



Case Study

GRYD Energy

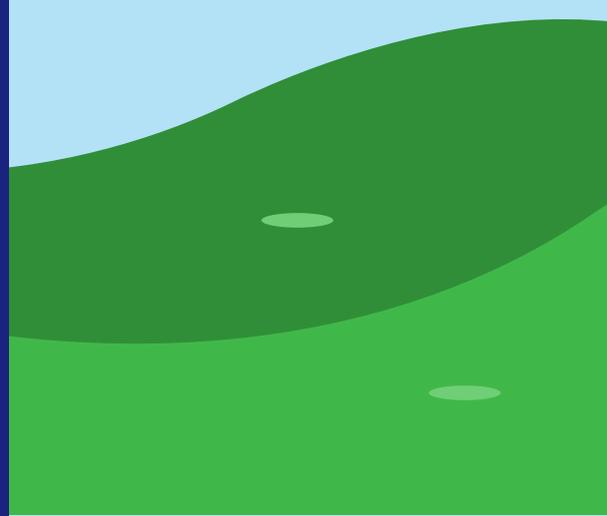


Summary

- **Location:** England, St. Ives, Cornwall
- **Capacity:** 12.75 Kilowatts across 3 new build homes
- **Type:** Residential Rooftop Solar
- **Designer and installer:** BK Developments/
GRYD Energy
- **Owner:** GRYD Energy
- **Panel type:** Monocrystalline
- **Completion date:** March 2024



GRYD Energy is a VC backed clean energy-tech business, pioneering a new approach to rapidly scale residential solar adoption for new homes while eliminating the upfront cost and burden of ownership.



Overview

In a first-of-its-kind deployment, GRYD Energy delivered zero-cost smart solar systems for 3 new homes at a site in St. Ives, Cornwall.

Working with new build property developers, GRYD funds the smart solar hardware on all new homes, including PV and batteries; saving developers up to £10k in hardware costs per home – while exceeding their obligations under building regulations Part L and the upcoming Future Homes Standard.

The homeowner moves into a home with a fully optimised, managed, and maintained smart solar system that serves over 70% of their electricity demand in return for a fixed monthly subscription guaranteed for the 25 year life of the system – saving on their energy bill from day 1 with no upfront cost or lengthy payback period. By eliminating the cost of solar hardware to the developer, GRYD removes the tricky act of trying to balance ever increasing project costs and more stringent regulations with trying to build high quality, affordable homes.

The project in St. Ives was deployed in partnership with BK Developments and is the first of GRYD's full scale commercial pilot projects. The build-to-rent units with complete GRYD solar systems are receiving up to 85% of their energy for a fixed monthly subscription and achieving overall saving on energy of up to 20% compared to energy supplied just from the traditional grid.



Project Summary

This project is the first of its kind in the UK where full-scale and optimally sized solar and battery storage systems have been deployed on newbuild homes with zero cost burden on the developer or homeowner.

This project aimed to demonstrate how developers, in partnership with GRYD, can exceed their regulatory obligations and boost their homes EPC rating and other green credentials with zero additional cost.

The systems specification and design was completed by GRYD with support from a local MCS certified installer before being deployed in March 2024 as part of the developers construction programme. The installation was completed over 3 days and made use of the developers already in place scaffolding which reduced the installation cost and speed of deployment. Each unit includes a 4.25kW array with a 5kWh battery as well as a central internet connected communications hub that allows GRYD to remotely monitor and operate the system to ensure maximum performance and quickly identify any faults if they occur. The system also uses micro inverters for individual panel monitoring.

GRYD was driven by the need to address the high upfront costs of solar energy, rising electricity prices, regulatory changes, and the urgent need for innovative solutions to achieve net-zero emissions goals. BK Developments is a forward thinking developer that had been exploring adding solar to their homes that were under construction. However, the cost of hardware compared to the expected rental yields of the homes meant that it was not viable to include optimally sized solar and battery systems without impacting their margin or the affordability of the homes.



Another concern was the increased electrical demand from the homes with the inclusion of electrical heating systems. This, combined with volatile electricity markets, was a cause for concern among potential tenants who were worried about the cost of running the home if energy prices were to spike again as they did in 2022.

By working with GRYD, the developer was able to eliminate the cost of the solar system and maintain their margin and affordability of the homes. It also meant that the homes susceptibility to erratic swings in the energy markets are significantly reduced as the majority of the homes energy demand is served by the GRYD solar system for a fixed monthly price.

Outcomes/Solution

- Scalable Business Model: GRYD funds, installs, and operates smart solar systems on new homes at zero cost to house builders or homeowners. This approach eliminates the hardware cost from construction projects while exceeding carbon reduction requirements.
- Ownership-Free Benefits: Homeowners enjoy solar benefits without upfront costs or added premiums to house prices. GRYD supplies the energy generated on the roof directly to homeowners at rates cheaper than traditional retailers, resulting in net savings from day one.
- Intelligent Optimisation: GRYD's intelligent software learns a home's energy demand down to the appliance level and optimises consumption at both individual and network levels. This minimises energy bills and carbon emissions while enabling peer-to-peer energy sharing and providing flexibility services to the grid.

The flagship pilot project in St. Ives, Cornwall, demonstrates the effectiveness of GRYD's model:

- Three homes equipped with optimised solar generation and battery systems providing 70+% of their electricity demand
- ~15% energy bill savings for homeowners
- A fixed, inflation proof, cost of electricity for the 25 year life of the system
- 1.2 tonnes of CO₂e eliminated per home, per year
- Regulatory sustainability requirements far exceeded
- Zero hardware cost to the developer or homeowner

Building on this success, GRYD has secured contracts for an additional 300 homes with five developers across several sites with deployment starting later in 2024. The company has also amassed a pipeline of over 1,000 homes and is attracting interest from some of the leading national housebuilders.

Local Benefit

- High demand for new homes and pressure from increasing regulation to minimise CO₂ emissions are driving up build costs and subsequently house prices making them unaffordable for many
- With GRYD funding the hardware and provisioning well above the minimum requirements of the regulations we can help developers deliver higher quality, more efficient, more saleable homes, while maintaining affordability in the market.
- With a significant proportion of the home's energy served by the solar system we reduce the strain on the local grid at peak times, alleviating capacity constraints in some areas.
- A home with a GRYD system will eliminate 1.2 tonnes of CO₂e annual compared to a home drawing its electricity from the traditional grid.
- A home with a GRYD system, which includes a connected battery, can support the local network by providing critical flexibility and demand-side response, reducing the risk

Learn more about what's happening at GRYD Energy at www.gryd.energy



Published in the United Kingdom by Solar Energy UK
6 Langley St, London WC2H 9JA, The Conduit
© Solar Trade Association 2024

www.solarenergyuk.org