



Careers in Clean Local Energy



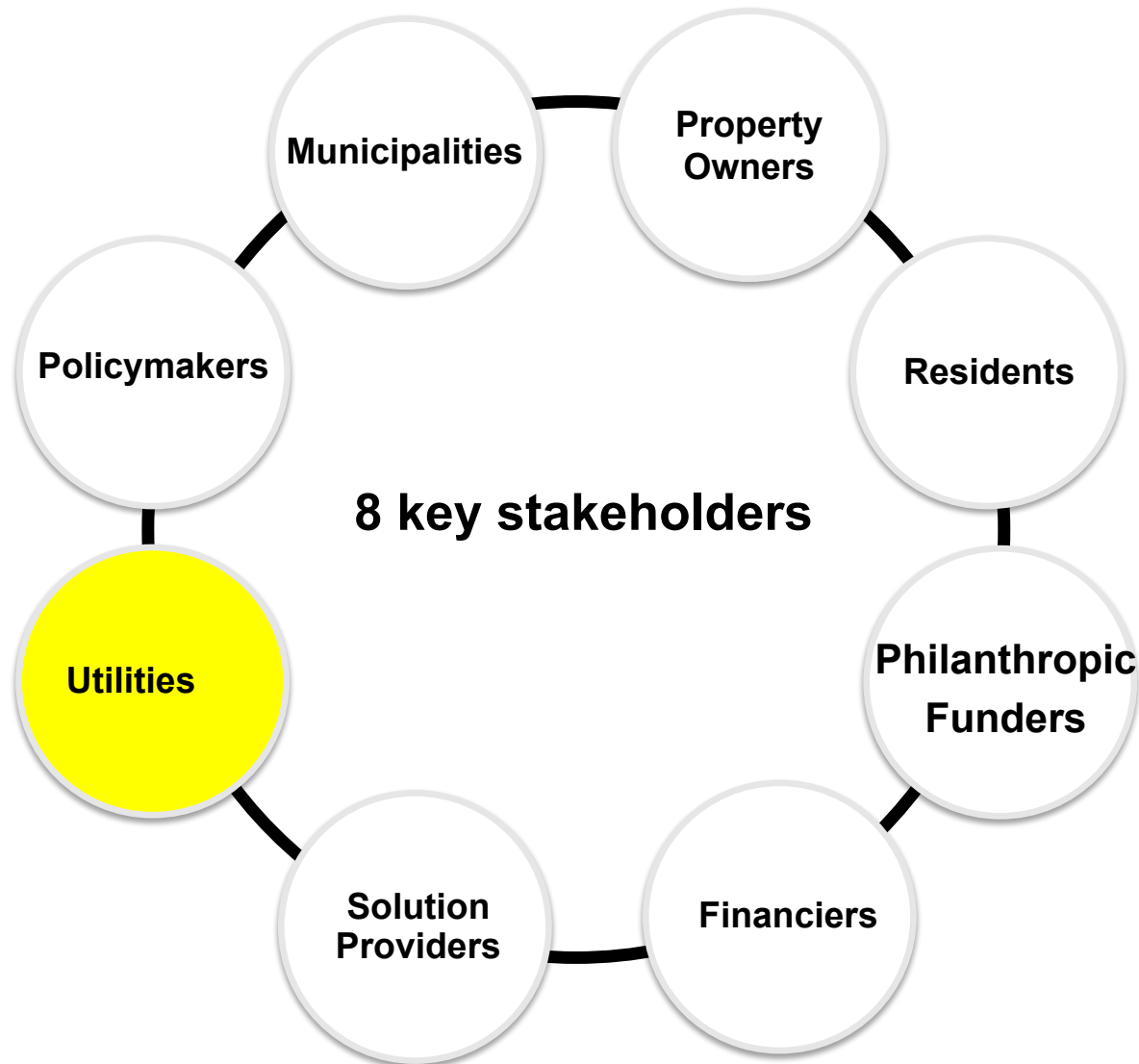
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Mission

