

After attacks, Paris prepares for climate change talks

[Sammy Roth](#), The Desert Sun 12:15 p.m. PST November 16, 2015

California has long led the world in tackling climate change. Now, Golden State leaders hope the rest of the world will follow their lead.

Negotiators from more than 190 countries will gather in Paris two weeks from Monday, in a last-ditch effort to strike a deal that averts catastrophic levels of global warming. Gov. Jerry Brown plans to lead a delegation of eight lawmakers, including Eduardo Garcia, one of the Coachella Valley's representatives in the State Assembly. They'll be joined by former Gov. Arnold Schwarzenegger, billionaire climate activist Tom Steyer, and many other environmental advocates who want to see world leaders draw inspiration from California.

California isn't a country, but for the purposes of Paris it might as well be. It's the world's eighth-largest economy, and the federal government often adopts the state's ambitious environmental policies. Brown's administration has worked with national and regional governments in Canada, Mexico, China and elsewhere on programs to slash carbon emissions. The governor has made it clear [he wants California to play a prominent role in Paris](#).

“The real source of climate action has to come from states and provinces,” Brown said earlier this year at a climate summit in Toronto. “This is a call to arms. We’re going to build up such a drumbeat that our national counterparts — they’re going to listen.”



A dead Joshua tree frames another that has lost some of its branches at Joshua Tree National Park on May 13, 2014. Researchers have found that Joshua tree populations are declining in some areas of the park due to climate change. (Photo: Richard Lui/The Desert Sun)

When Brown, Garcia and others arrive in Paris, they'll have quite a story to tell.

California now gets a quarter of its electricity from renewable sources like solar and wind, a figure expected to double by 2030. Californians use the same amount of energy today as they did in the 1970s, even as per-person energy use has spiked across most of the country. Policies to discourage gasoline consumption have led to cleaner fuels and helped put more than 150,000 electric vehicles on the road, a number that is growing quickly.

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While California's climate efforts are by no means perfect, world leaders can learn a lot from the state's multi-pronged approach to global warming, policy and legal experts say. The key lesson, they say, is that the state has acted on climate without inflicting economic disaster. The state has outpaced the rest of the country in job growth and GDP growth since the height of the Great Recession, even as carbon pollution has fallen.

"The biggest worry is that curtailing greenhouse emission will have really negative economic effects," said Ann Carlson, an environmental law professor and co-director of UCLA's Emmett Institute on Climate Change and the Environment. "So far, that has not been true for California."

The reality, experts say, is that climate policies have contributed to the state's sunny economic outlook. From 2006 to 2014, California cleantech companies [garnered more than \\$27 billion](#) in venture capital and other financing. The solar industry alone [employed nearly 55,000 people](#) in 2014.

"It has not been the choice between a healthy environmental and a healthy economy. We can do both," said state Sen. Fran Pavley, who will head to Paris with the California delegation. "We've created a transition into this cleaner energy future."



State Sen. Fran Pavley, who will go to Paris as part of California's delegation for a major climate change summit, looks out at Palm Canyon Drive from The Coffee Bean & Tea Leaf in downtown Palm Springs on Nov. 11, 2015. (Photo: J. Omar Ornelas/The Desert Sun)

The Desert Sun interviewed nearly a dozen lawmakers, academics, activists and researchers about what California is doing to address climate change. Here's a primer on what they think the nations of the world should — and shouldn't — learn from the Golden State.

All about renewables

Some of California's climate programs are big and easy to understand. Others are smaller and more complicated — but nonetheless critical.

On the simple side: The state's clean energy mandate requires major utilities to get 50 percent of their electricity from renewable sources by 2030. Lawmakers approved that mandate earlier this year, supplanting a previous law that called for 33 percent by 2020. Utilities are on track to meet the 33 percent target, without significant impacts on electricity rates.

Experts say the clean energy mandate highlights a key lesson from California: Climate programs tend to become less controversial once people see them in action. While Democratic and Republican lawmakers still don't see eye to eye on the mandate, they largely agree that supporting the clean energy industry's growth is good for the state's economy and air quality.

"There's no politics in the world that are going to deny that benefit from being apparent, and being persuasive. And that's something that will begin to transcend party lines," said Alex Jackson, legal director for the Natural Resources Defense Council's California Climate Project.



Charlie Quezada installs solar panels at the Palm Springs Air Museum on Sept. 10, 2015. (Photo: Jay Calderon/The Desert Sun)

California's cap-and-trade program — a market-based mechanism to reduce emissions — will also be in the spotlight in Paris.

Under cap and trade, state officials set an overall cap on the amount of carbon that power plants, oil refineries and other major polluters are allowed to emit in a given year. They enforce that cap by issuing a limited number of "allowances" each year, and by requiring companies to have enough allowances to cover their pollution. Companies can buy extra allowances from the government, or from other polluters.

The goal of cap and trade is to make cutting emissions as inexpensive as possible. Companies that can slash their pollution cheaply are allowed to sell allowances to polluters for whom cutting back would be prohibitively expensive. On the flip side, polluters who can't afford to cut emissions can instead buy allowances. The overall emissions cap — and thus the number of allowances in the marketplace — drops every year.

