

# Powering the Penderi community with the UK's largest Energy as a Service model.



**Casestudy: October 2024**  
Working together to deliver warmer, healthier and more affordable homes whilst also helping our planet!



**Affordable housing specialist Pobl is a not-for-profit organisation dedicated to making a difference in people's lives and the environment. Wales' largest Social Housing provider, with a portfolio of over **23,000 homes**, Pobl is committed to achieving **Net Zero by 2030** and transforming its ageing Social Housing stock into a community of sustainable homes.**

**As part of its Decarbonisation Strategy, Pobl has committed to act as 'Carbon Cutters' over the next decade, ultimately retrofitting homes and reducing energy bills for its residents.**

## The Challenge

In 2019, Pobl approached us to help them develop and deliver technical solutions for a 644-homes regeneration project in Blaen-y-Maes, Swansea, in a community known as Penderi.



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Running our homes accounts for 40% of all carbon emissions in the UK, which we need to change; to run greener homes, reduce our carbon footprints and live in a way that ensures residents can heat their homes.

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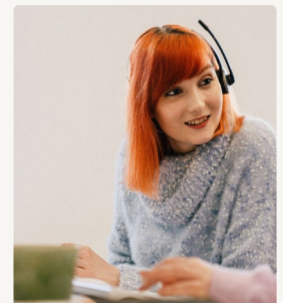
**Solitare**

Pobl, Director of Regeneration

To help fund the works, they also needed our help in securing funding from the European Regional Development Fund (ERDF) via the Welsh European Funding Office (WEFO).

As well as creating a solution that would allow Pobl to reduce their carbon footprint by installing renewable energy into communities, Pobl also wanted a model that would help reduce Resident energy bills, ensuring fairness across the community.

Solitare added “We know there is a climate emergency, and local people are concerned about the future, rising house bills, and how to get ready for the changes that are needed. This project look to develop a solution that can work for everyone.”



## The Solution

# We specified both Solar PV and battery storage as part of the measures to help reduce Pobl's carbon footprint and reduce energy bills for its Residents.

However, the measures would not help all Residents, as our Co-founder and CEO James, said: "Solar is unfair by its nature. Not all homes point at the sun and some people can't put panels on their roof at all."

By bringing together our experts across energy, renewables, and retrofit, we came up with an innovative Community Solar Share model as part of the project. The model was designed to not only allow Pobl to reduce all resident energy bills, while reducing their carbon footprint but also generate an income, ultimately allowing Pobl to retrofit more of their homes in the future.

The Solar Share model involved the installation of 1.4 MV of solar PV panels on 518 homes alongside the installation of 3.2 MWh of battery storage across the 644-home project. The battery storage aims to provide up to 60% of the community's power needs, reducing energy bills for Residents.

Sero's BEE (Building Energy Engine), a smart home energy management system, was also installed across all homes. This system monitors energy use and allows us to bill Residents for the electricity consumed from the solar PV panels. The tariff charged for renewable energy is charged at a cheaper rate than the resident would have previously paid to the grid. The tariff is discounted against the Ofgem price cap, meaning the resident sees a reduction in their energy bills.

To ensure equity for all Residents, functionality was also designed into Sero's billing system to allow the homes that don't directly benefit from solar to receive an energy credit. The credit can be distributed by using some of the income generated from the homes with solar PV installed.



**1.4 MV**

Solar panels on 518 homes



**3.2 MWh**

Battery storage across the 644 homes

As with any retrofit project, resident engagement is key to uptake. Our team was heavily involved in resident engagement, running community events throughout the project. Alongside the team also ran workshops with Pobl, supporting its team to develop and distribute materials that educated Residents on the benefits and particulars of the technology within their home.

**We successfully helped Pobl secure funding of £3.5m from the ERDF, alongside £1.6m in matched funding from Pobl. These funds led to the successful completion of the 644-homes retrofitting project in Penderi.**

The project is leading to a reduction in energy bills for Residents and has furthered Pobl's goal of achieving Net Zero by 2030. The installation of our innovative Solar Share Scheme will see an estimated 20-30% decrease in resident's energy bills and, our other retrofitting measures have led to 350 tonnes of carbon emissions being saved.



For Pobl, the ability to save customers money was at the heart of its ambition at Penderi as Solitaire Pritchard, Director of Regeneration at Pobl, said: “One of the key things about this project was that it puts more money in our customers’ pockets. The more disposable income we can allow for our customers, the better for us too, as we would rather that disposable income is being spent on food or whatever else our customers choose instead of going to energy companies.”

In debuting this community model, the project has paved the way for other Social Landlords to adopt a similar model and fund their retrofit programmes beyond grants. According to James, this project highlights the importance of social Landlords making a return on investments. He explains: “Social Housing alone cannot see their way through to net zero, there just isn’t enough money coming through.”

Beyond this, our project has also created a foundation for more job and training opportunities in the local community through Pobl and their contractors working in partnership with Gower College.

## What's Next?

**With the successful delivery of the Penderi project, we're continuing to monitor and evaluate the project, ensuring we enhance the model when lessons are learned.**



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We've learned a lot of lessons from this project and it's allowed us to develop the model further so that it can benefit many more Landlords and their Residents.

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**James**  
Sero, CEO, Co-Founder

Our billing and resident engagement teams are working closely with Pobl to ensure all Residents are maximising the technologies and the ability to reduce their bills. As part of our customer service offering, we run regular drop-in clinics for Residents to ask questions, attend community days, and provide help and guidance with billing over the phone.

Since completing the project in July 2023, together with Pobl, we've been educating the wider sector on the findings and learnings from the project, enabling others to visit Penderi and consider adopting a similar approach. James adds “We've learned a lot of lessons from this project and it's allowed us to develop the model further so that it can benefit many more Landlords and their Residents”.

The model developed for Penderi is now one of our core service offerings, and we're working with the Private Finance sector and other partners to allow more Landlords to fund and deliver large-scale retrofit.



# Get in touch

Enquiries@sero.life

[www.sero.life](http://www.sero.life)

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