



Does multifamily housing save energy?

Multifamily housing, which accounts for 27 million households in the U.S., consumes energy inefficiently. Significant energy savings are possible in this sector, which houses more than 60% of the rental market and 36% of all U.S. households.

Are multifamily properties Energy Star certified?

Individual top-performing multifamily properties may be eligible to earn ENERGY STAR certification, which is recognized by nearly 90% of American households. Studies have also shown that ENERGY STAR certified buildings have lower operating costs, contribute fewer greenhouse gas emissions to the environment, and show an increased asset value.

How can reducing energy & water costs help a multifamily property?

Whether you pay these utility costs directly or not, reducing energy, water, and waste across your multifamily properties can lower your operating costs, increase your properties' asset value, and make your properties more marketable through lower costs of living and increased comfort for residents.

Are residential batteries a viable technology for housing developers?

Residential batteries are emerging as affordable and accessible technology. Affordable housing developers can benefit from such stationary batteries because they help generate savings by reducing utility demand charges. Batteries have also proven to generate revenue for developers through providing grid services.

How can EPA help you build a new multifamily high-rise?

Bring in an expert to conduct a building audit to identify opportunities, or assemble your team and conduct a Treasure Hunt using the Treasure Map for Multifamily Properties checklist as a starting point. If you're building a new multifamily high-rise, EPA has resources to help you ensure that it is designed and built to earn the ENERGY STAR.

How many affordable housing units do we need?

Listen to audio narrations. Read offline. Join the Partner Program and earn for your writing. The United States needs approximately 7 to 12 million affordable housing units to provide homes to extremely

# ENERGY STORAGE AND MULTIFAMILY HOUSING



cost-burdened renter households and to those experiencing homelessness.



Join the Connecticut Green Bank on June 6 for a webinar presentation on Solar MAP . Hartford, CT (May 20, 2024) a?? To help owners and residents of affordable multifamily housing in Connecticut have easier access to the benefits of solar energy and battery storage, the Connecticut Green Bank is proud to announce that their successful Solar Marketplace a?|

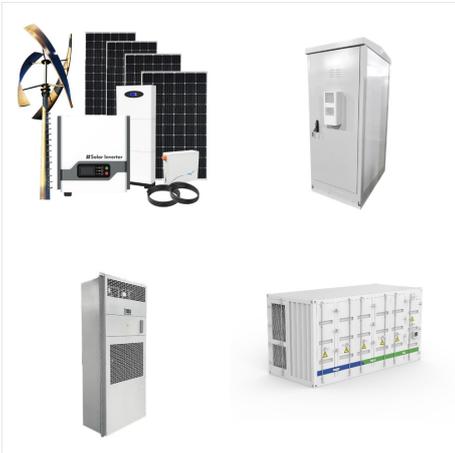


multifamily energy savings that each residential end use could provide. As of 2015, space and water heating systems had the potential to produce nearly two-thirds of total multifamily residential energy savings. 11. Each of these end uses accounted for just over 30% of potential multifamily energy savings, with slightly more potential

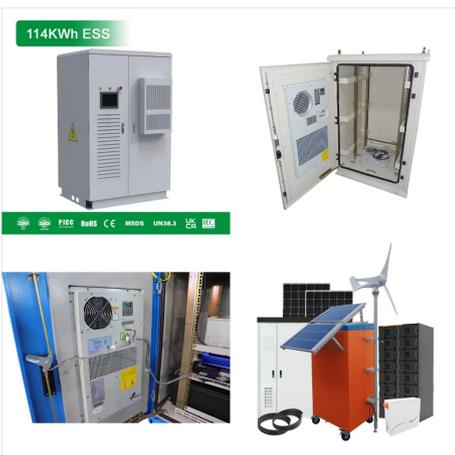


The California Solar on Multifamily Affordable Housing program, as featured in the CELICA Issue Brief: Reducing Energy Burden for Low-income Residents in Multifamily Housing with Solar Energy provides an example of how a state can structure a program to incentivize solar developers and low-income multifamily building owners to install solar PV

# ENERGY STORAGE AND MULTIFAMILY HOUSING



Many multifamily housing properties are limited by the amount of electricity they can use from the electric grid. EVESCO's unique combination of energy storage and fast charging technology can increase power output enabling the rapid deployment of EV charging stations without the need for expensive electric grid upgrades. We combine proven



Benefits of Solar Energy for Multifamily Housing. A growing number of multifamily housing projects in Massachusetts are installing solar panels, and it's easy to see why. Installing solar panels and battery storage at your rental properties will give your tenants some protection against power outages. Solar energy systems that include



Multifamily Affordable Housing (MFAH) Collaborative Overview In America, low-income households (earning 80% or less of the area median (e.g. energy efficiency and storage) with solar to enhance project value and resident benefits. Interested in learning more

# ENERGY STORAGE AND MULTIFAMILY HOUSING



This guide is for the multifamily affordable housing market to access funds from the Inflation Reduction Act and Bipartisan Infrastructure Law. It includes a calculator to estimate benefits and tax credits. (IRA) relating to solar energy and energy storage. Publishing Organization: Solar Energy Industries Association . What Nonprofits Need



Multifamily Financing; Energy Storage Solutions; Investment Solutions. Green Liberty Notes & Bonds; EV Charging Carbon Credits; Green Bank Capital Solutions; we make it easier for affordable multifamily housing providers to access renewable energy and achieve cost savings by providing support that simplifies every step of the process.



