

Turning Surplus Renewable Energy into Affordable Heating



EnergyCloud Ireland Pilot



The Challenge

Across Europe, renewable electricity generation, particularly wind energy, is increasing rapidly. However, significant volumes of renewable electricity are often curtailed or wasted because the grid cannot absorb all available power. At the same time, many households continue to experience fuel poverty, struggling to heat their homes during winter.

EnergyCloud Ireland partnered with housing provider Clúid Housing to explore whether surplus renewable electricity could instead be used to heat homes.

The Approach

Elnur installed ECOHHR PLUS High Heat Retention storage heaters within homes participating in the EnergyCloud programme.

The system allows renewable electricity to be stored as heat during periods of surplus energy generation. This stored heat is then released gradually throughout the day, maintaining comfortable temperatures while reducing heating costs.

The pilot demonstrated how smart storage heating can help balance renewable energy supply while supporting households experiencing fuel poverty.

ECOHHR PLUS Performance

Renewable Energy Utilisation

- surplus renewable electricity converted into usable home heating

System Efficiency

- up to 83% more efficient than traditional storage heaters
- Up to 56% more efficient than standard High Heat Retention heating systems when used with renewables

Resident Benefits

- lower heating costs
- improved comfort during winter months
- greater stability in energy usage.

These results highlight how intelligent heating systems can play a role in reducing renewable energy waste while improving energy affordability.

Why It Matters for Housing Providers

For housing associations and local authorities, the EnergyCloud pilot demonstrates how modern heating technology can:



Support fuel poverty reduction



Reduce grid curtailment



Integrate renewable electricity



Improve tenant comfort.

As renewable generation continues to expand, smart storage heating offers a practical way to turn surplus electricity into warm homes.



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