
20 YEARS OF AB 32

CALIFORNIA'S LANDMARK
CLIMATE LAW & ITS LEGACY



California Leadership
Ending Global Warming

NEXT 10 is an independent nonpartisan organization that educates, engages and empowers Californians to improve the state's future.

Next 10 is focused on innovation and the intersection between the economy, the environment, and quality of life issues for all Californians. We provide critical data to help inform the state's efforts to grow the economy and reduce greenhouse gas emissions. Next 10 was founded in 2003 by businessman and philanthropist F. Noel Perry.

The USC Schwarzenegger Institute for State and Global Policy is committed to advancing post-partisanship, where leaders put people above political parties and work together to identify the best ideas and solutions for those they serve.

Founded in 2012 by Governor Arnold Schwarzenegger in partnership with the University of Southern California, the Institute continues his policy legacy, focusing on energy and the environment, political reform, after-school education, and other critical policy issues. Through research, public forums, and partnerships, the Institute advances policy—not politics—and promotes solutions to today's most pressing challenges.

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Following decades of work to reduce air pollution across the state, the California Legislature passed Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, co-authored by Assemblymember Fran Pavley and Speaker of the Assembly Fabian Nunez, and signed into law by Governor Arnold Schwarzenegger on September 27, 2006.¹

In the first legislation of its kind, it placed an economy-wide cap on greenhouse gas emissions in California. The law directed the California Air Resources Board (CARB) to develop a plan to meet the target, including the use of market-based mechanisms. The state's cap-and-trade program put a price on carbon emissions by creating a market mechanism to regulate and reduce GHG emissions from large polluters in the state. The program puts a cap on the emissions of large emitters, such as power plants and large industrial facilities, and allowances are auctioned off quarterly to cover their emissions under the cap. The money raised from the auctions is deposited into the Greenhouse Gas Reduction Fund (GGRF) and is appropriated by the legislature to fund climate-related projects across the state, referred to as California Climate Investments (CCI). In addition to putting a price on carbon through the cap-and-trade program, it also set state-wide emissions reductions targets. The first emissions target, which required California to reduce emissions to 1990 levels by 2020, was met four years early. Senate Bill 32 (SB 32), passed in 2016, set an emission reduction goal of 40% below 1990 levels by 2030.²

AB 32 and its subsequent legislation remain popular with Californians, demonstrating that good policy can be both effective and successful. Twenty years later, 75% of Californians still support the state reducing greenhouse gas emissions in line with the goals set by the Global

Warming Solutions Act of 2006 and subsequent legislation. About two in three favor the state government making its own policies separate from the federal government on climate change. 60% favor requiring that all electricity come from renewable energy by 2045.³

The culmination of decades of climate work at the state and local levels, AB 32 represented a critical stepping stone in California's emergence as a global climate leader, laying the foundation for increasingly ambitious climate policies and demonstrating that meaningful climate solutions could be achieved at the state level. It laid the groundwork for future climate policy, encouraged climate innovation, provided clean technology jobs across the state, and has led to robust economic benefits – all while reducing emissions. Since its passage in 2006, California's GDP per capita has grown by 41% (as of 2023) while GHG emissions per capita fell by 29%.⁴ California's climate initiatives have made our energy services more reliable while inspiring imitators worldwide and helping to catalyze a remarkable twenty-year U.S. clean energy transition that has delivered dramatic economic and environmental gains for the entire nation.

California's climate leadership also spurred action beyond our borders as AB 32 was intended to be the beginning of a global movement toward climate action. One such example of California's global climate leadership is the International Carbon Action Partnership (ICAP), established in 2007 by more than 15 signatories – a key leader being then-governor Arnold Schwarzenegger – as an international forum for governments that have implemented or are planning to implement emissions trading systems.⁵ At the time of its inception California was evaluating options to achieve its 2020 greenhouse gas emissions target, and Europe had just launched the world's first ever emissions trading system. As these systems have developed over time, ICAP has been an important venue for sharing

1 "AB 32: California Global Warming Solutions Act of 2006." *California Legislative Information*, 27 Sept. 2006. Available at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32

2 "SB 32: California Global Warming Solutions Act of 2006: emissions limit." *California Legislative Information*, 8 Nov. 2016. Available at: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

3 Baldassare, M. et al., "PPIC Statewide Survey: Californians and the Environment." *Public Policy Institute of California*, July 2026. Available at: <https://www.ppic.org/?show-pdf=true&docraptor=true&url=https%3A%2F%2Fwww.ppic.org%2Fpublication%2Fppic-statewide-survey-californians-and-the-environment-july-2026>

4 "Figure 6. Greenhouse Gas Emissions and Gross Domestic Product, California Relative Trends Since 1990." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-6/>

5 "About ICAP." *International Carbon Action Partnership*. Available at: <https://icapcarbonaction.com/en/about-icap>

information between jurisdictions, providing support to emerging systems and strengthening the programs of all signatories. Today, ICAP has 36 full members and 9 observers.⁶