The European Union has cap and trade too, as does a group of nine northeastern U.S. states. But experts say California has ironed out some of the kinks in those systems, and is probably the best example to follow for countries like China, which plans to implement cap and trade.

"It's been working well, and it's actually been generating revenue for the state, which is really valuable for plowing back into projects that can further reduce emissions," said Ellen Hanak, director of the Water Policy Center at the Public Policy Institute of California.

Clean cars, energy efficiency

Compared to the electricity sector, progress has been slower when it comes to reducing emissions from cars and trucks, the state's largest source of climate pollution. But even on vehicle emissions, California has led the country. In 2002, state lawmakers passed first-in-the-nation limits on how much carbon cars and light trucks can emit. In 2010, President Barack Obama essentially applied California's program to the rest of the country.



Tesla Motors opened a showroom in Cathedral City on May 9, 2014. (Photo: J. Omar Ornelas/The Desert Sun)

For more than a decade, the state has required automakers to build a certain number of zero-emission vehicles if they want to sell cars in California. For model years 2015 through 2017, 14 percent of cars that are delivered for sale in California must be plug-in electric vehicles or run on hydrogen fuel cells.

Brown has also set a goal of putting 1.5 million zero-emission vehicles on the road by 2025. That target is important because it sends a signal to the auto industry that it should invest in clean-car technology, said Kathryn Phillips, director of the Sierra Club's California chapter.

"You need the mandate that helps the tech take off," Phillips said. "It makes it easier for the people who represent the auto industry who have to come to negotiate with regulators — it makes it much easier for them to go back to Detroit, or Japan, or Europe, and say that there's a very clear signal from California that they're unwilling to bend."

Brown's efforts to slash vehicle emissions suffered a high-profile defeat earlier this year, when moderate Democrats in the State Assembly killed a bill that would have required a 50 percent cut in petroleum use by 2030. Regulators still intend to reach that goal through existing legal authority. In a fiery press conference, Brown said the only consequence of the bill's defeat was that "my zeal has been intensified to a maximum degree."

Not all of California's climate-related initiatives have gotten so much publicity.

Take energy efficiency, which experts consider the easiest and cheapest way to reduce emissions. Since the 1970s, state policymakers have gradually tightened efficiency standards for appliances and new buildings. They've also required utilities to spend billions of dollars on efficiency, much of which has gone toward rebates for homes and businesses that invest in energy-efficient appliances and fixtures.



Ramon Perez — an electrician for Synergy, a company that does free energy-efficiency upgrades for small businesses as part of an Imperial Irrigation District program — replaces a light fixture at Zapateria Alberto in Indio on Jan. 28, 2014. (Photo: J. Omar Ornelas/The Desert Sun)

Lawmakers gave efficiency another big boost this year: SB 350, the bill that raised the clean energy mandate to 50 percent, also requires existing buildings to double their energy efficiency by 2030. It's an ambitious goal, but it cleared the Legislature with hardly any controversy.

"Sometimes it's the things that don't sound sexy to begin with, like energy efficiency, appliance standards, efficient refrigerators, efficient televisions," said Annie Notthoff, California advocacy director for the Natural Resources Defense Council, who is going to the Paris summit. "All of those things add up to a lot of emissions reductions."

That's another climate lesson from California, experts say: No one strategy is enough. With atmospheric carbon dioxide levels now regularly surpassing 400 parts per million [for the first time in the history of human civilization](#), there's no such thing as too many emissions cuts, too quickly.

"There's not one single policy that's going to do all the work. There's no silver bullet," Jackson said. "It's the whole pie, not any single piece, that is really the takeaway from California's efforts thus far."

State policymakers have set a goal of reducing carbon emissions to 1990 levels by 2020, 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. Here's what that will look like if accomplished.

Flexing California's muscle

Many of California's climate programs might not have been possible without Pavley, who served in the State Assembly before being elected to the Senate. She's best known for co-authoring AB 32, the Global Warming Solutions Act of 2006, which led to the cap-and-trade program and other measures.

Pavley said her biggest accomplishment was the 2002 "Clean Car Law," which required automakers to limit climate pollution from cars and light trucks. It was the first law in the country that set limits on greenhouse gas emissions.

The year after Obama took office, he announced national emissions standards modeled after Pavley's bill, part of a deal with the auto industry. And therein lies another lesson from California: When the world's eighth-largest economy takes dramatic action, the federal government tends to notice, as do other countries.

“We know when a policy passes here, it becomes a de facto national policy,” Pavley said. “Many manufacturers aren’t going to make one refrigerator here, and another refrigerator elsewhere. So we’re in a unique position to make change.”



Cars and trucks sit in traffic on the Interstate 10 near the Highway 111 exit, just outside the Coachella Valley. (Photo: Richard Lui/The Desert Sun)

California's Paris delegation hopes the state can exert its influence on the international stage, too.

