

Powerhouse

JCI & The Powerhouse Alliance

Project design

The bar has been raised for energy efficiency and building management. The Powerhouse Alliance, a Norwegian collaboration for innovation in energy, wanted to build a leading net zero smart building – the Powerhouse is now an exemplar of how a building can operate under its own power supply. The systems installed make the building relevant for the community long into the future, supplying electric vehicles with renewable power and generating power for the local neighborhood.

Results of the integrated approach

Johnson Controls International (JCI) helped to design a holistic smart building, including low energy hardware (such as LED lighting), energy efficient heat pumps, EV charging infrastructure and building management solutions. The Powerhouse harnesses a complete energy system that harvests twice the energy of the building's annual consumption and draws heating and cooling energy from the ocean. The system installed by JCI improves the efficiency over time to continuously drive value and optimize operations.

Key facts

- BREEAM Outstanding certification, the highest possible ranking for the built environment.
- Ocean source heat pumps (heating and cooling – neighborhood sharing)
- Building management systems
- Smart grid
- Micro & shared mobility
- EV charging infrastructure
- Produces 485,000 kWh annually, enough excess electricity to charge 200 electric vehicles
- 2867 m² of solar panels

Project archetype

Campus/Office decarbonization



Image credit Johnson Controls

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