Since then, the state has gone on to establish the Western Climate Initiative (WCI) with Québec, join 10 European and North American governments as founding partners of the International ZEV Alliance to accelerate the world's adoption of ZEVs, sign the Under 2 Memorandum of Understanding (Under2MOU) agreeing to limit global temperature rises below 2°C, and create climate-related agreements with various foreign governments, including China's Ministry of Science and Technology to reduce emissions through investments in emerging clean technologies.^{7, 8, 9, 10}

Within the U.S., California Governor Brown, New York Governor Cuomo, and Washington Governor Inslee established the U.S. Climate Alliance to reduce emissions in response to President Donald Trump's announcement to withdraw from the Paris Climate Agreement in 2017 (before the U.S. formally withdrew in 2020). Today, the Alliance includes governors from 24 states and territories, representing approximately 55% of the U.S. population, and 60% of the U.S. economy.¹¹

Other key achievements of AB 32 and subsequent legislation include:

- Met goal of reducing emissions to 1990 levels by 2020 four years ahead of schedule.¹²
- Achieved 1 million solar roofs in December 2019 with over 3,000 MW of rooftop solar capacity installed.¹³ By the end of 2023, the state had over 2 million solar roofs and similar small systems with nearly 16,000 MW of capacity.¹⁴
- Achieved 100% clean electricity for periods on time on 219 and 279 days in 2024 and 2025, respectively.¹⁵
- Increased installed utility-scale solar generation by 7,847% from 2008 to 2024.¹⁶
- Installed over 21,000 MW of battery storage by mid-2026, an increase of 2,500% since 2019 and 41% of the way toward meeting the state's goal of installing 52,000 MW of battery storage by 2045.¹⁷
- Achieved 2.7 million electric vehicles sold in California as of July 2026.¹⁸
- From 2018 to Q2 2024, clean tech investments in California totaled \$191 billion – the most of any state.¹⁹

6 "15-year Anniversary of ICAP." *International Carbon Action Partnership*. Available at: <https://icapcarbonaction.com/en/15-year-anniversary-icap>

7 "Our Work." *Western Climate Initiative*. Available at: <https://wci-inc.org/>

8 "2026 Focus Areas." *ZEV Alliance*. Available at: <https://zevalliance.org/focus-areas/>

9 "Under2 Memorandum of Understanding." *The Climate Group*. Available at: <https://www.theclimategroup.org/under2-memorandum-understanding>

10 "China and California sign deal to work on climate change without Trump." *The Guardian*, 6 Jun. 2017. Available at: <https://www.theguardian.com/us-news/2017/jun/07/china-and-california-sign-deal-to-work-on-climate-change-without-trump>

11 "About Our Coaliton." *United States Climate Alliance*. Available at: <https://usclimatealliance.org/about/>

12 "Figure 4. GHG Emissions and Projected Reduction Goals." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-4/>

13 "California Celebrates Reaching One Million Solar Roofs Milestone; New Focus On "One Million Solar Batteries" Goal." *California Solar + Storage Association*, 12 Dec. 2019. Available at: <https://calssa.org/press-releases/2019/12/12/california-celebrates-reaching-one-million-solar-roofs-milestone-new-focus-on-one-million-solar-batteries-goal>

14 "California's Clean Energy Journey." *California Energy Commission*. Available at: <https://storymaps.arcgis.com/stories/09850952609a4da7b181166f1910cdc7>

15 "Tracking Progress Towards 100% Clean Energy." *California Energy Commission*. Available at: <https://www.energy.ca.gov/data-reports/clean-energy-serving-california/tracking-progress-toward-100-clean-energy>

16 "Figure 29. California Renewable Electricity Generation." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/renewable-energy/figure-29/>

17 "California surpasses 21,000 megawatts of battery resources supporting the state's electric grid." *Office of Governor Gavin Newsom*, 7 Aug 2026. Available at: <https://www.energy.ca.gov/news/2026-08/california-surpasses-21000-megawatts-battery-resources-supporting-states>

18 "New ZEV Sales in California." *California Energy Commission*. Available at: <https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics-collection/new-zev>

19 "Clean Energy Investment in Every State." *Climate Central*. Available at: <https://www.climatecentral.org/climate-matters/clean-energy-investment-in-every-state>

- Created 552,300 clean energy jobs in California as of 2024 – the most of any state in the U.S. and nearly twice the second-ranked state (Texas).²⁰
- 51% of California's electricity in May 2026 was produced by solar (utility-scale and rooftop) – the first time the clean energy source surpassed the halfway mark for an entire month and the first global economy to do so.²¹
- California set the first energy efficiency policies in the U.S. in the 1970s and those rules have saved Californians more than \$200 billion in energy costs and inspired similar standards across the country.²²
- Awarded over \$21.6 billion through the cap-and-trade program to fund CCI programs to support over 143,000 jobs cumulatively.²³

Economic Benefits

Funding from AB 32's cap-and-trade program, known as California Climate Investments (CCI) when invested in climate-related programs, has led to robust economic benefits across the state. Since its inception in 2014, the cap-and-trade program has raised over \$36.2 billion as of July 2026 for climate projects across the state with \$16 billion returned to residents and small businesses through the California Climate Credits program that provides a twice-yearly credit on electricity bills to all customers.²⁴ So far, CCI has implemented more than \$15.5 billion across more than 604,891 projects since the Legislature first appropriated funds from cap-and-trade in 2014—making

Figure ES1. California Climate Investments



CALIFORNIA CLIMATE INVESTMENTS

\$15.5 billion across more than **604,891 projects**. Making investments in affordable housing, low carbon transportation, forest health, community protection and more.