Already, California is working directly with other countries on climate plans. Last year the Canadian province of Québec joined the state's cap and trade program, in a move that should make compliance less expensive. Brown has signed agreements with China, Mexico and other countries pledging to work together to limit emissions. In a report earlier this year, the Annenberg Foundation Trust at Sunnylands, in Rancho Mirage, said California has "helped create something of a state model for subnational international cooperation on climate change" through its work with China.

Climate experts increasingly see direct cooperation between subnational governments — including states, provinces and cities — as key to reducing global emissions. Those kinds of efforts, Jackson said, could make the Paris climate summit more successful than a similar conference at Copenhagen in 2009, which was largely seen as a failure.

“It’s the first one where there’s going to be the breadth and the extent of subnational, municipal, business community, tribal action that’s going to come to Paris and demand national leadership,” Jackson said. “I think it’s going to be a different scene entirely.”



Gov. Jerry Brown discusses climate change in Beverly Hills on April 29, 2015. (Photo: AP)

California is working with its domestic neighbors, too.

The California Independent System Operator, which runs most of the state's electricity grid, launched a program last year to share more electricity with grid operators in states like Idaho, Nevada, Oregon, Utah, Washington and Wyoming. The program is known as the "energy imbalance market," and one of its goals is to allow the participants to send more clean energy across state lines. That could limit the need to shut down solar and wind farms when supply exceeds demand in a particular state, collectively allowing the participants to use more clean energy and less coal, oil and gas.

So far, the program has averted about 5,700 metric tons of carbon emissions, said Mark Rothleder, vice president for market quality and renewable integration at the California grid operator. That's not a big number, but his agency believes the program could eventually prevent the emission of two to four million metric tons per year. At the high end, that would be like taking 850,000 typical passenger cars off the road.

"It's pretty simple and pretty straightforward math," Rothleder said, adding that participants have also saved \$33 million in the program's first year. "If I can do this more efficiently by dispatching optimally with my neighbors, why shouldn't I consider doing that?"



A wind turbine generates electricity near Desert Hot Springs, California, with Mount San Jacinto in the background. (Photo: Jay Calderon/The Desert Sun)

Concerns remain

California has led the world on climate, but critics say it needs to do more.

Next month, the California Public Utilities Commission is expected to revamp the state's incentive program for rooftop solar. Solar advocates fear the commission will approve utility company proposals to slash incentives, which they say [would sink the industry for at least the next five years](#).

"It is unfortunate that one of the world's largest markets for renewable energy — the rooftop solar market in California — is left hanging in the lurch while everybody else goes to Paris, and all because the utilities want it to go away," said Bernadette Del Chiaro, executive director of the California Solar Energy Industries Association. "It sort of flies in the face of what California really stands for."

Environmental justice groups have concerns, too. They've long argued that cap and trade is fundamentally unfair to low-income communities, which are often home to power plants and oil refineries that spew greenhouse gases and hazardous chemicals into the air. Under cap and trade, they contend, many of those facilities have been allowed to continue business as usual, rather than being required to cut their pollution.



Children walk through blowing dust in Mecca, in the eastern Coachella Valley, about two miles from Western Environmental Inc.'s soil recycling plant, on Feb. 16, 2011. (Photo: Richard Lui/The Desert Sun)

Still, environmental justice advocates are pleased that 25 percent of the revenues from cap and trade [must be redirected toward disadvantaged communities](#). They've also applauded several programs that passed the Legislature this year, including \$1 billion in funding to support rooftop solar at low-income, multifamily housing units. In another major victory, lawmakers approved a bill that will add two representatives for low-income communities to the California Air Resources Board, the powerful agency that develops most climate regulations.

"The big story is that environmental justice actually won this year," said Strela Cervas, co-director of the California Environmental Justice Alliance. "For the first time in forever that we've been doing this, four or five of our priority pieces of legislation were signed into law this year."

Perhaps the biggest shortcoming in the state's climate efforts is one that can't be helped: No matter what it does, California can't save itself from the consequences of global warming. The accumulation of greenhouse gases in the atmosphere is a global phenomenon requiring global solutions.

For months, Brown and other lawmakers have emphasized the importance of inspiring strong action at the Paris summit, which runs from Nov. 30 through Dec. 11. Now, California's representatives will get to see first-hand whether they've succeeded in their goal.

"California's aggressive climate change policies aren't going to change the occurrence (of global warming) throughout the world," said Garcia, the State Assembly member. "We need to send a message to other countries that they need to step up their efforts as well."

No one expects the nations of the world to act as aggressively as California has, at least not in Paris. The international agreement taking shape will probably be built around non-binding national emissions targets, and financial commitments from rich countries to support action in poor countries. The national targets that have been floated probably wouldn't keep global warming below two degrees Celsius, beyond which scientists fear the worst consequences of climate change would become irreversible.

But Paris could be a start.

"I think what's going to be important in Paris is that California can go there and show a face for the U.S., a place where we are making progress," Phillips said. "The bottom line is just that it can be done. That's what California's lesson is."

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