

ENERGY STORAGE MANAGEMENT SYSTEM



What is?

This software optimizes the use of renewable energy from solar panels, balancing electricity and heat generation with building demands and storage options. It manages electrical storage, thermal tanks, and heat pumps, adapting to factors like energy production, demand, and storage status for efficient energy use.

Challenge

Maximizing renewable energy in buildings is complex, with fluctuating production, diverse storage needs, and varying demands for electricity and heat.

Solution

A comprehensive array of monitoring, actuators, and control devices is established to oversee the entire system. Real-time data enables swift responses to fluctuations in demand or production. The integration of both electric and thermal storage systems mitigates adverse system dynamics. Consequently, the Energy Storage Management System seamlessly controls energy flows, integrating solar power and thermal systems to meet real-time needs while enhancing storage efficiency.

Key Benefits



Energy optimization

Optimizes energy use from solar panels



Balances E&H

Balances electricity and heat across storage and demand



Smart Systems

Fully integrates with smart building systems

Target Users

- ✓ Building energy managers
- ✓ Renewable energy installers
- ✓ Smart home developers

Next Steps

- ✓ The Energy Storage Management Systems is currently being validated in ENSNARE real demos. Furthermore, it will be enhanced in future R&D projects to incorporate advanced functionalities that enable predictive control and adaptation to variable factors such as dynamic tariffs and forecast production and demand.



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