Source: 2026 Annual Report to the Legislature on California Climate Investments Using Cap-and-Invest Auction Proceeds, California Climate Investments²⁵

major investments in affordable housing, low-carbon transportation, forest health, community air protection, and more – while supporting over 143,000 jobs.²⁶ This includes building 17,776 new homes, of which 16,638 are affordable, and making investments that will lead to a 115.3 billion reduction in vehicle miles traveled over the project lifetimes.²⁷ Over the lifetime of projects, California Climate Investments will have also resulted in \$44 billion in estimated cost savings from reduced travel costs like fuel and parking, along with energy cost savings from energy efficiency and clean energy projects.²⁸ The energy cost savings alone are expected to be \$9.9 billion.²⁹ All together, these programs are projected to reduce GHG emissions by an estimated 130.5 million metric tons of carbon-dioxide equivalent (MMTCO₂e) over the project lifetimes.³⁰ The 2022 Scoping Plan forecasts that all of the state's climate action will help grow California's GDP to \$5.1 trillion by 2045, up from \$3.2 trillion in 2021, while creating an estimated 4 million jobs.³¹

20 "Clean Jobs California Factsheet." E2, Oct. 2025. Available at: https://e2.org/wp-content/uploads/2025/11/E2-FS-Clean-Jobs-CA-2025-25-10-E_04-1.pdf

21 McCarthy, Dan. "California was mostly solar-powered in May – a global first." *Canary Media*, 31 July 2026. Available at: <https://www.canary-media.com/articles/solar/california-solar-power-record-may>

22 "California's Clean Energy Journey." *California Energy Commission*. Available at: <https://storymaps.arcgis.com/stories/09850952609a4da7b181166f1910cdc7>

23 "2026 Annual Report to the Legislature on California Climate Investments Using Cap-and-Invest Auction Proceeds." *California Climate Investments*, July 2026 (p.9, 21). Available at: https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci_annual_report_2026.pdf

24 Ibid. (p.31)

25 Ibid.

26 Ibid. (p.9, 21)

27 Ibid. (p.12)

28 Ibid. (p. 9)

29 Ibid. (p. 12)

30 Ibid. (p. 9)

31 "CARB approves unprecedented climate action plan to shift world's 4th largest economy from fossil fuels to clean and renewable energy." *California Air Resources Board*, 12 Dec. 2022. Available at: <https://ww2.arb.ca.gov/news/carb-approves-unprecedented-climate-action-plan-shift-worlds-4th-largest-economy-fossil-fuels/printable/print>

Other CCI highlights include:

- As of April 2026, the Clean Truck and Bus Voucher Incentive Project (HVIP) has delivered more than \$1 billion in funding to California fleets – supporting more than 2,000 fleets, enabling the deployment of 11,600 clean vehicles, and accumulating 181 million miles statewide.³²
- Since June 1, 2025, the Clean Cars 4 All program has implemented \$241 million (out of over \$500 million allocated) to provide 26,900 vehicles to recipients. This is estimated to have led to reductions of 6.7 tons of particulate matter (PM), 47.5 tons of hydrocarbon (HC) and reactive organic gases (ROG), 281.2 tons of oxides of nitrogen (NOx), and 221,100 metric tons of carbon dioxide-equivalent (CO₂e).³³
- As of November 2025, \$315.6 million from the Safe and Affordable Drinking Water Fund (SADW) had been implemented across 142 projects with nearly all of the funding (\$314 million) benefiting priority populations.³⁴ In 2025, the full \$78.2 million allocated went to disadvantaged communities and supported 72 full-time jobs.³⁵
- According to the 2024 Annual Progress Report, the Community Air Protection Program (CAP) has spent \$1.4 billion on more than 9,000 incentive projects since 2017 – reducing over 23,000 tons of oxides of nitrogen (NOx), 950 tons of particulate matter (PM), and 282,600 metric tons of greenhouse gas (GHG) emissions statewide.^{36, 37}
- In 2025, Governor Newsom announced that CARB has directed \$632 million in cap-and-trade funds to more than 9,000 local-level air-quality improvement projects since 2017, with 85% of the funding reaching disadvantaged and low-income communities, to reduce harmful air pollutants and emissions by replacing old diesel equipment and upgrading vehicles, among other actions.³⁸

Outside of CCI funds, the economic benefits of California's climate commitments and investments in climate programs have led to robust job growth across emerging industries such as, solar, wind, energy efficiency, electric vehicles, and biofuels. In 2024, California led the U.S. in total clean energy jobs with 552,300 workers employed across these technologies – nearly twice as many as the second-ranked state, Texas. The amount of California workers in clean vehicle jobs grew by 58.3% by 2022 and 75.4% by 2024 compared to 2020, representing a huge shift towards electric vehicle production across the state. Notably, more than seven times as many workers were employed in clean energy jobs than in the fossil fuel industry (80,600) in 2024 and 79% of all new energy jobs in California are clean energy jobs.³⁹ Since 2014, integration of California's grid with other states in the West has also resulted in