Multifamily Financing; Energy Storage Solutions; Investment Solutions. Green Liberty Notes & Bonds; EV Charging Carbon Credits; Green Bank Capital Solutions; from businesses and nonprofits to multifamily housing and local government. Modern, sustainable buildings help owners save money, reduce their environmental impact, and create better

# ENERGY STORAGE AND MULTIFAMILY HOUSING



Installing solar on multifamily affordable housing a?? where a quarter of all U.S. low-income households live a?? is one equity-centered approach to clean energy. Solar can save property owners and tenants on energy costs. And the community as a whole benefits from reduced fossil fuel use and greenhouse gas emissions. Yet, the multifamily affordable housing a?|



Low-income families in apartment buildings are not in a position to install solar energy systems, and yet often bear the greatest burden from high energy costs and local air pollution. The Solar on Multifamily Affordable Housing Program (SOMAH) provides financial incentives that cover up to 85% of the costs of installing photovoltaic energy systems, delivering clean power and energy a?|



Green Funding and Resources for New York Affordable multifamily Housing: Improving the Climate Resilience of NY Multifamily Housing 6 Enterprise Community Partners Description: Provides small multifamily properties access to funds to support electrification measures with a focus on replacing older and less energy-efficient systems with all-electric, high-performance a?|

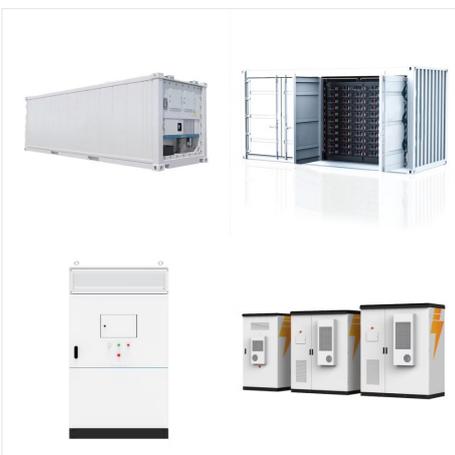
# ENERGY STORAGE AND MULTIFAMILY HOUSING



Pairing EV chargers with on-site battery storage systems is the game-changer for multifamily housing complexes. Energy generated during the day, whether from solar panels or the grid, can be



Watch the National Renewable Energy Laboratory, Clean Energy Group, Boulder Housing Partners, and Sunrun discuss solar and storage projects in the multifamily sector, available solar and storage assessment tools, and considerations for those providers evaluating these systems. Clean Energy Group's Marriele Mango and Abbe Ramanan presented.



Business Models of Multi-family Housing Buildings Valeria Casalicchio, Giampaolo Manzolini, Matteo Giacomo Prina, (2016) to study the impact of storage systems in the case of high renewable energy penetration. The storage model of this work is described as follows:  $i(t)$  is the mismatch in PV production, energy-sharing and energy demand at

# ENERGY STORAGE AND MULTIFAMILY HOUSING



The best energy storage options for multifamily housing are 1. Lithium-ion batteries, 2. Flow batteries, 3. Lead-acid batteries, 4. Thermal energy storage. Each option has distinct a?)



The project seeks to demonstrate the financeable pathways for existing affordable multifamily housing to become grid-interactive efficient buildings. This project will enroll up to 20 low-moderate apartment communities to strategically deploy and implement efficiency, demand flexibility, renewable generation, and energy storage.



Energy Storage Solutions and the Technical Assistance Fund for Affordable Multifamily Properties. Recording; Slides on Energy Storage Solutions; Ed Kranich, Connecticut Green Bank & Marriele Mango, Clean Energy Group Achieving High-Quality Deep Energy Retrofits in Multifamily Housing: Darien Crimmin, Winn Development: April 21, 2017:

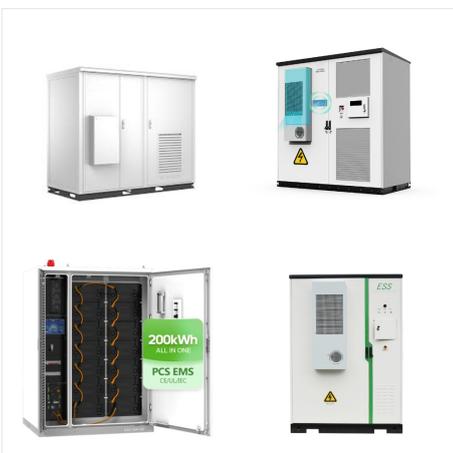
# ENERGY STORAGE AND MULTIFAMILY HOUSING



At BPi, we specialize in providing solar energy solutions, covered solar structures, EV chargers, battery energy storage, and backup generators for multifamily and affordable housing properties. Our solutions help to reduce energy costs, a?]



