



AB 32 Cap-and-Trade Regulation

Frequently Asked Questions

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California has developed a cap-and-trade program to cut greenhouse gas (GHG) pollution. The program officially began on January 1, 2013 and has held auctions every quarter since then. This document answers basic questions about the program. For more information, please contact the authors or visit the [California Air Resources Board \(CARB\) website](#). More information is also available from EDF in an FAQ specifically on the cap-and-trade auctions.

Program Rationale

Q. Why has California developed a cap-and-trade program?

A. The state legislature passed the Global Warming Solutions Act (AB 32) in 2006 requiring CARB to undertake a statewide effort to reduce global warming pollution, and granting explicit authority to develop market-based programs. After extensive stakeholder input, including research and analysis by economic and technological advisory committees, CARB decided to implement a cap-and-trade program as one of several separate measures to cut emissions. Cap and trade has been used before to successfully reduce pollution, such as acid rain, and will complement other regulations like building, vehicle, and appliance energy efficiency standards. Since cap and trade places an absolute limit – a cap – on the amount of pollution that can be released and creates a price for carbon emissions (through trading), the program as a whole creates a strong economic incentive to cut pollution quickly and at the lowest cost.

Q: Why is California regulating greenhouse gases instead of Congress or the U.S. EPA?

A: Climate change is a serious threat to our public health and economic prosperity – decreasing air quality, increasing forest fires, and causing sea levels to rise. Scientists across the globe agree that action to reduce pollution must be taken immediately to prevent the worst impacts. Although the U.S. Environmental Protection Agency (EPA) has authority to regulate GHGs under the Clean Air Act, federal government action is several steps behind and Congress continues to try to limit EPA's authority. In light of the fact that federal action may still occur, California is carefully developing its program to work within any future federal program or work without federal action.

Q. Are California's actions going to make a difference?

A. As the world's eighth largest economy, California's leadership is necessary but not sufficient to stop climate change. For this reason, California developed a cap-and-trade program that can link to other markets in the United States, Canada, and other countries around the world. The Canadian province of Quebec has developed its own cap-and-trade program, which officially linked with California's program on January 1, 2014. By working with other states and nations, California's cap-and-trade market can inspire investments that reduce pollution well beyond our borders, inspiring new programs around the world and multiplying the economic and environmental benefits achieved.

Impacts on California's Economy and Jobs

Q: How will the program impact California's overall economy?

A: Several studies predict a small, but likely positive overall impact on the economy and jobs.ⁱ Shifting to home-grown clean energy sources and investing in energy efficiency creates jobs in California and reduces our reliance on imported energy. This will keep money and jobs in the state. California's economy will also become less vulnerable to global fuel price fluctuations because cutting GHGs to meet the pollution limit will reduce fossil fuel imports by 75 million barrels per year.ⁱⁱ By getting more of our energy from sources in California and wasting less of it, California's economy will become stronger from within and positioned for long-term prosperity. The program's first year has shown that California's economy can thrive under a cap-and-trade program as unemployment decreased and the budget was balanced for the first time since before the recession.

Q: How will the program impact California's job market?

A: Anticipation of California's cap-and-trade program helped attract more than \$9 billion in clean tech investments to the state since 2006, with every \$100 million of capital invested creating 2,700 direct jobs at venture-backed companies and many more indirect jobs.ⁱⁱⁱ Since 2006, jobs in the green economy have grown 10 times faster than total jobs.^{iv} This growth in green jobs is expected to accelerate as the program progresses because it encourages further innovation in clean energy and energy efficiency products and services.^v

Q: Is this really the right time to implement a cap-and-trade program?

A: Implementing this program will improve California's ability to compete in the global clean energy race, a market that has already reached over \$269 billion. Although average yearly investments in global clean energy over the last three years increased by 57% compared to 2007-2009, the U.S. is now in second place behind China and continues to underperform in clean energy investments compared to the size of its economy.^{vi} California needs to pick up the pace to help the U.S. remain competitive, and the state's cap-and-trade program will spur innovative solutions that can be marketed and exported around the world.

Furthermore, Californians strongly support AB 32, of which the cap-and-trade program is a critical element. Polls have shown repeatedly that residents believe strongly that aggressive pursuit of cleaner energy and environmental protection is a 'win-win' that will create jobs and protect our natural resources.^{vii} In November 2010, Californians voted overwhelmingly (61%) to keep AB 32 in place by defeating a ballot initiative (Prop 23) that would have suspended the program.

Impacts on Businesses

Q: What is the program's likely impact on businesses and competition?

