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Town seeks ways to function during extended power outages

By Vera Kochan

With the onset of an early fire season approaching, the town of Moraga is looking ahead in the event of any Pacific Gas & Electric Co. induced Public Safety Power Shutoffs. Having experienced them a number of times over recent years, council gave staff a thumbs up to hire Clean Coalition in January 2022, in order to create a Town Facility Energy Generation Study for the purpose of examining various cost and efficient use-based alternatives for the town's four properties: Town Hall Offices/Police Station; Corp Yard/Town Council Chambers/Emergency Operations; Hacienda de Las Flores Park; and Moraga Library.

Clean Coalition is a nonprofit organization based in Santa Barbara with offices in the Bay Area. They specialize in providing technical services related to accelerating the transition to renewable energy. On April 21, Clean Coalition Executive Director Craig Lewis and Director of Development Greg Thomson joined Moraga's Public Works Director/Town Engineer Shawn Knapp and Senior Civil Engineer Bret Swain for a public webinar to present the study's findings and suggestions.

The first task for Clean Coalition was to "obtain and analyze energy use at each of the four town properties; study and model various options to provide resilience at each site; and consider renewable energy and fossil fuel resources."

Clean Coalition proceeded to "provide a detailed report analyzing the power needs for each property and proposing various alternatives for independent and emergency backup power generation for each site."

Finally, recommendations were made for "the best options considering the town's program and project goals for climate change, energy provider mix of resources, sustainability, financing, affordability."

Several options were determined to be unfeasible for various reasons: Solar only has no resilience due to solar being automatically shut off when the grid goes out; Battery only is too large and costly to provide resilience without onsite energy generation; Run of river hydro has insufficient local hydro resources; Geothermal has insufficient local resources and is uneconomical; Biofuel is nonexistent locally and uneconomical to create; Pipeline fueled generators can be disrupted during earthquakes and extreme weather; and Propane requires an extra, separate tank versus diesel.

Clean Coalition's key findings determined that the energy option of solar plus storage (battery), and diesel-only were not considered preferable due to cost and minimal savings for Moraga. Using solar plus storage would cost over \$8 million. Diesel-only would cost over \$800,000 with both options providing no savings. On the other hand, either solar plus diesel or solar plus storage plus diesel would save the town over \$1.8 million over a 25-year period using the Power Purchase Agreement (pay a fee on the energy that is generated).

Clean Coalition made an additional point, stating, "Due to the addition of storage, the solar plus storage plus diesel option provides ongoing, indefinite support for a percentage of loads during outages, while also providing additional Value-of-Resilience of over \$250,000, thus bringing the total savings to Moraga for this scenario at over \$2.1 million."

The findings and suggestions of the study are tentatively scheduled for the May 11 town council meeting.

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