By tapping into solar energy, multifamily housing communities can significantly reduce their dependence on grid electricity, leading to lower energy bills. The inclusion of solar panels with integrated battery storage systems elevates this resilience to another level. In moments of power outages, the stored solar energy becomes a vital



Thirty-six percent of U.S. households now rent, and more than 60% of the rental market is in multifamily buildings, accounting for 27 million households. Uptake of energy efficiency measures in multifamily housing has lagged other types of housing, leaving significant unrealized energy savings on the table.

# ENERGY STORAGE AND MULTIFAMILY HOUSING



Learn about ASHRAE's latest Advanced Energy Design Guide for Multifamily Buildings, developed with support from DOE, which, step-by-step, assists organizations and building professionals in achieving zero energy buildings.

**TAX FREE**

**ENERGY STORAGE SYSTEM**

**Product Model**  
 HU-ESS-215kW/115kWh/215kVA/115kWh  
 HU-ESS-115kW/55kWh/115kVA/55kWh

**Dimensions**  
 1600\*1200\*2200mm  
 1600\*1200\*2000mm

**Rated Battery Capacity**  
 215kWh/115kWh

**Battery Cooling Method**  
 Air Cooled/Liquid Cooled

**PRODUCT INFORMATION**

- BATTERY CAPACITY 115kWh
- DC VOLTAGE RANGE 600V-1020V
- DEGREE OF PROTECTION IP54
- OPERATING TEMPERATURE RANGE 10-35°C

**ESS Cabinet**

**Solar Panel**

**PV Inverter Box**

**Lithium Battery**

**Hybrid Inverter**

N2 - Community solar offers multiple benefits to providers and residents of multifamily affordable housing (MFAH), including access to affordable renewable energy for low- and moderate-income households, tax credits and other financial benefits for property owners, and increased community resilience when paired with energy storage.

**Energy storage(kWh)**  
**102.4kWh**

**Normal voltage(Vdc)**  
**512V**

Outdoor All-in-one ESS cabinet

The first case considered was a multi-family housing building made of five housing units, where a dual-earner couple, a one-earner couple, a couple over 65 years old, a family of a dual-earner couple and a child, and a dual-earner couple with home help live. Fleischhacker A, Auer H, Lettner G, Botterud A (2018) Sharing solar PV and energy

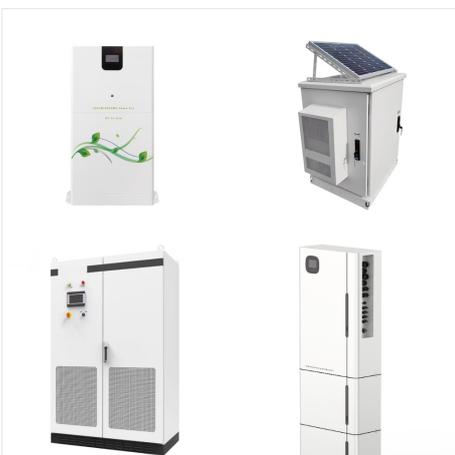
# ENERGY STORAGE AND MULTIFAMILY HOUSING



This guide offers simple options for states to add Multifamily Affordable Housing (MFAH) solar and/or solar+storage to their application to the \$7 billion Greenhouse Gas Reduction Fund (GGRF) Solar for All competition (Solar for All) and take advantage of the new tax credit features of the Inflation reduction Act.



Multifamily properties rely on energy to provide residents with a safe, comfortable place to call home. There are multiple paths to optimizing your building's performance, no matter your budget. Integrating energy-saving solutions into your multifamily property can lead to long-term savings and year-round comfort for residents. Join our Email

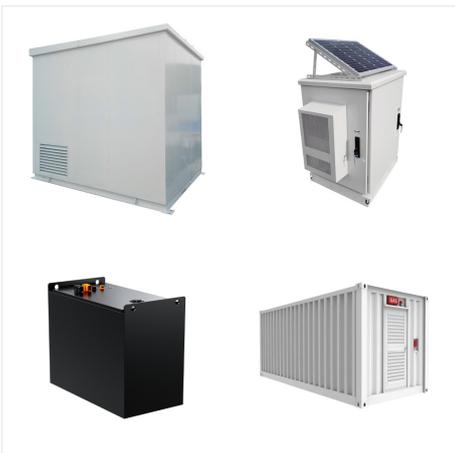


An effort is underway to develop new building codes focused on ensuring that multifamily affordable housing residents have access to reliable electricity during grid outages. The U.S. Department of Energy Building Energy Technology Office announced the selection of the Climate Resilient Energy Code project for \$1 million in funding support.

# ENERGY STORAGE AND MULTIFAMILY HOUSING



on-site renewable energy, electric vehicle infrastructure installation, and energy storage for multifamily housing in California. Key factors in program development will be cost-effectiveness, utility bill savings, greenhouse gas reductions, effectiveness in reaching energy storage, and energy and water efficiency strategies, see Figure ES



Battery storage introduces the concept of load-shifting, allowing multifamily housing complexes to optimize their energy consumption patterns. By storing excess energy during periods of low demand, such as during the day when solar panels are at their peak efficiency, and utilizing it during peak hours, property managers can significantly