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Adding Energy Storage to Solar Creates Major Economic Benefits for Affordable Multifamily Rental Housing in California

New economic analysis makes the case for including battery storage in California's billion-dollar investment plan for expanding solar access to low-income residents

San Diego, CA – A new report demonstrates how battery storage combined with solar photovoltaic (PV) systems would lead to significant electric bill savings for both property owners and residents of multifamily affordable rental housing in California.

According to the authors of *Closing the California Clean Energy Divide*, the findings are particularly important given the recently enacted Assembly Bill 693, which established the state's Multifamily Affordable Housing Solar Roofs (Solar Roofs) Program and provides up to \$1 billion in cap-and-trade funding over 10 years to create incentives for installing solar PV systems starting in 2017.

Authored by the [California Housing Partnership](#), [Center for Sustainable Energy](#), and [Clean Energy Group](#), the report explores how battery storage technologies installed with solar PV would enable system owners to better control the energy they produce and when they consume it. The first-of-its-kind study offers several compelling conclusions.

- Under current utility rate tariffs, the combination of solar and battery storage technologies could virtually eliminate electric bills for some owners of affordable rental housing. Unlike stand-alone solar, which reduces energy consumption expenses but does little to offset expensive demand-related charges, a properly sized solar and battery storage system can eliminate nearly all electricity expenses, resulting in an annual electric utility bill of less than a few hundred dollars.
- The addition of storage technologies has the potential to nearly double stand-alone solar electricity bill savings at about a third of the cost of solar. For example, the addition of an \$112,100 battery storage system to a \$385,000 solar installation increased savings from \$15,000 per year to \$27,900, an 85 percent increase in savings for only a 29 percent increase in cost.

- The addition of battery storage to solar improves the economics of each property analyzed across all utility territories, reducing project payback by over three years in some cases.

“Our analysis, which is based on actual data from existing buildings, shows that adding battery storage to a solar PV system installed on an affordable housing property in Southern California could increase the annual savings on a property owner’s electricity bill to 99 percent, which is nearly double the savings of what a solar-alone system can provide” said Seth Mullendore, a program manager at Clean Energy Group.

The report finds that affordable multifamily-housing property owners in two utility territories – Southern California Edison and San Diego Gas & Electric – have the potential to increase savings by nearly 100 percent over solar-alone by adding storage, while increasing upfront investment by less than 30 percent, essentially eliminating their annual electric bills.

“Many affordable housing owners are interested in exploring energy storage, both for the economic benefits and improved resiliency of a property,” said Wayne Waite, policy director at California Housing Partnership. “This report fills the information gap for owners so they can better understand these emerging technologies.”

With modeling support from the energy software company Geli, the authors analyzed detailed electricity usage data from nine affordable rental housing properties across California’s three investor-owned utilities, which account for nearly 80 percent of utility customers in the state. The analysis shows that the addition of battery storage improved the economics of stand-alone solar for all properties examined in the study.

The Solar Roofs program has the potential to reach approximately a third of existing affordable multifamily properties in the state. Along with delivering bill savings to affordable housing property owners and residents, these targeted incentives could help California reach its ambitious clean energy goals and lead to healthier, more resilient affordable housing communities.

“California has invested heavily to ensure qualified low-income properties have had equal access to our growing solar market,” said Sachu Constantine, director of policy at Center for Sustainable Energy. “But recent changes to the critical underlying rates and tariffs may compromise the value proposition of solar for affordable housing residents and owners unless we find a way to include the combination of energy storage and solar in the Solar Roofs program.”

The report, *Closing the California Clean Energy Divide*, is available at www.cleanegroup.org/ceg-resources/resource/closing-the-california-clean-energy-divide/.

The authors of the report will present their findings in a webinar on Wednesday, June 15 at 2pm ET/ 11am PT. There will be an opportunity for the authors to address questions from the audience. This webinar is free, but registration is required. For more information and to register, visit www.cleanegroup.org/webinar/reducing-electric-bills-california-multifamily-affordable-housing-solar-storage.

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About Clean Energy Group

[Clean Energy Group](#) is a leading national, nonprofit advocacy organization working on innovative technology, finance, and policy programs in the areas of clean energy and climate change. Clean Energy Group, in partnership with Meridian Institute, founded the [Resilient Power Project](#) to help states and municipalities with program and policy information, analysis, financial tools, technical assistance, and best practices to speed the deployment of clean, resilient power systems in their communities. For more information, visit www.cleanegroup.org and www.resilient-power.org.

About the California Housing Partnership

The [California Housing Partnership Corporation](#) (CHPC) is a state-created nonprofit organization that helps to preserve and expand the supply of homes affordable to low-income households in California. CHPC does this by providing financial consulting services, technical assistance, trainings, policy research, and advocacy leadership to nonprofit and government housing organizations throughout the state. CHPC's efforts have leveraged more than \$8 billion in private and public financing to preserve and create more than 30,000 affordable homes for low-income households. In recognition of the key role that energy and water costs play in the long-term financial feasibility of operating affordable housing developments, CHPC runs the Green Energy Rental Home Energy Efficiency Network (GREEN), a coalition of more than 80 affordable housing, environmental, and resource efficiency organizations. For more information, visit www.chpc.net.

About the Center for Sustainable Energy®

Founded in 1996, the [Center for Sustainable Energy](#) (CSE) is a mission-driven nonprofit, providing clean energy program design and management, and technical advisory services. Governments, regulators, utilities, businesses, property owners and others look to CSE as an objective implementation partner to develop customized solutions that help lower energy costs and increase consumer choice and accessibility to clean energy technologies. CSE's suite of services includes expertise in transportation, energy efficiency and building performance, research and analysis, emerging technologies, policy support, workforce development, and marketing, education and outreach. Headquartered in San Diego, CSE works nationwide with support of offices in Los Angeles and Boston and Oakland, Calif. Learn more at energycenter.org

Note to editors: Photos and interviews are available upon request.