32 "Clean Truck and Bus Voucher Incentive Project." *California HVIP*. Available at: <https://californiahvip.org/>

33 "Outcomes and Results for Clean Cars 4 All." *California Air Resources Board*. Available at: <https://ww2.arb.ca.gov/our-work/programs/clean-cars-4-all/outcomes-and-results-clean-cars-4-all>

34 "Safe and Affordable Drinking Water Fund." *California State Water Resources Control Board*. Available at: <https://www.caclimateinvestments.ca.gov/safer-drinking-water>

35 "FY 2025-26 Fund Expenditure Plan, Safe and Affordable Drinking Water Fund." *California Climate Investments and the California State Water Resources Control Board*. Available at: https://www.waterboards.ca.gov/water_issues/programs/grants_loans/docs/2025/fy2025-26-fep-final-1125.pdf

36 "Community Air Protection Incentives Factsheet." *California Air Resources Board*, May 2024. Available at: <https://ww2.arb.ca.gov/sites/default/files/2024-12/CAP%20Incentives%20Fact%20Sheet%20Nov2023%20English.pdf>

37 "Community Air Protection Program Annual Progress Report." *California Air Resources Board*, July 2025. Available at: https://ww2.arb.ca.gov/sites/default/files/2025-06/OCAP_APR2024_Final.pdf

38 "New report shows Cap-and-Invest dollars are improving air quality in California's most polluted communities." *Office of Governor Gavin Newsom*, 25 July 2025. Available at: https://www.gov.ca.gov/2025/07/25/new-report-shows-cap-and-invest-dollars-are-improving-air-quality-in-californias-most-polluted-communities/?utm_source=chatgpt.com

39 "Clean Jobs California Factsheet." *E2*, Oct. 2025. Available at: https://e2.org/wp-content/uploads/2025/11/E2-FS-Clean-Jobs-CA-2025-25-10-E_04-1.pdf

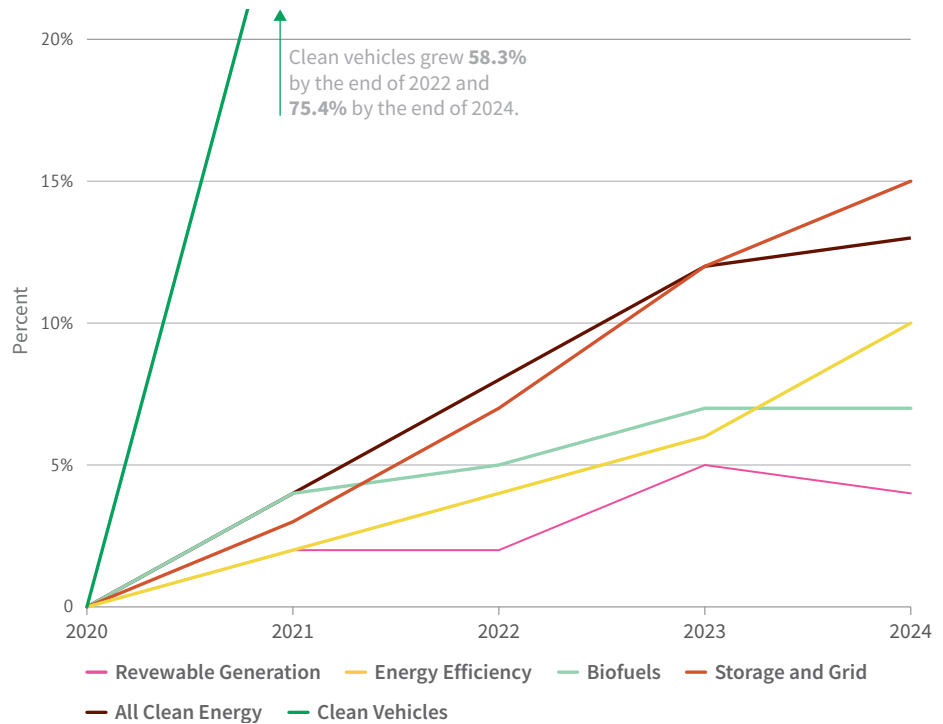
\$9 billion in economic benefits while reducing emissions by 1.18 MMTCO₂e, roughly equivalent to emissions from 236,276 passenger cars driven for a year.^{40, 41}

Environmental Benefits

Since the passage of AB 32 in 2006, California has made tremendous progress by reducing total statewide emissions of greenhouse gases 23.3% as of 2023 (the latest year for which data is available).⁴² In 2006, California was the 12th-largest emitter of greenhouse gas emissions in the world, just after Mexico.⁴³ In 2023, California stood as the 20th-largest, producing fewer emissions than smaller economies such as Brazil, Australia, and Indonesia.⁴⁵

The largest source of emissions in the state comes from the transportation sector. Despite this, emissions from that sector had fallen by 26.7% from 2006 to 2023.⁴⁶ Within the sector, emissions from passenger vehicles and heavy-duty vehicles have seen reductions of 19.7% and 45.3%, respectively.⁴⁸