A: The program was designed to help businesses transition smoothly to a low-carbon economy over the next decade and reward those that reduce emissions fastest. Since industrial polluters do not have to pay for most of their emissions permits (allowances) at the program's start, the 350 regulated companies remain competitive against other companies in states and nations that don't have a price on pollution. Additional features will help keep costs down, maintain competitiveness, and ensure the smooth transition to a capped economy. One such feature is the ability to use offsets (state-certified pollution reductions from economic sectors – such as agriculture and forestry – that are not directly covered by the program). Another program feature to contain costs is the Allowance Price Containment Reserve, a "rainy-day" pool of allowances that becomes available if prices go up yet does not compromise environmental integrity since these allowances would come from under the cap. Once firmly established, the cap-and-trade program will drive companies to become more resilient and more competitive.

Q: What is California's method for distributing allowances in the program?

A: The cap-and-trade regulation gives most allowance away for free at the start of the program to protect businesses from incurring significant compliance costs. Some businesses use large amounts of energy or face stiff competition from producers outside the state, and free allowances affords them time to invest in efficiency improvements. With a free allowance structure at the beginning, regulators are able to soften the impact to businesses of their compliance obligations while protecting consumers from increased costs. While most allowances are freely allocated, some are auctioned. More information on the allowance auction process is available in EDF's Auction FAQ document.

Q: Why would companies stay in California when they can relocate to avoid regulations?

A: Research shows that businesses are not leaving California because of regulatory requirements; in fact, business relocation accounts for a smaller share of job losses and gains in California than in most other states.^{viii} California is gradually transitioning to a low-carbon economy where new ideas can prosper and businesses can flourish. Firms have many good reasons to stay during this transition, such as an abundance of talented employees, access to capital, exceptional educational institutions, excellent weather, existing infrastructure, and consumer and business demand in the world's eighth largest economy. Given the investments that businesses have already made in the Golden State, it would not make financial sense for companies to leave as the California economy continues to flourish.

Q: What is the program’s likely impact on small businesses?

A: Small businesses emitting under 25,000 tons of carbon pollution per year are not regulated by the program and are not likely to experience significant increases in operating costs. Sole proprietorships spend on average just 3.3 percent of their sales dollars on electricity, and businesses with more than 500 employees spend just 0.3 percent.^{ix} Additionally, costs for businesses are likely to decrease with access to more efficient vehicles and buildings, and other energy-saving innovations.

Impacts on Households and Consumers

Q: What is the program’s likely impact on consumers?

A: The program is expected to have a minimal impact on consumers. While limiting pollution may cause prices to rise for carbon-polluting energy sources, monthly energy bills will likely decline due to reduced energy consumption per capita. With more efficient buildings, appliances, and cars, and less polluting transportation choices and fuels, implementing AB 32 will mean an increase in personal income of about 30 dollars per person in the year 2020.^x This estimate is in line with California’s long history of successful energy efficiency programs demonstrating that reducing energy use saves money. For example, building efficiency standards have saved Californians \$56 billion over the last 35 years.^{xi}

Q: What is the program’s likely impact on gas prices?

A: California plans to add carbon pollution from transportation fuels to the program in 2015. Making fuel producers pay for pollution may increase prices at the pumps slightly, but the increases will very likely be less than the rise in gas prices that are seen every year during the summer travel season and well below the amount paid during oil price shock events. Natural disasters, political unrest, or other discrete events, such as oil price manipulation, have caused six severe crude oil price shocks since 1973. With a price on carbon, fuel providers and car makers will have incentives to produce cleaner and more efficient fuels and vehicles, limiting our dependence on crude oil in the long term and creating more options for consumers and lessening the effect of price shocks. This market signal works in concert with existing vehicle and fuel standards to usher in a lower carbon transportation system.

Q: Why is this program better than a carbon tax?

A: Cap and trade limits total pollution and gives businesses the flexibility to determine how best to invest in reductions. Energy taxes do not put a limit on pollution and can’t guarantee results. Additionally, since carbon taxes are politically unlikely to be enacted federally, and impossible to set uniformly from country to country, cap and trade is unique in its ability to achieve reductions at the lowest overall cost while minimizing adverse consumer impacts. Furthermore, cap and trade provides more opportunity to be linked internationally.

Q: How will money raised in the program be used?

A: By law, money raised in the cap-and-trade program will be invested in ways that further AB 32’s goals, funding solutions that reduce pollution, increase clean energy generation, keep energy prices down, and prepare for the impacts of global warming. In the program’s first year, the state raised approximately \$633 million. Examples of proposed investments for these proceeds include home weatherization programs for disadvantaged communities, low carbon transportation, water and agricultural efficiency, and large-scale clean energy projects. By investing this money in California, the program can create local efficiency-related and clean energy jobs, reduce expenditures on imported fossil fuels, and boost consumer spending on other goods and services. More information on use of allowance proceeds can be found at CARB’s webpage on [Auction Proceeds](#).

Overall environmental impact

Q: How will cap and trade benefit California’s air quality?

