



Vallecito Energy Storage Resilience (VESR) Project

The Vallecito Energy Storage Resilience Project was awarded a 20-year Energy Storage Resource Adequacy Agreement by Southern California Edison (SCE) and is staged to provide significant additional grid services.

Benefits to Santa Barbara County

- **Enhances reliability and resilience** by helping mitigate Santa Barbara County's dependence on a single 220 kV transmission path serving the Goleta Load Pocket (portion of Santa Barbara County served by SCE).
- **Provides local job creation and other economic stimulation** by supporting dozens of technical and construction jobs over the development and construction phases while injecting millions of dollars into the local economy.
- **Stages solar-driven resilience with potential for more than 15 MW of solar siting potential** at Carpinteria High School and other nearby commercial-scale built environments, with the majority in the form of solar parking canopies. Could provide the energy storage foundation for a future community microgrid.

By demonstrating how energy storage within the Goleta Load Pocket can establish reliability and resilience for the region, VESR promotes increased deployment of distributed energy resources.

Technology



1. Lithium-ion (Li-ion) battery cell technology rated at 10 MW and 40 MWh.
2. Tier-one suppliers for all components, including battery cells, power conversion systems, and controller.
3. 16 kV interconnection to feeder served by SCE's nearby Carpinteria Substation.
4. Advanced controller that provides state-of-the-art monitoring, communications, and control functionality.
5. Flexible functionality capable of supporting the Resource Adequacy (RA) contracted to SCE and additional grid services like renewable energy integration, deferred infrastructure investments, frequency balancing, voltage balancing, spinning reserves, and demand response.

More key features

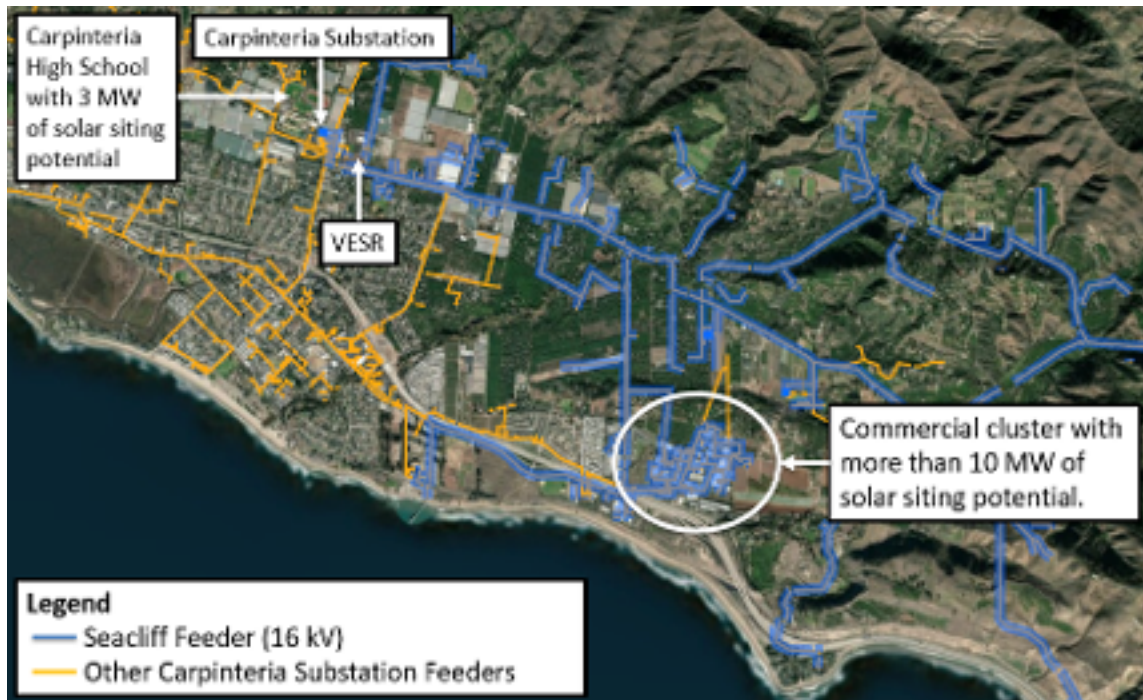
- **Mitigates** Southern California's broad vulnerability to natural gas availability, avoiding situations like the indefinite shutdown without warning of the Aliso Canyon Natural Gas field due to rampant gas leakage. Essentially, energy storage can replace gas peaker plants and reduce the need for natural gas availability.
- **Enhances** broad Local Capacity Requirements (LCR) in SCE's broad Moorpark subarea, which incorporates Ventura County and the SCE's portion of Santa Barbara County.
- **Fulfills** 10% of the 400 MWh of energy storage that is needed within the Goleta Load Pocket, in conjunction with 200 MW of solar, to protect the region from a complete transmission outage, which could result in rolling blackouts for an extended period throughout the portion of Santa Barbara County that is served by SCE.

VESR Project Status

The VESR Project will be the first front-of-meter wholesale distributed generation energy storage system to come online to fill SCE's Local Capacity Requirements in the Santa Barbara region.

- **Utility contract:** 20-year Energy Storage Resource Adequacy Agreement awarded by SCE in March 2019.
- **Interconnection Agreement:** SCE Generator Interconnection Agreement (GIA) for interconnection on SCE Seacliff 16 kV Distribution Feeder, executed in September 2019.
- **Permitting status:** All permits approved as of August 2020.
- **Commercial Operation Date:** Commercial Operation Date (COD) scheduled for December 2020.

The VESR Project will serve as a model that supports Santa Barbara County's emissions reduction goals, increases the County's energy resilience, drives regional economic development, and optimizes the performance and cost-effectiveness of the electricity grid.



VESR Project partners include Ormat, Southern California Edison, and the County of Santa Barbara.