Figure ES2. California Energy Employment Growth by Clean Energy Sector



Source: Clean Jobs California Factsheet, E2⁴⁷

These reductions are largely due to policies like the Low Carbon Fuel Standard (LCFS), created in response to AB 32 goals coupled with subsequent efforts to electrify transportation and improvements in fuel economy through regulations developed in California. Assembly Bill 1493 (AB 1493), passed in 2002, was the first measure passed in the U.S. to

40 "Western Energy Markets Quarterly Benefits Report debuts with first Extended Day-Ahead Market results." CAISO, 30 July 2026. Available at: <https://www.caiso.com/about/news/news-releases/western-energy-markets-quarterly-benefits-report-debuts-with-first-extended-day-ahead-market-results>

41 "Western Energy Imbalance Market continues to deliver with over \$8.6 billion in total benefits to date." CAISO, 28 Apr. 2026. Available at: <https://www.caiso.com/about/news/news-releases/western-energy-imbalance-market-continues-to-deliver-with-over-8-6-billion-in-total-benefits-to-date>

42 "Figure 1. Total California Greenhouse Gas Emissions." Next 10 California Green Innovation Index, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-1/>

43 "GHG emissions of all world countries." European Commission. Available at: https://edgar.jrc.ec.europa.eu/report_2024

44 Pavely, F., "California Climate Change." California Coastal Commission, Dec. 2006. Available at: <https://documents.coastal.ca.gov/climate/gw-12-2006-pavley.pdf>

45 "International Scorecards" Next 10 California Green Innovation Index, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/international-scorecards/>

46 "2025 California Green Innovation Index." Next 10, 16 Dec. 2025. <https://greeninnovationindex.org/2025-edition/>

47 "Clean Jobs California Factsheet." E2, Oct. 2025. Available at: https://e2.org/wp-content/uploads/2025/11/E2-FS-Clean-Jobs-CA-2025-25-10-E_04-1.pdf

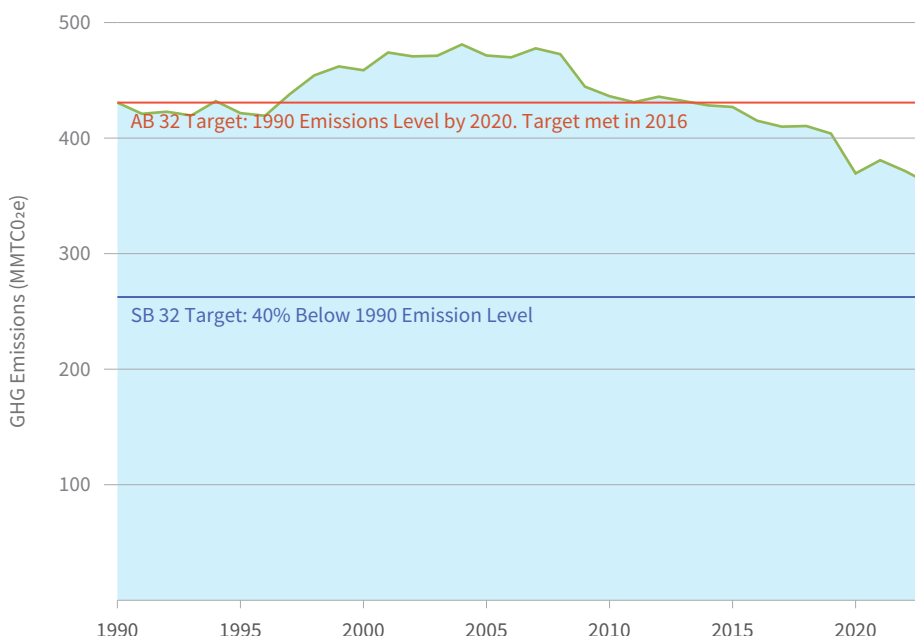
48 "Figure 2. Green House Gas Emission by Source." Next 10 California Green Innovation Index, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-2/>

regulate emissions from passenger vehicles and an important precursor to AB 32. It ultimately led to the creation of national emission standards in 2009.⁴⁹ In 2012, the state set a goal of 1.5 million ZEVs on California roads by 2025 – a goal that California met in 2023 – and introduced the Advanced Clear Cars rules that set more stringent tailpipe emissions standards for cars model years 2017 through 2025.^{50, 51} Meanwhile, the LCFS has been largely responsible for the significant reduction in emissions from heavy-duty vehicles.⁵²

The state has also made enormous progress in decarbonizing the electric power sector since 2006, due to the state's renewable portfolio standard and subsequent clean electricity policies. Emissions from electricity generation overall have fallen by 45.2%, with those from electricity imported from neighboring states falling by 70.9% and those from in-state generation dropping by 17.4%. These reductions are a testament to the regulations put in place to meet the AB 32 goal.⁵³ Emissions have also fallen by 15.4% and 18.4% in the agriculture and industrial sector, respectively.⁵⁴

In combination, utility-scale and rooftop solar panels produced 51% of California's electricity in May 2026 – the

Figure ES3. Total California Greenhouse Gas Emissions, 1990-2023



Source: 2025 California Green Innovation Index, Next 10⁵⁵

first time the clean energy source surpassed the halfway mark for an entire month. This milestone is particularly notable as California is the world's first major economy to cross the 50% threshold (Hungary came the closest at 47% in June 2025, though it has a far smaller GDP). Better still, solar outproduced natural gas not only during May, but throughout every month in 2026 leading up to it too. Achieving this milestone would not have been possible without batteries to store the excess solar energy so it can be used later in the evening.⁵⁶

