

California scrambles to improve electric grid to avoid summer blackouts

Last year's heatwave blackouts could be repeated unless steps are taken.



The AES Redondo Beach power plant was originally scheduled to close at the end of 2020, then at the end of 2021. Now, regulators are considering extending the life of the outdated plant through 2023 to help avoid blackouts during heatwaves. (Staff file photo)

By [MARTIN WISCKOL](#) | mwisckol@scng.com | Orange County Register

PUBLISHED: March 23, 2021 at 1:34 p.m. | UPDATED: March 24, 2021 at 6:40 a.m.

State agencies and electric utilities are scrambling to shore up power supplies in hopes of avoiding the rolling blackouts that left 800,000 California homes and businesses without power during a record-breaking heatwave last August.

That means gas-fired power plants could be called on more, instead of less, at a time when the state is trying wean itself from fossil fuels that produce greenhouse gases.

Already last year, [state regulators extended](#) the life of outdated gas-fired power generators in Huntington Beach, Long Beach, Redondo Beach and Oxnard, all of which had been scheduled to shut down at the end of 2020. And now, the state is considering a second extension for the Redondo Beach plant, which is currently scheduled to close at the end of this year.

Environmentalists are at odds with regulators and utilities over how to address the shifting energy landscape. But both sides agree that more needs to be done to meet clean energy goals at a time of when the Diablo Canyon nuclear plant and several gas-fired plants are scheduled to close, climate change is increasing summer electricity demands, and the phasing out of gasoline cars and natural-gas buildings will boost year-round electricity needs.

Legislators are also becoming increasingly aware of the steep challenge ahead if California is to meet its targets of 60% green energy by 2030 and 100% by 2045.



“To meet our state’s goals, we must build six gigawatts of new generation and storage each year ... equivalent to powering approximately 4 million homes with clean energy every year,” Sen. Dianne Feinstein said in a March 19 letter to California Public Utilities Commission President Marybel Batjer. Feinstein called on the commission to let her know of its priorities for possible inclusion in any future federal infrastructure package, such as the proposal now being prepared by the White House.

But the more urgent concern is getting the state through the next couple summers.

Patchwork plan

Like the deadly February power outages in Texas, California’s shortfalls last summer have been linked to more extreme weather resulting from climate change. The biggest threat to California, though, is heat rather than cold.

Another difference is the extent of the threat, with widespread agreement that California’s electrical grid is more integrated than the grid in Texas, and that California has more contingencies in place to address temporary power shortages.

But as last summer proved, that was not enough.

The state’s [“Final Root Cause Analysis”](#) found the rolling blackouts on Aug. 14 and 15 resulted from a combination of increased demand, inadequate supplies, a now-fixed software glitch, the export of power to out-of-state utilities, gas-fired plants unable to run at full capacity and out-of-state suppliers with no energy left to sell to California.

It was a problem anticipated, in part, in a [state readiness report](#) for the summer of 2020 that was written by the non-profit, quasi-governmental agency known as CAISO, which coordinates 80% of power delivery in the state. The report noted that if a heatwave extended beyond California to neighboring states that sell energy to the Golden State, there would be risk of an electricity shortage.

In an effort to shore up supplies for this summer, the state Public Utilities Commission on Thursday, March 25, will consider [a proposal](#) that, among other things, calls for a 2.5% increase in the amount of energy procured by the state’s three major utilities, Southern California Edison, San Diego Gas & Electric, and Pacific Gas and Electric.

The plan also seeks to reduce demand at critical junctures by adjusting and increasing the possible number of “critical peak pricing” periods when utilities charge the most for electricity, and by allowing large commercial customers to pay a lower rate if they allow the utility to reduce the amount of power available when there’s a threat of blackouts.

But green-power activists oppose the proposal, saying there should be more emphasis on reducing demand and less on increasing supplies from existing sources.

“All of that gas burning is what we need to get away from, but instead we’re leaning into it,” said V. John White, executive director of the non-profit Center for Energy Efficiency and Renewable Technologies. Along with the Sierra Club and other environmental groups, White’s organization wants strict limits on utilities procuring additional energy from gas-fired plants.

White and other environmentalists also are calling for the commission to require utilities to offer more incentives to residential customers — particularly low-income residents — to use less energy during critical periods and an easier process for residential customers with solar panels to sell their energy to the electrical grid.

Edison, which provided recommendations to the commission and supports the proposal, said those suggested alternatives aren’t practical to get in place by summer.

“These programs take a fair amount of effort, so we are focused on what would give us the most resources quickly,” said William Walsh, Edison’s vice president of energy procurement.

And where will the additional energy come from, if needed?

“That’s the key question now,” Walsh said. “There’s only so much that exists. There’s probably very little left so we’ll probably be looking outside of the state.”

He acknowledged that there could be cost increases for customers but said he couldn’t predict how much.

Gas-fired plants

Natural-gas power plants in Huntington Beach and Long Beach fired up long-planned, new generators in 2020. Intended to replace existing units, the new generators are smaller, and get twice as much energy from the same amount of gas. Unlike the old generators, they don’t suck in ocean water for cooling and so do not harm sea life.