A. As businesses, governments, and citizens reduce global warming pollution, they will simultaneously reduce other pollutants. Burning less fuel avoids carbon-based pollution that heats the atmosphere, as well as toxic pollution that causes cancer and “criteria” pollutants that contribute to city smog and regional haze and cause asthma. These benefits are likely to be greatest where there is most severe and pressing need. For example, the U.S. acid rain cap-

and-trade program inspired the most significant improvements in areas with the worst air quality because the same areas contain the highest emitting facilities.

Program enforcement and integrity

Q: How will the program ensure reductions are actually happening?

A: California has a mandatory greenhouse gas emissions reporting rule that requires regulated businesses use consistent methods to annually report emissions. At the end of each compliance period, regulated polluters will have to hold allowances equal to their emissions. Rigorous regulatory enforcement includes matching polluters' allowances with reported emissions. Stiff penalties will be levied against companies that don't have allowances equal to their emissions or that try to cheat the program.

Q: How will the program maintain transparency? Who polices it?

A: Emissions reports and results from allowance auctioning and trading are publicly available. CARB oversees the program with assistance from market monitoring experts and sister agencies. These experts have decades of experience successfully enforcing market operations and regulatory standards. State and local agencies have the authority to investigate and exact penalties for non-compliance. More information on market oversight is included in EDF's cap-and-trade auction FAQ.

Q: How does the program ensure offsets have real environmental and economic benefits?

A: Offsets encourage innovation and can stimulate job and economic growth in 'non-capped' sectors like agriculture and forestry, as well as help to contain costs of the program. Only verified high-quality offsets, credited under offset protocols that have been approved by CARB, can be used in the program, meaning polluters' flexibility to invest in low-cost compliance options will be maintained without compromising environmental integrity. All offset projects must go through a rigorous verification process before undergoing a full review by CARB, which helps to ensure that the projects are achieving the appropriate emissions reductions. For more information on offsets, refer to EDF's offsets basics fact sheet.

Q: How will California avoid problems encountered in other cap-and-trade programs?

A: California has a well-developed emission reporting program and a strong enforcement regime. Therefore, the design of the California program is based on up-to-date actual reported emissions, not dubious projections. California also has a process for certifying and tracking offsets, which will ensure every claim of emissions reductions is verified, accurate, and accounted for. Through these precautions, California is expected to avoid initial challenges faced by programs in Europe and the northeastern U.S., which have still recorded significant success reducing climate change pollution in the face of these challenges.

Q: Is this market vulnerable to the type of manipulation that led to the state's 2003 energy crisis?

A: Electricity is a very different commodity than greenhouse gas emissions allowances. With multi-year compliance periods and ample regulatory oversight, the cap-and-trade program is not subject to the same minute-by-minute trading and system balancing that is required of electricity.

ⁱ Center for Resource Solutions, Climate Policy and Economic Growth in California, 2010, *available at*: www.prnewswire.com/news-releases/controversy-over-economic-impacts-of-californias-climate-law-a-comparative-analysis-of-projections-78446102.html

ⁱⁱ EDF, Shockproofing Society, 2010, *available at*: http://www.edf.org/documents/11338_Oil_Shock_Report_Final.pdf

ⁱⁱⁱ Environmental Entrepreneurs & Cleantech Venture Network, Creating Cleantech Clusters, 2006, *available at*: www.e2.org/ext/doc/2006%20National%20Cleantech%20FORMATTED%20FINAL.pdf

^{iv} Next 10, Many Shades of Green, 2010, *available at*: www.next10.org/next10/publications/green_jobs.html

^v Employment Development Department, California's Green Economy, 2010, *available at*: www.labormarketinfo.edd.ca.gov/

^{vi} Pew Charitable Trust, Investing in Clean Power: Who's Winning the Clean Energy Race? 2012, *available at*: <http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Report/-clenG20-Report-2012-Digital.pdf>

^{vii} Field Research Corporation, Two In Three Californians Support Actions To Combat Global Warming, 2013, *available at*: <http://field.com/fieldpollonline/subscribers/RIs2440.pdf>

^{viii} PPIC, Business Relocation and Homegrown Jobs 1992-2006, 2010 *available at*: www.ppic.org/main/publication.asp?i=956

^{ix} CARB, Updated Economic Impact Analysis of California's Climate Change Scoping Plan, 2010, *available at*: www.arb.ca.gov/cc/scopingplan/economics-sp/updated-analysis/updated_sp_analysis.pdf, See also Union of Concerned Scientists, The Economic Impacts of AB 32 on California Small Business, 2010, *available at*: www.ucsusa.org/global_warming/solutions/big_picture_solutions/AB-32-and-CA-small-business.html

^x See endnote x at Table ES-2.

^{xi} California Energy Commission, 2011, *available at*: www.energy.ca.gov/title24/