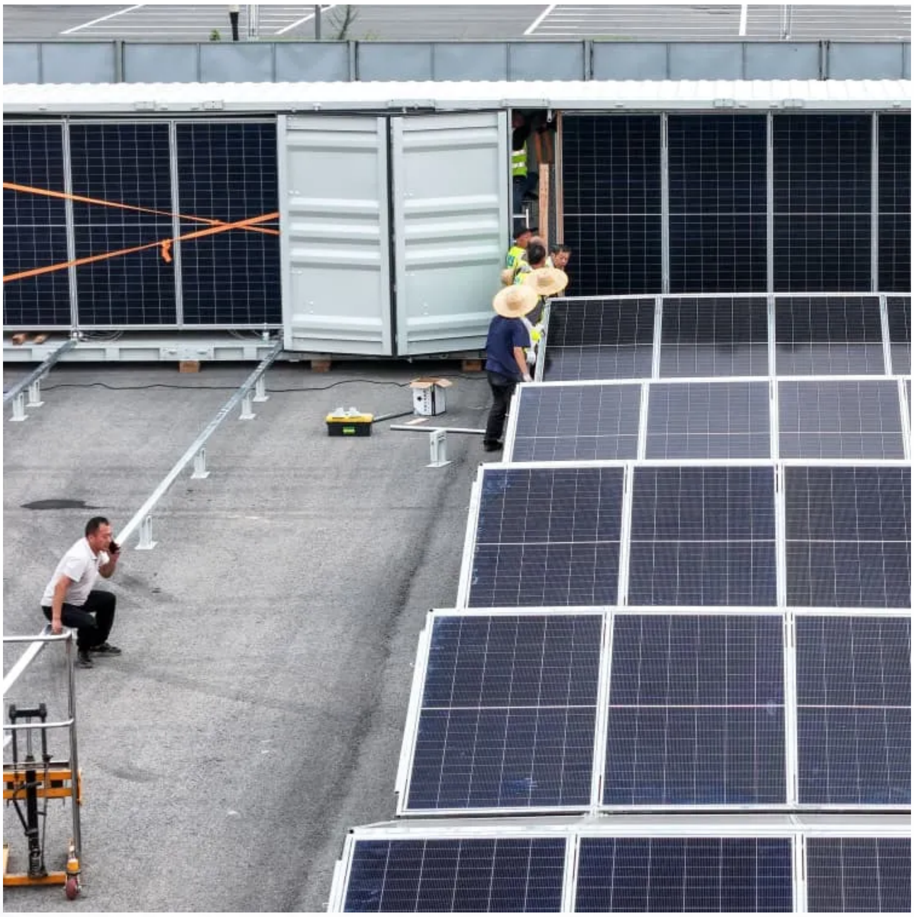
A-Core Container

Solar panels installed on rooftop BESS



Overview

This study presents the outcome of a utility-run rooftop photovoltaic (PV) power plant with battery energy storage systems (BESS) as a viable solution for enhanced energy storage and grid resiliency at t.

What is rooftop solar with Bess?

Rooftop solar with BESS is a practical, scalable solution to modern energy challenges. It empowers commercial and industrial users with control, flexibility, and cost savings, while supporting a cleaner, more resilient grid. As energy systems evolve, solar + storage is poised to be a cornerstone of the distributed, decarbonized future.

How much would a rooftop solar system cost without Bess?

Without BESS, the same household could install 10 kW of rooftop solar, which would cost $28,700 and save $1,567 per year. PGE and the state of Oregon both offer incentives for rooftop solar and battery energy storage. With the utility, state, and federal incentives, the combined solar and BESS system could be paid back within 11 years.

Are rooftop solar panels or battery energy storage systems worth the cost?

Pacific Northwest National Laboratory (PNNL) researchers are here to help. Homeowners must navigate a quagmire of complicated policies to determine whether the energy savings from rooftop solar panels or battery energy storage systems (BESS) are worth the high upfront cost.

Are rooftop solar and battery energy storage a barrier to adoption?

Even with the benefits of rooftop solar and battery energy storage, the upfront cost of these systems is still a barrier to adoption. In some cases, especially for BESS, the time it takes for a homeowner to recoup the cost of the system with energy savings is longer than the lifetime of the technology itself.

Why should you choose a rooftop PV & Bess system?

4. The rooftop PV + BESS can provide a diverse range of services and quickly

respond to grid requirements. Technological advancements have also improved the scalability of energy storage systems. Thus, the BESS can be an essential grid element, contributing to system reliability and flexibility.

What is the cost-benefit analysis for Bess & rooftop PV combined?

The cost-benefit analysis has been carried out based on the following primary benefits to C&I consumers considering BESS and rooftop PV combined and BESS without a PV system. The PV and BESS will operate behind the meter in tandem with the grid power supply system and DG power supply when there is a grid outage.

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