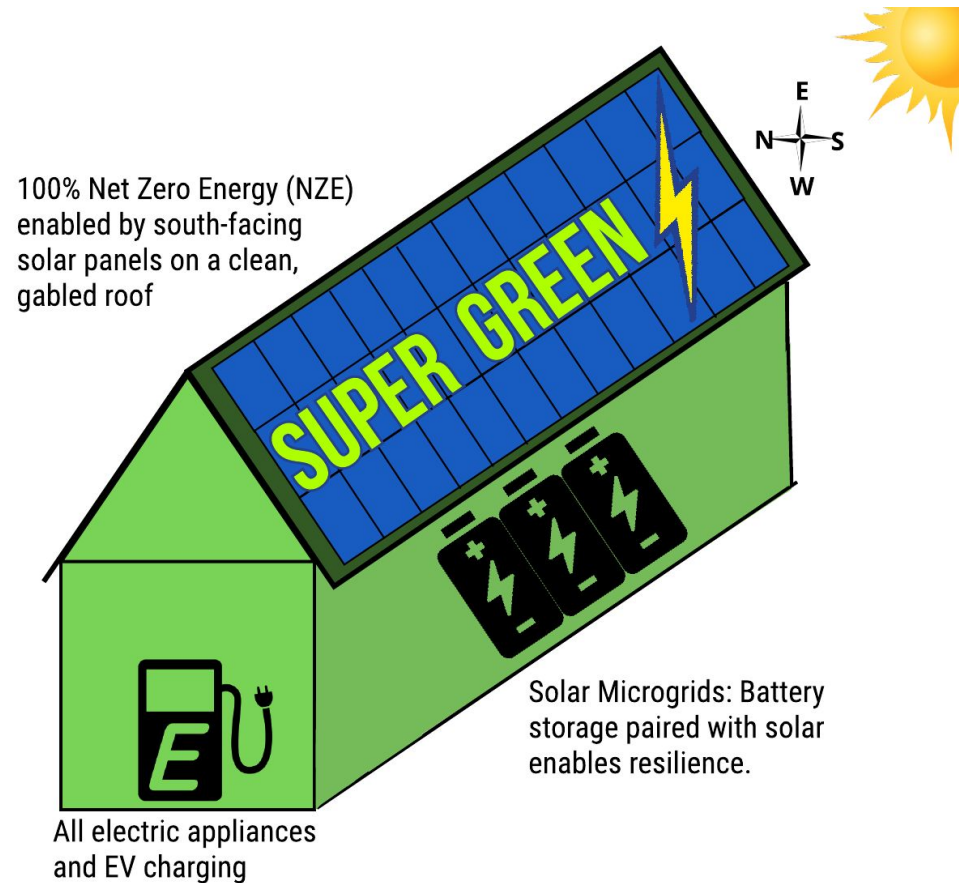
To accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise.

Renewable Energy End-Game

100% renewable energy; 25% local, interconnected within the distribution grid and ensuring resilience without dependence on the transmission grid; and 75% remote, fully dependent on the transmission grid for serving loads.



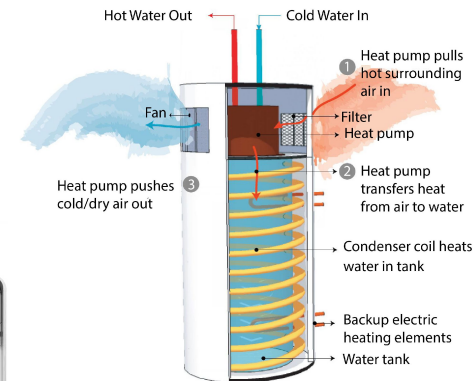
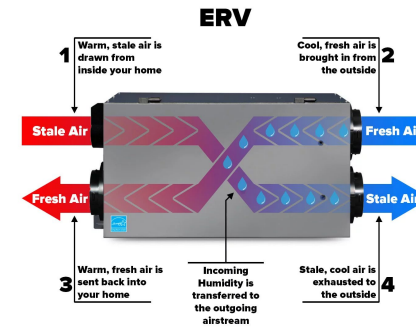
1. 100% Electric: No gas service to the home and ideally an all-EV household.
2. Net Zero Energy (NZE): Onsite solar energy production at least equals the annual energy consumption across the premise, including to cover home EV charging.
3. Solar Microgrid: Combines a battery to the solar for economic optimization and achieving unparalleled energy resilience.



