



World's First "GridOptimal" Building is Sonoma Clean Power's Headquarters

SANTA ROSA, CALIF., September 20, 2022 – [Sonoma Clean Power](#) (SCP) recently unveiled its new all-electric headquarters which features an innovative microgrid and goes far beyond "net zero energy" standards by reducing greenhouse gas emissions on the State's electric grid.

Located at 431 E Street in Santa Rosa, California, the two-year renovation transformed a 1979 structure into the world's first GridOptimal[®] building that enables and accelerates decarbonization of the grid. Unlike traditional net zero energy buildings, SCP's headquarters considers exactly *when* it produces and uses power.

The building's 23 electric car chargers, building lights, HVAC, and water heating can all adjust when they use electricity to ensure that energy is only drawn from the grid when plenty of clean power is available in California. The battery system typically charges up around noon when there is an abundance of solar power. During the evening, the building can then use that energy or place it back onto the grid to reduce the State's reliance on polluting gas power plants.

"After eight years of growing our team and expanding our mission, we're able to show what an advanced energy building looks like in practice with the most efficient and climate-friendly facility we know how to build," said Geof Syphers, CEO of Sonoma Clean Power. "Our new headquarters is a 'test case' that's working well, and we want people to know that this can be replicated — that clean electricity and decarbonization are attainable today. We also want people to understand that a 24/7 zero-emissions future for buildings is achievable and practical."

SCP's new headquarters is the first pilot project for the [GridOptimal[®] Buildings Initiative](#), a joint program of the New Buildings Institute and the U.S. Green Building Council. The program aims to redefine how building design and operations can cost-effectively support decarbonization of the power grid and a fully renewable electricity supply.

Using an hourly signal of grid emissions, the building's flexible microgrid adjusts when to pull from the external power grid or its on-site 220 kWh battery system. This allows it to store and utilize renewable energy, and even supply power back onto the grid at times when other buildings need it. The microgrid also can operate portions of the building when the grid is down and serve as an emergency operations center during a local disaster.

The all-electric building is partially powered by an on-site solar array with the rest coming from SCP's 100 percent renewable and locally generated [EverGreen](#) service. Its exceptional air sealing and strict energy and water efficiency criteria far exceed the highest standards in sustainability and health. The former natural gas infrastructure was removed for space heating and hot water, and the kitchen was refitted for advanced induction cooking.



“Sonoma Clean Power’s new headquarters is an exciting example of how yesterday’s buildings can be repositioned to blaze a trail toward the clean, flexible, healthy, and resilient buildings of tomorrow,” said Alexi Miller, Acting Director of Building Innovation at New Buildings Institute. “This GridOptimal pilot project led the way through both passive and active building-grid integration strategies. The building’s designers focused on targeted energy efficiency measures that reduce power demand during high-cost, high carbon times. Meanwhile, the solar plus storage microgrid system and smart controls work together to enhance demand flexibility, while reducing operating costs and cutting carbon emissions. SCP’s leadership is inspiring, and we look forward to more buildings following their example.”

The building serves as an elevated workspace for employees complete with daylighting, fresh air systems, and operable windows. Thoughtfully curated natural materials and furniture were selected to comply with strict environmental standards. Two 300-year-old oak trees on the property were carefully protected through construction, and now help cool the building during the summer.

The project was designed by [EHDD Architecture](#) to create a lively welcoming space out of an old, dated office building, while showing how even simple updates can reduce a building’s carbon footprint. This included reorienting the entryway to maximize daylighting and installing large ceiling fans to extend the range of comfort conditions in the space when necessary to support building load curtailment. [Guttman & Blaevoet](#) served as the project’s lead building infrastructure and sustainability engineer, with conceptual support from the engineers at [Point Energy Innovations](#).

[Midstate Construction](#) was the project’s general contractor, and [Sixth Dimension](#) was the construction manager. The project’s design began in 2018, with construction completed in 2021. The microgrid installation was completed in mid-2022.

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About Sonoma Clean Power

Sonoma Clean Power is the public power provider for Sonoma and Mendocino counties, serving about half a million people. In downtown Santa Rosa, SCP operates the only Advanced Energy Center in the United States dedicated to helping customers transition to 100% renewable energy for their homes, businesses, and vehicles. SCP is also the only power provider in California offering 100% local, renewable electricity twenty-four hours per day, every day of the year. To learn more, visit sonomacleanpower.org or call 1 (855) 202-2139.