

SEAI National Energy Research, Development & Demonstration Funding Programme

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RevRenew: Smart Home Flexibility for Renewable Energy Expansion

Project Overview/ Background

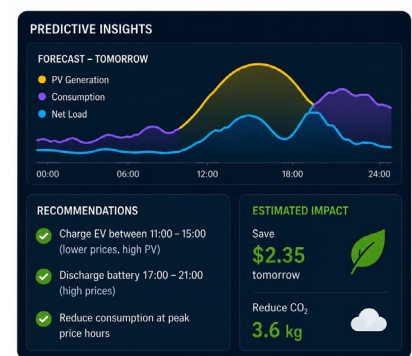
- RevRenew explores how Irish homes with solar PV, batteries and EVs can operate as flexible renewable-energy assets.
- The project links 50 citizen-science households with a Westport living-lab baseline to test home energy management in real conditions.

Problem statement

- Renewable expansion needs flexible demand as well as new generation.
- Unmanaged PV exports, EV charging and storage can create peaks and missed self-consumption opportunities.
- Policy needs evidence on what turns home devices into reliable grid flexibility.

Research Methodologies

Home energy data, dashboards, and predictive insights.



Research Outcomes

Integrated control, trusted participation, and storage technologies like V2H are key to enabling flexible and resilient energy systems.



Policy Recommendations

Smart-home flexibility can be accelerated through dynamic tariffs, interoperable retrofit and EV supports, and targeted storage and V2H incentives.