

# Major energy storage project—enough to power 110,000 homes for 2 hours—coming to San Diego

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A portfolio of 44 battery storage systems across San Diego County aimed at adding more emissions-free energy to California's electric grid

is about to roll out, with one location in Chula Vista and another in El Cajon poised to break ground within the next month.

EnerSmart Storage, a renewable energy company based in San Diego, will design, construct and operate the systems. When completed, 12 sites across the county will enhance grid reliability and increase energy efficiency. The entire portfolio will account for 165 megawatts and 336 megawatt-hours of battery [storage](#) electricity—enough to power 110,000 homes for two hours.

"We're super excited about it just because it's something that is really helping the growth of renewable energy," said EnerSmart managing partner James Beach, who said the portfolio will assist the San Diego Gas & Electric distribution system. "It's helping local residents and businesses by having this backup power available."

The El Cajon site is one of two locations that will deploy zinc battery storage technology manufactured by EOS Energy.

The Chula Vista location is one of 10 sites that will use lithium-iron phosphate batteries made by BYD, a multinational based in China whose North American headquarters is in downtown Los Angeles.

BYD's iron phosphate batteries are considered less flammable than the widely used [lithium-ion batteries](#) often seen in electric vehicles and utility-scale battery storage systems.

The North American Development Bank and Siemens Financial Services have provided the financing for the BYD projects for EnerSmart. Beach said the total loan is \$90 million to \$100 million.

"We're really excited to have these projects going and having strong banks behind us to help put them together," Beach said.

The North American Development Bank, based in San Antonio, Texas, and known as the NADB for short, is a binational institution established by the U.S. and Mexican governments to finance environmental and energy infrastructure projects that are located within 60 miles of the border.

According to the NABD, the San Diego energy storage project will displace the emissions of 31,100 metric tons of carbon per year.

"The new battery storage project helps meet current infrastructure needs and contributes to increasing our global competitiveness and transition to a green economy," San Diego Regional Chamber of Commerce CEO Jerry Sanders said in a statement. "We applaud the bank's commitment."

The El Cajon and Chula Vista locations are scheduled to begin commercial operations April 1. Beach said he hopes all 12 sites in the portfolio will be up and running by the end of 2023.

The locations with the biggest systems will be in Ramona, which will store 39 megawatts and 78 megawatt-hours of electricity, and Rancho Peñasquitos, storing 30 megawatts and 60 megawatt-hours. Both will use BYD's iron phosphate batteries.

Energy storage is taking on a larger role in California's power mix. Under the state's Renewable Portfolio Standard, 60 percent of California's electricity must come from renewable sources by 2030. By 2045, if not earlier, 100 percent must come from carbon-free sources.

Solar production in California is so abundant during the day that the California Independent System Operator, the nonprofit that manages the grid for about 80 percent of the state, often has to send the excess to adjacent states like Arizona or curtail it all together. But when the sun goes down, solar production disappears.

Storage can help solve the problem by taking that excess solar generation, saving it via batteries or other means and then sending it to the grid at night, or at other times when the electric system needs it.

Any extra megawatts can also come in handy when the grid comes under extreme stress due to increased demand—most often seen in California when extreme heat waves lead consumers to crank up their air conditioners. If things get dire, grid operators have to consider instituting rotating power outages, as they did in August 2020.

California accounted for 506 megawatts of battery storage power capacity—the maximum amount of power batteries can discharge at a given moment—as of December 2020, according to the Energy Information Administration. That's by the far the largest amount of any state in the nation.

In the aftermath of the 2020 rolling blackouts, the California Public Utilities Commission ordered power companies to accelerate the deployment of more battery storage projects, as part of a larger mission to ensure there is adequate electricity to meet demand.

Critics of [energy](#) storage point to their relatively high cost compared to conventional sources of power. In the early 1990s, for example, lithium-ion battery projects cost about \$10,000 per kilowatt-hour.

Prices have gone down dramatically, though, and earlier this year an analysis by the National Renewable Energy Laboratory projected storage costs for four-hour systems ranging from \$143 per kilowatt-hour to \$248 by 2030. The industry's breakthrough price is generally considered to be about \$100 per kilowatt-hour.

Beach of EnerSmart estimated the price for the San Diego portfolio will come to about \$300 per kilowatt-hour.

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