49 "California's Greenhouse Gas Vehicle Emission Standards under Assembly Bill 1493 of 2002." *California Air Resources Board*. Available at: ww2.arb.ca.gov/californias-greenhouse-gas-vehicle-emission-standards-under-assembly-bill-1493-2002-pavley

50 "Figure 21. Trends in Zero-Emission Vehicle Registrations and Projected Needs to Meet 2025 and 2030 Goals." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/transportation/figure-21/>

51 "California Air Resources Board Releases Proposed Advanced Clean Car Rules." *California Air Resources Board*, 7 Dec. 2011. Available at: <https://ww2.arb.ca.gov/news/california-air-resources-board-releases-proposed-advanced-clean-car-rules>

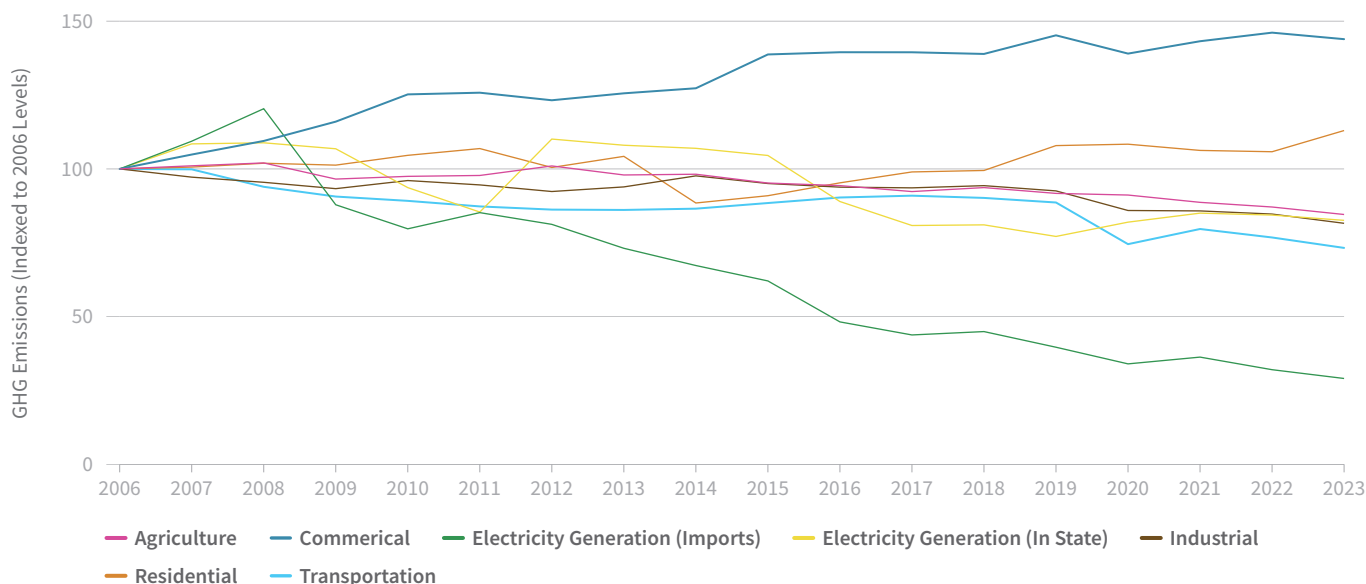
52 "Figure 2. Green House Gas Emission by Source." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-2/>

53 "The Economic Impact of AB 32 on Localities." *The Union of Concerned Scientists*, 7 Dec. 2010. Available at: <https://www.ucs.org/resources/economic-impact-ab-32-localities>

54 "Figure 3. GHG Emissions Indexed to 2006 Levels." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-3/>

55 "Figure 1. Total California Greenhouse Gas Emissions." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-1/>

56 McCarthy, Dan. "California was mostly solar-powered in May – a global first." *Canary Media*, 31 July 2026. Available at: <https://www.canary-media.com/articles/solar/california-solar-power-record-may>

Figure ES4. Greenhouse Gas Emissions (Indexed to 2006 Levels)

Source: 2025 California Green Innovation Index, Next 10⁵⁷

As of August 2026, battery storage across the state had increased by 2,500% since 2019 to over 21,000 MW of battery storage—41% of the way to the 2045 goal.⁵⁸ 21,000 MW is equivalent to roughly one-third of the statewide peak demand, which exceeded 63,000 MW during the September 2022 heat wave.⁵⁹ The world's largest battery storage project, Edwards & Sanborn, is in Kern County.⁶⁰

Despite this progress, California still has a long way to go to meet its ambitious climate targets. In order to meet the SB 32 (2016) goal to further reduce GHG emissions to 40% below the 1990 levels by 2030, California must achieve an annual average reduction of 4.4% as of 2023 – nearly double the average annual reduction from 2019 to 2023 of 2.8%. At this rate, the state is on track to reach its SB 32 goal in 2035.⁶¹