Specifications

Mechanical and Plumbing

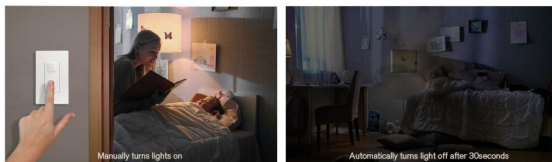
- Heat Pump HVAC
- Heat Pump Water Heater
- ERV: Energy Recovery Ventilator
- E-Fireplace: Napoleon Alluravision 60" [Optional]
- Heat Pump Pool Water Heater [Optional]



Electrical

- LED Light Bulbs

VACANCY MODE
Manual ON and Auto OFF / Manual ON - Manual OFF



Span Panel [Optional]



Appliances

- Induction Cooktop
- EnergyStar Refrigerator
- EnergyStar Dishwasher
- EnergyStar Washing Machine
- Energy Efficient Microwave
- Heat Pump Dryer
- EV Charging Outlet and/or Charger ⚡
(Level 2 capable) **100% Electric**



Induction Cooktops



Energy Efficient



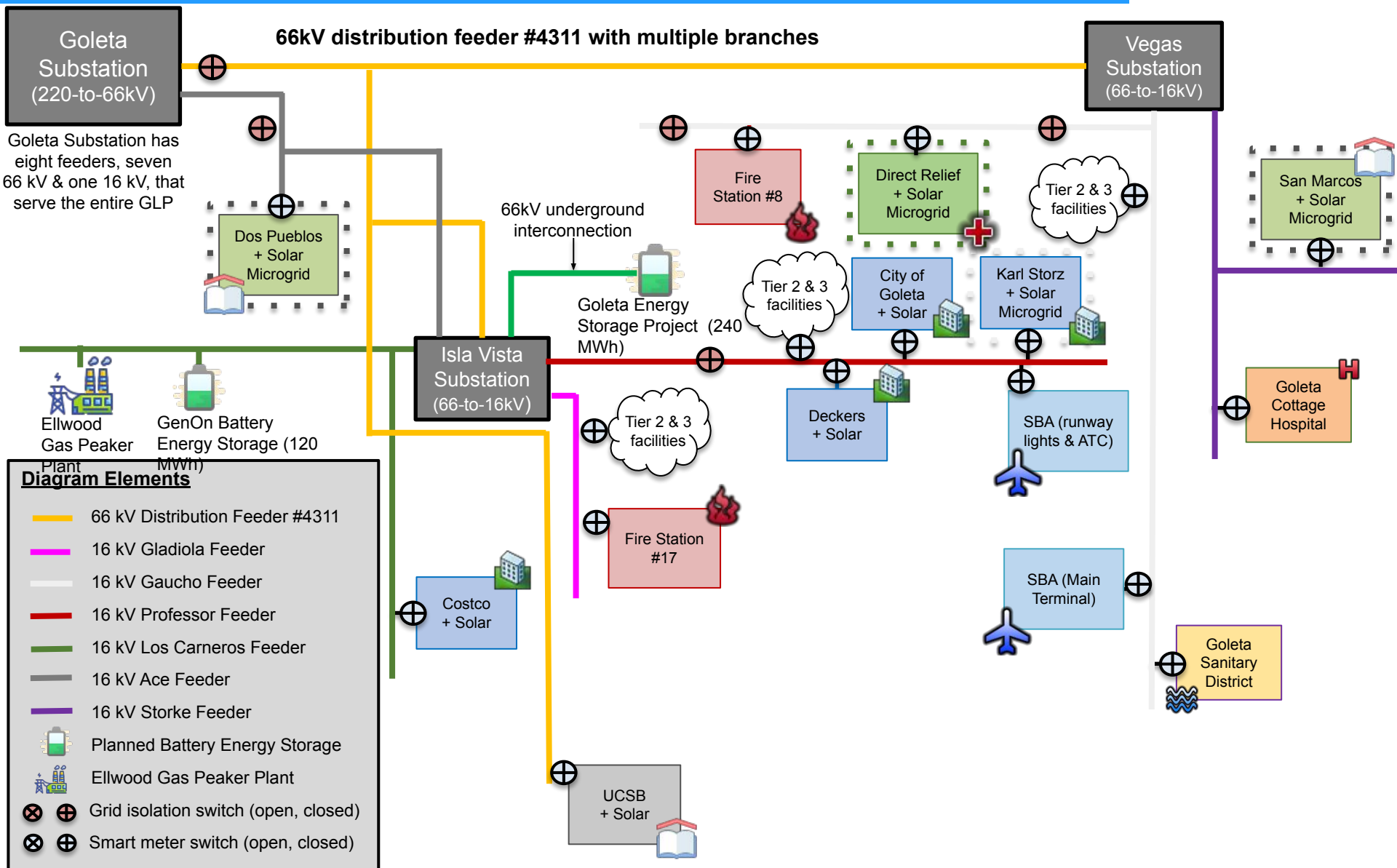
Goleta Load Pocket (GLP)

