually grow cheaper as electrolyzers come down in cost. DOE also eased qualification of blue hydrogen for 45V.

Simultaneously, DOE terminated funding for two of the seven regional clean hydrogen hubs: the ARCHES Hub in California and the Pacific Northwest Hub. These specific hubs aimed to demonstrate green electrolytic hydrogen production, while most surviving hubs skew towards gas-with-CCS (blue) production.

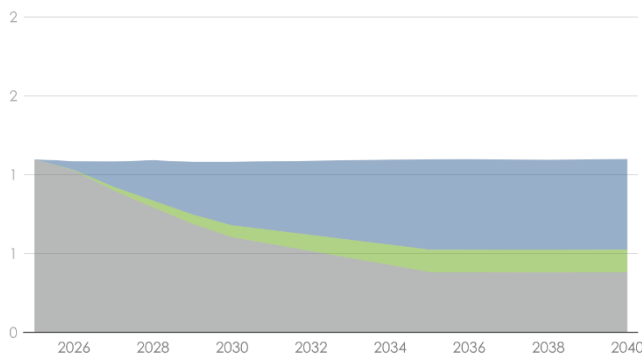
These changes shrank the pool of qualifying hydrogen projects by shortening the timeline for construction and shifted it towards natural gas CCS projects, away from electrolysis. As a result, the model forecasts less clean hydrogen overall, with a skew towards blue hydrogen (0.28 million metric tons (Mt) now vs. 0.57 Mt before) and away from green hydrogen (0.023 Mt now compared to 0.14 Mt before).

America now stands as a global outlier, as most clean hydrogen production outside the U.S. will come from electrolysis, driven by strict demand levers in regions like the European Union and electrolyzers' greater potential for long-term cost declines.

California Merchant Hydrogen Production by Tech

January 2025 forecast, Mt

■ SMR ■ electrolysis ■ SMR w/ CCS

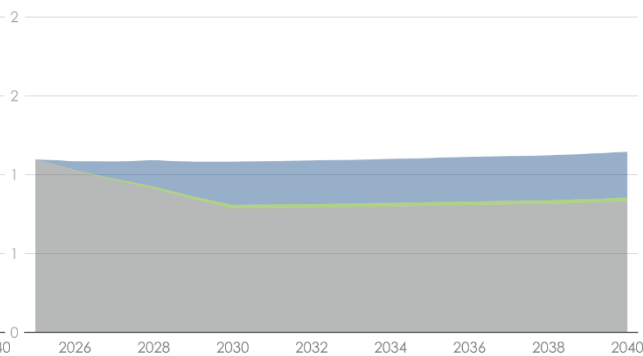


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California Merchant Hydrogen Production by Tech

2026 forecast, Mt

■ SMR ■ electrolysis ■ SMR w/ CCS



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Pollution and Healthcare Spending

Increased pollution from federal policy changes during the 15-year window from 2026 to 2040 will raise Californians' healthcare-related costs by \$1.7 billion. Adding in economic valuation of premature mortality, work loss days, school loss days, and minor restricted activity days raises the total societal costs to \$6.8 billion in 2035 and \$12 billion in 2040 for a cumulative total of \$81 billion through 2040.

Burning fossil fuels releases pollutants with varying effects on the environment and public health: particulate matter lodges in lungs and bloodstream, nitrogen oxides (NO_x) contribute to smog and ozone, and sulfur oxides (SO_x) cause respiratory problems. Current federal energy policies will bolster coal power plants and internal combustion engine vehicle sales, raising local pollution levels and harming community health, especially among children and the elderly, raising healthcare costs across California.

Table 1. Annual change in California health endpoints due to federal energy policies alongside economic valuations

Health Endpoint	Change, 2035	Change, 2040	Costs, 2035 (2025 USD)	Costs, 2040 (2025 USD)
Childhood asthma exacerbations	84,000	140,000	\$20 million	\$32 million
New childhood asthma cases	1,200	1,900	\$99 million	\$160 million
New childhood hay fever/rhinitis cases	7,800	13,000	\$9 million	\$15 million
New lung cancer cases	5	10	\$250,000	\$500,000
New stroke cases	4	8	\$260,000	\$520,000
New cardiac arrest cases	1	1	\$69,000	\$69,000
Emergency room visits (respiratory)	470	770	\$790,000	\$1.3 million
Emergency room visits (cardiac)	24	43	\$54,000	\$96,000
Hospital admissions (respiratory)	45	81	\$1.7 million	\$3 million
Hospital admissions (cardiovascular)	55	100	\$1.6 million	\$3 million
Hospital admissions (Alzheimer's)	46	86	\$1.1 million	\$2 million
Hospital admissions (Parkinson's)	5	9	\$120,000	\$220,000
Non-fatal heart attacks	150	280	\$14 million	\$26 million
Total costs, healthcare⁴			\$150 million	\$250 million
Premature adult mortality	540	980	\$6.4 billion	\$12 billion
Restricted activity days	200,000	360,000	\$26 million	\$46 million
Work loss days	34,000	61,000	\$11 million	\$20 million
School loss days	98,000	160,000	\$180 million	\$300 million
Total costs, healthcare + societal			\$6.8 billion	\$12 billion

⁴ Healthcare cost estimates exclude four categories: premature mortality (valued using the U.S. Environmental Protection Agency's value of a statistical life), minor restricted activity days (valued as the willingness to pay to avoid mild symptoms), work loss days (lost wages), and school loss days (caregiver lost wages and discounted lost future earnings from reduced learning). These endpoints represent welfare losses and productivity impacts that, while real, are distinct from healthcare spending. This sum includes all other categories. Notably, healthcare cost values combine single-event costs (e.g., hospitalizations) with discounted present-value estimates of multi-year treatment costs (e.g., 5-year lung-cancer treatment), all expressed in 2025 USD.

METHODOLOGY

Our model's current policies scenario projects the evolution of the energy system under current federal and major state policies as of July 2026. This report's analysis compares the current policies baseline to a January 2025 policy counterfactual that freezes federal policies as of January 2025.

Full results from our modeling and the model repository are available on [Zenodo](#).

The scenario's documentation is available on the EPS [docs website](#).