Subsequent Legislation

Innovative climate policies followed the passage of AB 32 to achieve the state's climate goals and the policies outlined in the Scoping Plans. **SB 375** (2008), the Sustainable Communities and Climate Protection Act directed the California Air Resources Board (CARB) to set regional targets for reducing greenhouse gas emissions from passenger vehicles consistent with AB 32, providing the basis for inter-agency collaboration (with a focus on land use policies) across the state.⁶²

The 2008 Scoping Plan led to the creation of the **Low Carbon Fuel Standard** (LCFS), designed to reduce emissions from mobile sources (transportation fuels), that assigns transportation fuels a carbon intensity score and fuel suppliers must gradually lower the average carbon

57 Figure 3. GHG Emissions Indexed to 2006 Levels." *Next 10 California Green Innovation Index*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-3/>

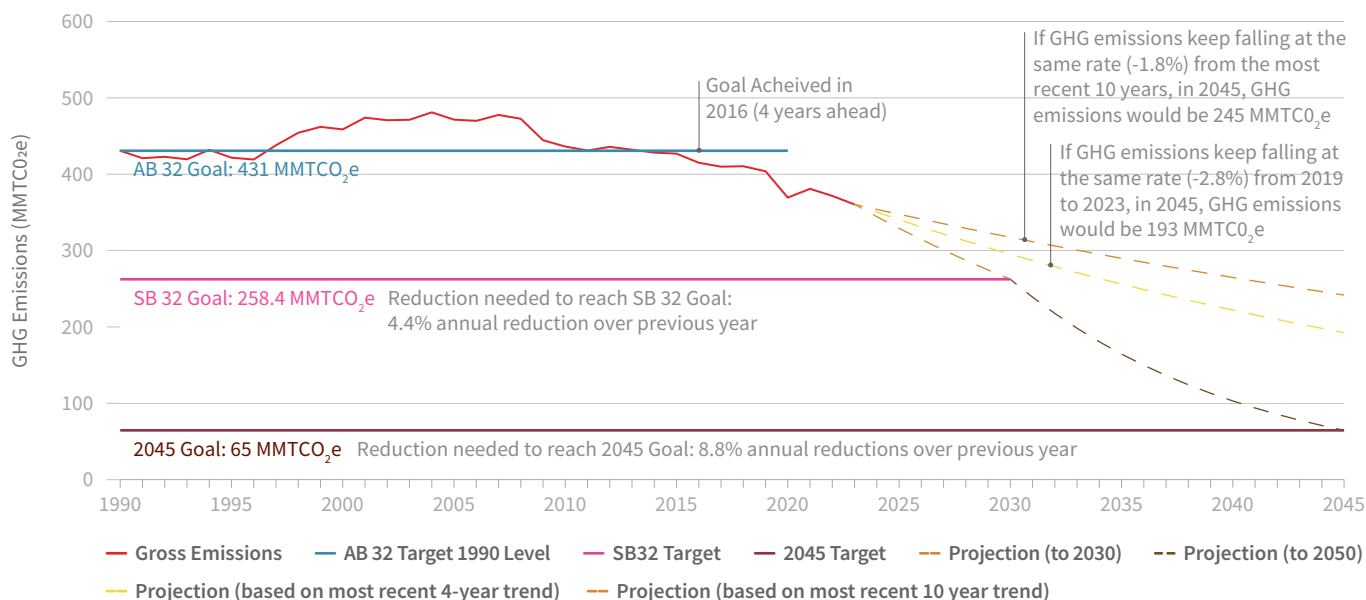
58 "California surpasses 21,000 megawatts of battery resources supporting the state's electric grid." *Office of Governor Gavin Newsom*, 7 Aug 2026. Available at: <https://www.energy.ca.gov/news/2026-08/california-surpasses-21000-megawatts-battery-resources-supporting-states>

59 Ibid.

60 "California's Clean Energy Journey." *California Energy Commission*. Available at: <https://storymaps.arcgis.com/stories/09850952609a4da7b181166f1910cdc7>

61 "2025 California Green Innovation Index." *Next 10*, 16 Dec. 2025. Available at: <https://greeninnovationindex.org/2025-edition/>

62 "The Basics of SB 375." *Institute for Local Government*. Available at: <https://www.ca-ilg.org/post/basics-sb-375>

Figure ES5. Greenhouse Gas Emissions and Projected Reduction Goals

Source: 2025 California Green Innovation Index, Next 10⁶³

intensity of all fuels they sell in California over time.⁶⁴

Executive Order B-16-12 (2012), signed by Governor Jerry Brown, built on the goals of his predecessor Arnold Schwarzenegger by establishing long-term milestones to facilitate the commercialization of zero-emission vehicles (ZEVs), including a target of 1.5 million ZEVs on the road by 2025.⁶⁵ That same year, CARB adopted **Advanced Clean Cars I**, regulations to control motor vehicle emissions through 2025 model years.⁶⁶ **SB 32** (2016), the California Global Warming Solutions Act of 2016, expanded upon AB 32 to set a new target to reduce GHG emissions to 40% below the 1990 levels by 2030.⁶⁷ In order to achieve

these goals, new legislation was crucial. **SB 100** set the most ambitious Renewable Portfolio Standard (RPS) goals of achieving 60% of the state's electricity from carbon-free sources by 2030 and 100% by 2045.⁶⁸ In 2022, the **California Climate Crisis Act** (AB 1279) codified the state's goal to reach net-zero greenhouse gas (GHG) emissions by 2045, requiring reductions of at least 85% below 1990 levels.⁶⁹ Most recently, **AB 1207** (2025) reauthorized and extended the state's cap-and-trade program through December 31, 2045 while renaming it "Cap-and-Invest" – recommitting to the goals established by AB 32 and pushing California to continue leading the transition to a clean economy.⁷⁰

63 "Figure 4. GHG Emissions and Projected Reduction Goals." *Next 10 California Green Innovation Index*, 16 Dec. 2025.