The GLP is the perfect opportunity for a comprehensive Community Microgrid



- GLP spans 70 miles of California coastline, from Point Conception to Lake Casitas, encompassing the cities of Goleta, Santa Barbara (including Montecito), and Carpinteria.
- GLP is highly transmission-vulnerable and disaster-prone (fire, landslide, earthquake).
- **200 megawatts (MW) of solar and 400 megawatt-hours (MWh) of energy storage** will provide 100% protection to GLP against a complete transmission outage (“N-2 event”).
 - 200 MW of solar is equivalent to about 5 times the amount of solar currently deployed in the GLP and represents about 25% of the energy mix.
 - Multi-GWs of solar siting opportunity exists on commercial-scale built-environments like parking lots, parking structures, and rooftops; and 200 MW represents about 7% of the technical siting potential.
 - Other resources like energy efficiency, demand response, and offshore wind can significantly reduce solar+storage requirements.

Local Energy Storage enable Community Microgrids



Greenbark will create significant economic benefits to the local community

Economic benefits to the GLP from new solar + energy storage

20-year economic benefits to Goleta Load Pocket from new solar + energy storage



10 MW solar

- \$10.9M total economic stimulation
- \$8.6M added wages
- 92 construction job-years
- 33.6 operations & maintenance job-years
- \$2M site leasing income



20 MWh energy storage

- \$6.3M total economic stimulation
- \$5.5M added wages
- 64 construction job-years
- 17.6 operations & maintenance job-years



10 MW solar + 20 MWh energy storage

- \$17.3M total economic stimulation
- \$14M added wages
- 155 construction job-years
- 51 operations & maintenance job-years
- \$2M site leasing income

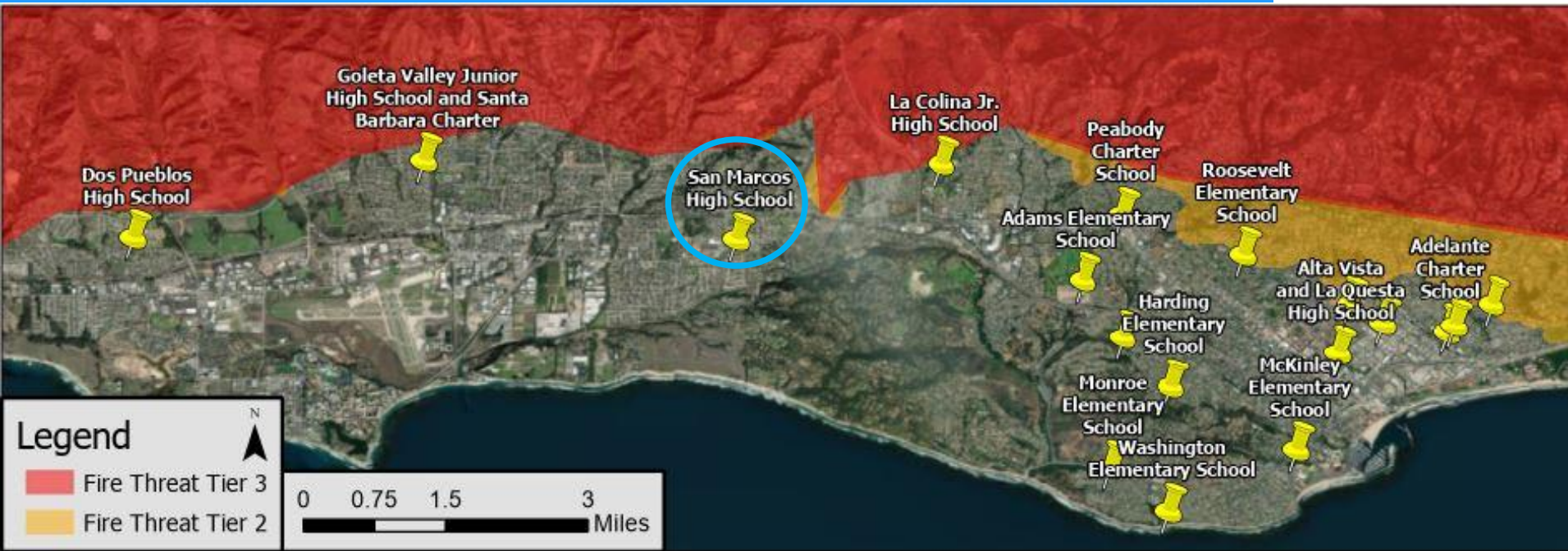
Fulfilling the Goleta Load Pocket Community Microgrid 100% resilience requirements of 200 MW of solar + 400 MWh of energy storage will yield \$346 million in economic stimulation