The units typically operate only in the evening and early morning, when solar and wind power is minimal. Unlike the old generators, which can take as much as three days to start running, the new units can start up in 20 minutes.

The last of the old generators at those two plants, as well as those in Redondo Beach and Oxnard, most built in the 1950s and 1960s, had been scheduled to shut down in 2020 as part of a state mandate to eliminate power units that harmed sea life. In Redondo Beach and Oxnard, there were no replacements built because of the transition to clean energy. As a result, the plants were scheduled to shut down entirely.

But, last year, concerns over adequate power supplies resulted in extensions for the old units. In Redondo Beach, where local opposition to the extensions was strongest, a new closure date was set for the end of 2021. At the other three sites, the approved shutdown date is 2023.

On Friday, March 26, a committee representing a host of state regulatory agencies will consider [recommending](#) a second extension of the Redondo Beach’s units, this time until 2023.

“The two heat storms in 2020 showed that the California planning margins need to be increased to account for more extreme heat events,” said Public Utilities Commission spokesperson Terrie Prosper. “Concerns for 2021 will carry over into 2022 and 2023, until sufficient new resources can be built to meet the new planning needs based on extreme weather events.”

Long-term solutions



Then there's the longer-range energy needs, where renewable energy activists disagree with the commission on several fronts. Differences include how much clean juice should be required by mid-decade and how carbon emissions are measured in reaching the 2030 goal of a 60% reduction.

The state was ahead of schedule in meeting its 33% reduction goal for 2020, but some environmentalists take issue with that calculation and point to the old gas-fired plants that are still operating to help buoy their case.

While Prosper said the commission has called for 8,000 megawatts of new clean energy over the next four years — including 2,000 megawatts of storage capacity by this summer that was not available last year — activists say that's not enough. The addition over four years would be a 17% increase to the [maximum amount of energy](#) pumped out at any time last year.

One clean-energy proposal getting legislators attention is the prospect of building windmills offshore of Northern California. Unlike onshore wind farms, those offshore would produce energy around the clock because of constant winds, according to Elizabeth Nickerson of Environment California.

Assemblyman David Chiu, D-San Francisco, has introduced a bill, [AB 525](#), that would establish goals of 3,000 megawatts of offshore wind by 2030 and 10,000 by 2040. Meanwhile, a [climate-change executive order](#) signed by President Biden a week after being sworn calls on a sharp increase in offshore wind initiatives and a [\\$1 trillion-plus infrastructure](#) proposal being developed by the White House includes clean-energy construction.

With an emphasis on the need for power then the sun isn't shining, expanding battery storage of solar and wind power is a key priority. A particularly ambitious proposal would turn Riverside County's abandoned Eagle Mountain iron mine into a pump-storage plant, in which water would be pumped from a lower reservoir to an upper reservoir when the sun out and energy is cheap. When the sun sets, the upper reservoir would release its water to drive energy-producing turbines en route back to the lower reservoir.

The plant could deliver as much as 1,300 megawatts and has received all necessary permits. The sticking point is the \$3 billion price tag for construction.

"It's a question of investing in infrastructure at a time when the utilities are trying to provide the lowest cost energy," said Patrick Sinclair, head of the non-profit California Alliance for Renewable Energy Solutions, which is funded in part by Eagle Mountain's developers. "How do you move forward at a time when the emphasis is on the lowest cost options and the lowest cost option is fossil fuels?"

Edison's Walsh said it's not yet time to pursue the project.

"We don't see a need for this type of long-term storage until the end of the decade or maybe the beginning of the next one, although we're open to additional information," he said.

But environmentalists say the commission needs to be more proactive in pursuing long-term projects, despite the expense.


"Not investing in large-scale infrastructure is going to cost us in the long run," White said.

[Newsroom Guidelines](#)

[News Tips](#)

[Contact Us](#)

[Report an Error](#)

 The Trust Project

Coast Lines

Sign up for our new email newsletter, **Coast Lines**, that is all about what's happening, changing and important along Southern California's coast.

Enter your email to subscribe

SUBSCRIBE

Tags: [Environment](#), [Top Stories Breeze](#), [top stories ivdb](#), [Top Stories LADN](#), [Top Stories LBPT](#), [Top Stories OCR](#), [Top Stories PE](#), [Top Stories PSN](#), [top stories rdf](#), [Top Stories SGVT](#), [top stories sun](#), [Top Stories WDN](#)

Martin Wisckol | Reporter

Martin Wisckol covers coastal environment and development. Previously, he spent two decades as politics reporter and columnist for the Orange County Register. He's also held reporting positions in Miami, Jacksonville, Detroit and his hometown of San Diego, with an emphasis on land use and urban planning. He is a lifelong surfer and has spent most of his life on the coast. His work has been honored by the Society of Professional Journalists, the National Headliner Awards, the California Newspaper Publishers Association, the Florida Press Club and the American Planning Association Florida Chapter.

mwisckol@scng.com

[Follow Martin Wisckol @MartinWisckol](#)

SPONSORED CONTENT

Considering the 2020 Mazda CX-30? Read This First

By Mazda



Inside and out, the 2020 Mazda CX-30 is built to make you feel alive. Read more on Edmunds.