Available at: <https://greeninnovationindex.org/2025-edition/carbon-economy/figure-4/>

64 "Low Carbon Fuel Standard." *California Air Resources Board*. Available at: <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard>

65 "Zero-Emission Vehicles Over the Years." *California Business and Economic Development*. Available at: <https://business.ca.gov/industries/zero-emission-vehicles/zev-timeline/>

66 "Advanced Clean Cars." *California Air Resources Board*. Available at: [https://ww2.arb.ca.gov/our-work/programs/drive-forward-light-duty-vehicle-program/advanced-clean-cars#:~:text=Advanced%20Clean%20Cars%20I,and%20greenhouse%20gases%20\(LEV%20III\)](https://ww2.arb.ca.gov/our-work/programs/drive-forward-light-duty-vehicle-program/advanced-clean-cars#:~:text=Advanced%20Clean%20Cars%20I,and%20greenhouse%20gases%20(LEV%20III))

67 "SB 32: California Global Warming Solutions Act of 2006: emissions limit." *California Legislative Information*, 8 Nov. 2016. Available at: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

68 "SB 100: California Renewables Portfolio Standard Program: emissions of greenhouse gases." *California Legislative Information*, 10 Sept. 2018. Available at: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100

69 "AB 1279: The California Climate Crisis Act." *California Legislative Information*, 19 Sept. 2022. Available at: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1279

70 "AB 1207 Climate change: market-based compliance mechanism extension." *California Legislative Information*, 22 Sept. 2025. Available at: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=202520260AB1207

National Leadership

As California continues to work to achieve these goals, California's leaders have shown continued commitment to advancing climate policies and achieving goals set by previous administrations. AB 32 has served as a model for multiple state level greenhouse gas emissions regulations as Hawaii, New Jersey, Massachusetts, and Connecticut all implemented their own versions of the Global Warming Solutions Act, shortly after California's implementation.^{71, 72, 73, 74} California's Cap-and-Invest program, formerly known as Cap-and-Trade, was adopted by Washington state as well as Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont through the Regional Greenhouse

Gas Initiative (RGGI).⁷⁵ In addition to the replication of AB 32, Oregon, Washington, New Mexico, and Hawaii have implemented versions of California's Low Carbon Fuel Standard and 17 states and the District of Columbia are beneficiaries of California's Clean Air Act Waiver, preempting standard federal regulations to set stricter tailpipe emission and zero-emission vehicle (ZEV) standards under Section 117.⁷⁶ This has been monumental as "Section 177 States" accounted for 40% of new light-duty vehicle registrations and 28% of new heavy-duty vehicle registrations in the United States in 2025.⁷⁷ Despite this, the federal government has recently attempted to revoke California's Clean Air Act Waiver, defying decades of precedent and affecting California, the District of Columbia, and 17 other states.⁷⁸

71 "AB 234 H.B. NO. 226." *Legislature of the State of Hawaii*, 30 June 2007. Available at: https://health.hawaii.gov/cab/files/2023/05/SLH2007_Act234.pdf

72 "Greenhouse Gas Emissions Goals." *New Jersey Department of Environmental Protection*. Available at: <https://dep.nj.gov/ghg/ghg-emissions-goals/>

73 "Global Warming Solutions Act Background." *Massachusetts Executive Office of Energy and Environmental Affairs*. Available at: <https://www.mass.gov/info-details/global-warming-solutions-act-background>

74 "Public Act 08-98: An Act Concerning Connecticut Global Warming Solutions." *Connecticut State Legislature*, 2008. Available at: <https://www.cga.ct.gov/2008/SUM/2008SUM00098-R03HB-05600-SUM.htm>

75 "The Regional Greenhouse Gas Initiative, an initiative of the Eastern States of the US." *RGGI, Inc.* Available at: <https://www.rggi.org/>

76 "States Adopting CARB Emission Standards." *Fuel2Electric*. Available at: <https://www.fuel2electric.com/states-adopting-carb-emission-standards>

77 "States that have Adopted California's Vehicle Regulations." *California Air Resources Board*. Available at: <https://ww2.arb.ca.gov/states-have-adopted-californias-vehicle-regulations>

78 "Assault on California continues: Governor Newsom sues Trump over illegal attempt to revoke state's clean air policies." *Office of Governor Gavin Newsom*, 12 July 2025. Available at: <https://www.gov.ca.gov/2025/06/12/assault-on-california-continues-governor-newsom-sues-trump-over-illegal-attempt-to-revoke-states-clean-air-policies/>

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