Greenbark (120 MWh energy storage)

- \$37.8M total economic stimulation
- \$33M added wages
- 384 construction job – years
- 105.6 operations & maintenance job – years

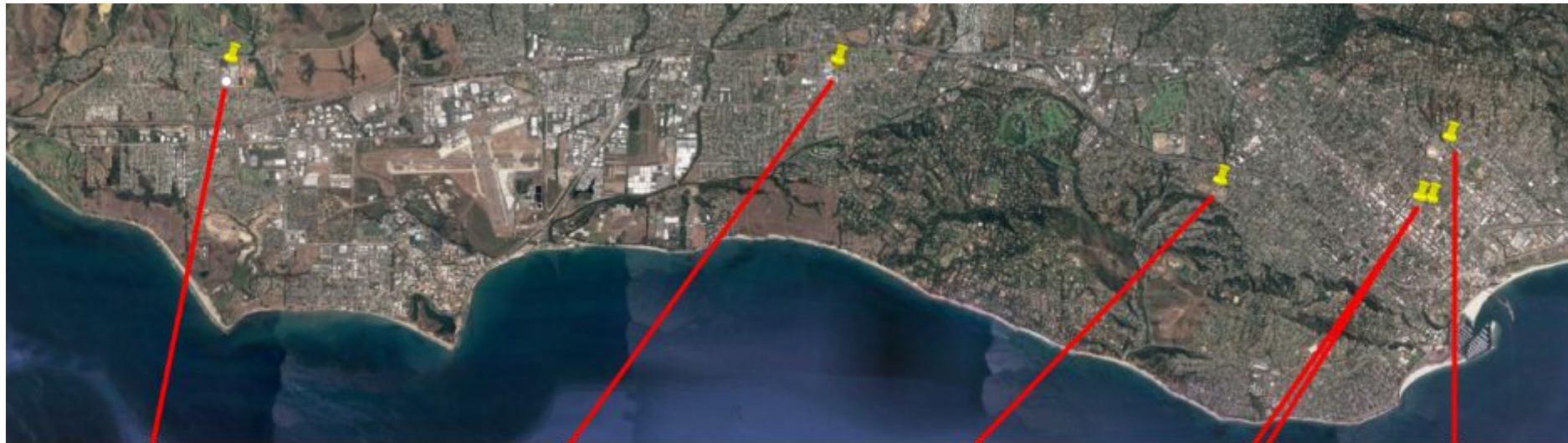
These results were calculated using the Clean Coalition's 20-year economic benefit study, which was developed using the National Renewable Energy Laboratory's (NREL) Jobs and Economic Development Impact (JEDI) models.

Clean Coalition's 20-year economic benefit study



- The entire Santa Barbara region is surrounded by extreme fire risk (earthquake & landslide risk too) and is extremely vulnerable to electricity grid outages.
- The SBUSD is a major school district that increasingly recognizes the value-of-resilience (VOR) and has embraced the Clean Coalition's vision to implement Solar Microgrids at a number of its key schools and other critical facilities.
- SMHS is in the middle of the extensive SBUSD service area.

