



Case Study

Vale of Glamorgan Council

Customer | Severn Avenue,
Housing Association | Barry, UK





Impact in Numbers

£310-£380 Yearly bill savings per flat

11 Tonnes of CO₂ saved

8 Tailored SAP point increase

Additional Outcomes

- Met PAS fireproof regulations by having communal batteries.
- EPC disparity solved by increasing SAP points.
- Improved carbon savings and reduced running costs of the building.
- Enhanced asset ratings, and future-proofed the property against rising energy prices.
- Regular automated reports
- System alerts for faults, overuse, and fuel poverty
- Minimal resident engagement required
- Achieved net-zero target

Project details

35
Flats

5 (One per block)
SolShare units

48
Solar capacity (kWp)

1.4
kWp per flat

Solax Battery
Paired with complimentary technologies

£2,400
Turnkey price per flat

2024
Completed



Wales, UK



“The innovative SOLAX three-phase hybrid inverter and SolShare solution have not only allowed us to meet the stringent PAS 63100:2024 regulations but also set a new benchmark for community battery storage in the UK.”

Vale of Glamorgan Council



The Client

Vale of Glamorgan Council, a local government body in Wales, initiated a rejuvenation project for five residential blocks as part of their commitment to sustainability and energy efficiency. The project included comprehensive retrofits such as External and Internal Wall Insulation (EWI and IWI) and energy-saving measures. Additionally, the council aimed to integrate solar energy and innovative battery storage solutions to comply with new regulatory standards.

What was the problem?

The primary challenge for Vale of Glamorgan Council was to integrate a battery storage solution into the solar energy system for these residential blocks while ensuring compliance with the newly introduced PAS 63100:2024 regulations. These regulations are designed to minimise the risk of batteries in dwellings becoming a fire hazard and to mitigate the impact should a battery fire occur. The council needed a solution that not only distributed solar energy effectively to the individual flats but also incorporated a safe and efficient battery storage system. This was especially challenging given the need for a community-based battery storage setup that could serve multiple flats from a single solar energy system.

What did we do?

A pioneering solution using the SOLAX three-phase hybrid inverter with unbalanced phase distribution, combined with a unique multi-stackable battery system was implemented. The solar energy generated from rooftop panels was allocated to each flat using Solshare, allowing for specific kWp allocation per unit. In addition, the new battery setup provided additional storage capacity, ensuring that each flat could draw power as needed. This was the UK's first community battery storage system of its kind, optimising energy efficiency by directing power to the specific phase with the highest demand.

Outcomes and Insights

The SOLAX three-phase hybrid inverter with unbalanced phase distribution and SolShare solution achieved a UK first in community battery storage for residential blocks, complying with PAS 63100:2024 regulations. By linking 35 flats to rooftop solar with this setup, the project significantly improved energy efficiency, reduced wastage, and optimised solar energy use. This innovation set a new standard for community battery systems and demonstrated their feasibility for future projects.

Benefits to Getting Shared Solar



5-15 Points
increased SAP
and EPC rating

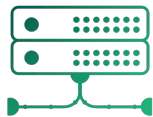


up to 60%
lower energy
bills



CO₂
reduced carbon
footprint

How it Works



Creates a direct connection of solar PV to multiple flats, behind-the-meter.



Allows you to specify the exact kWp each flat receives based on their SAP and EPC requirements.



Sends solar power to each resident when they need it, maximising their bill savings.



Tailorable kWp to each flat

See how SolShare gets the most from your solar PV system

By allocating the specific kWp associated to each flat, you can add the exact SAP points required to achieve your EPC goals.

Benefits of specific kWp allocation:

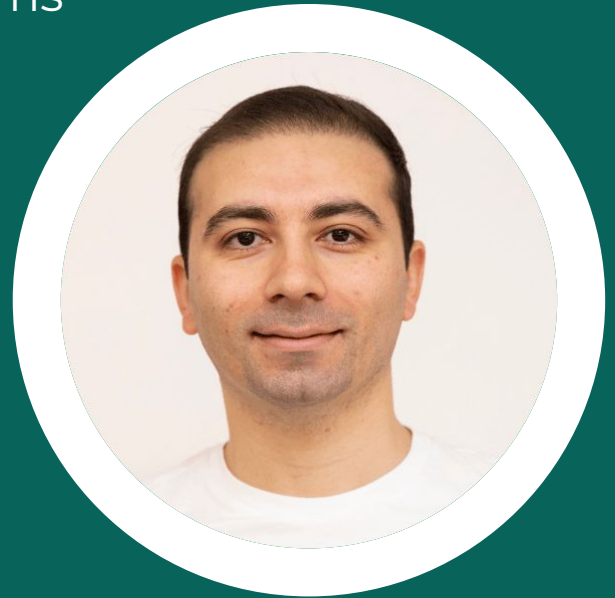
- Reduce costs and require less roof space by needing less panels.
- It's a simple and highly effective tool to solve SAP and EPC disparity across the building.

This table shows how modular house builder TopHat have specified the exact kWp to each flat to bring them all from a varying EPC C to a level EPC B.

Flat Type	Without SolShare		With SolShare			
	SAP Rating	EPC Band	kWp Allocation	SAP Score Increase	New SAP Rating	New EPC Band
2B4P Top floor	72	C	1.5	9	81	B
2B4P Mid floor	77	C	1	5	82	B
2B4P Ground floor	72	C	1.6	9	81	B
1B2P Top floor	76	C	1	6	82	B
1B2P Mid floor	80	C	0.5	2	82	B
1B2P Ground floor	75	C	1	7	82	B

Get Started

Book an appointment with our experts today - they will help you navigate available funding streams and accelerate your journey to net-zero!



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