Six SBUSD Solar Microgrid sites



Dos Pueblos High School



San Marcos High School



La Cumbre Junior High School

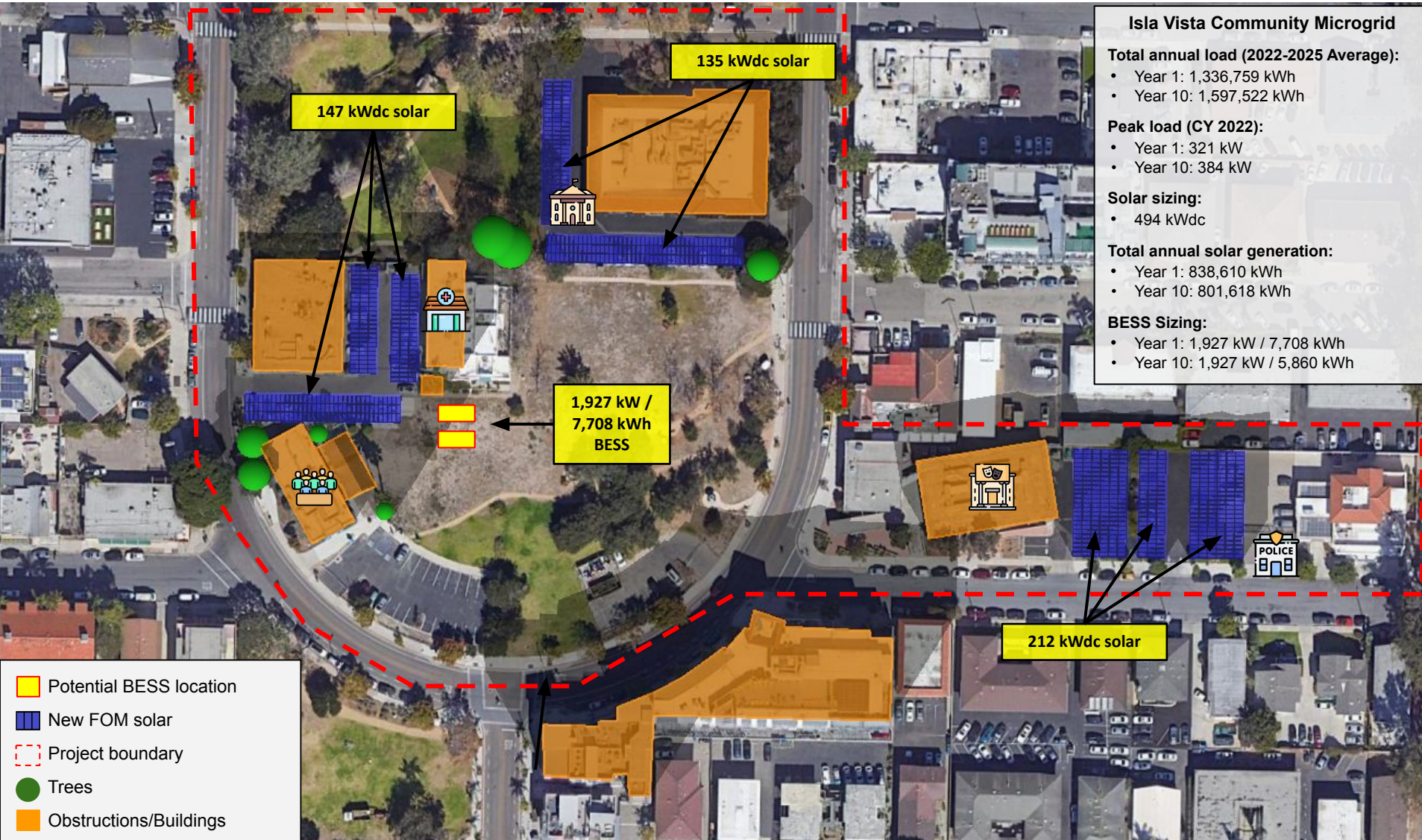


District Food Warehouse
& District Office



Santa Barbara High School

Isla Vista Community Microgrid

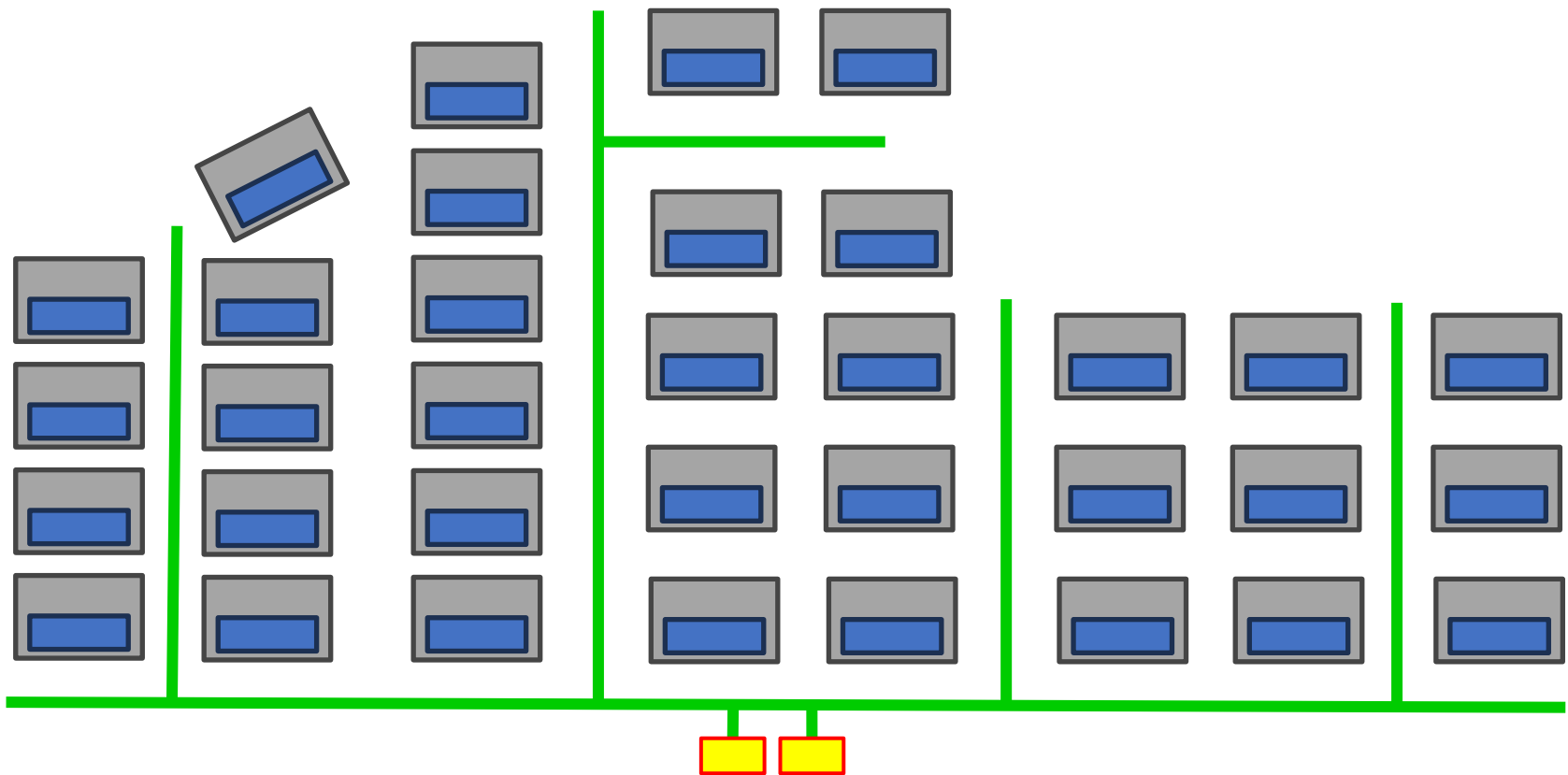


- All-electric, 8-story, commercial and permanently affordable housing community.
- 65 units of 100% affordable housing with ground floor commercial offices and retail spaces.
- Affordable home ownership via condominiums that provide homeownership benefits from original tenancy, with all being disadvantaged and low-income.
- Net Zero Energy (NZE) building with a solar canopy covering the entire roof area, including a large rooftop patio and roof-mounted mechanical equipment for HVAC etc.
- GridOptimal with the Solar Microgrid providing all energy during the 4-9pm grid-constrained period daily.
- Solar Microgrid resilience ensuring indefinite resilience for the critical loads during grid outages of any duration, with significant resilience to all other loads based on solar energy availability and battery state-of-charge. Meets the full performance requirements of the CEC-recommended VOR123 value-of-resilience (VOR) methodology.

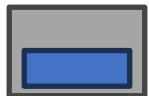




Sierra Blanca energy system layout



Legend



Average house with average Solar Microgrid:

- 19.25 kWdc solar
- 10 kWac / 26.4 kWh battery



20'x10' battery container
hosting 500 kW & 1 MWh



Private electricity grid