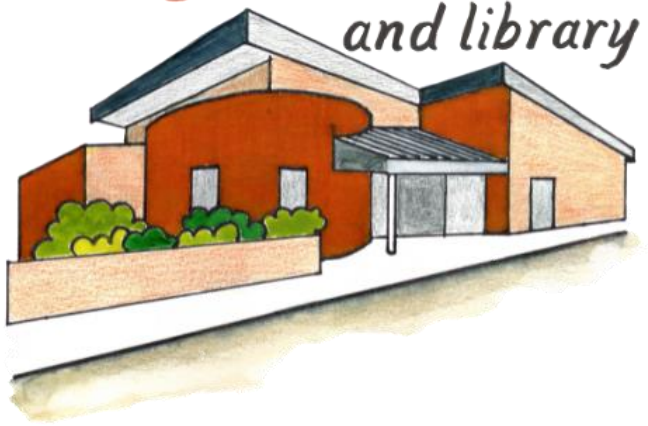
Introduction

This presentation was delivered to the West Berkshire Town and Parish Climate Forum on 22nd October 2025.
The Presentation describes how the Hungerford Hub and Library building has become operationally net zero or better by installing improved heating controls, an Air Source Heat Pump and a Solar generation system on the roof.
Energy costs have also been dramatically reduced thereby helping to financially sustain the services the building provides

Hungerford Hub and Library Journey to Net Zero

22nd October 2025

Hungerford Hub and library



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HUNGERFORD ENVIRONMENTAL ACTION TEAM

The Hungerford Hub and Library - Background

2008 New-build WBC library building opened with….

- Gas boiler with “wet” underfloor (UFH) heating
- Basic mechanical ventilation with heat recovery
- Rudimentary room/zone thermostatic controls

2018 WBC Library closure threatened

- As a result of Town Council and Local volunteer efforts…..
  - Building leased by WBC to Town Council and
  - Run by Hungerford Library & Community Trust Charity

The Hungerford Hub and Library under new management

May 2022 – Basic thermostat control replaced with zoned, timed online system

Summer 2022 – 14 year-old Gas boiler failed and not repairable

Oct 2022 - 17kW Air Source Heat Pump installed with £5k Boiler Upgrade grant

Heating CO2e Emissions Reduced by 75% (from 2680kg to 880kg per year)

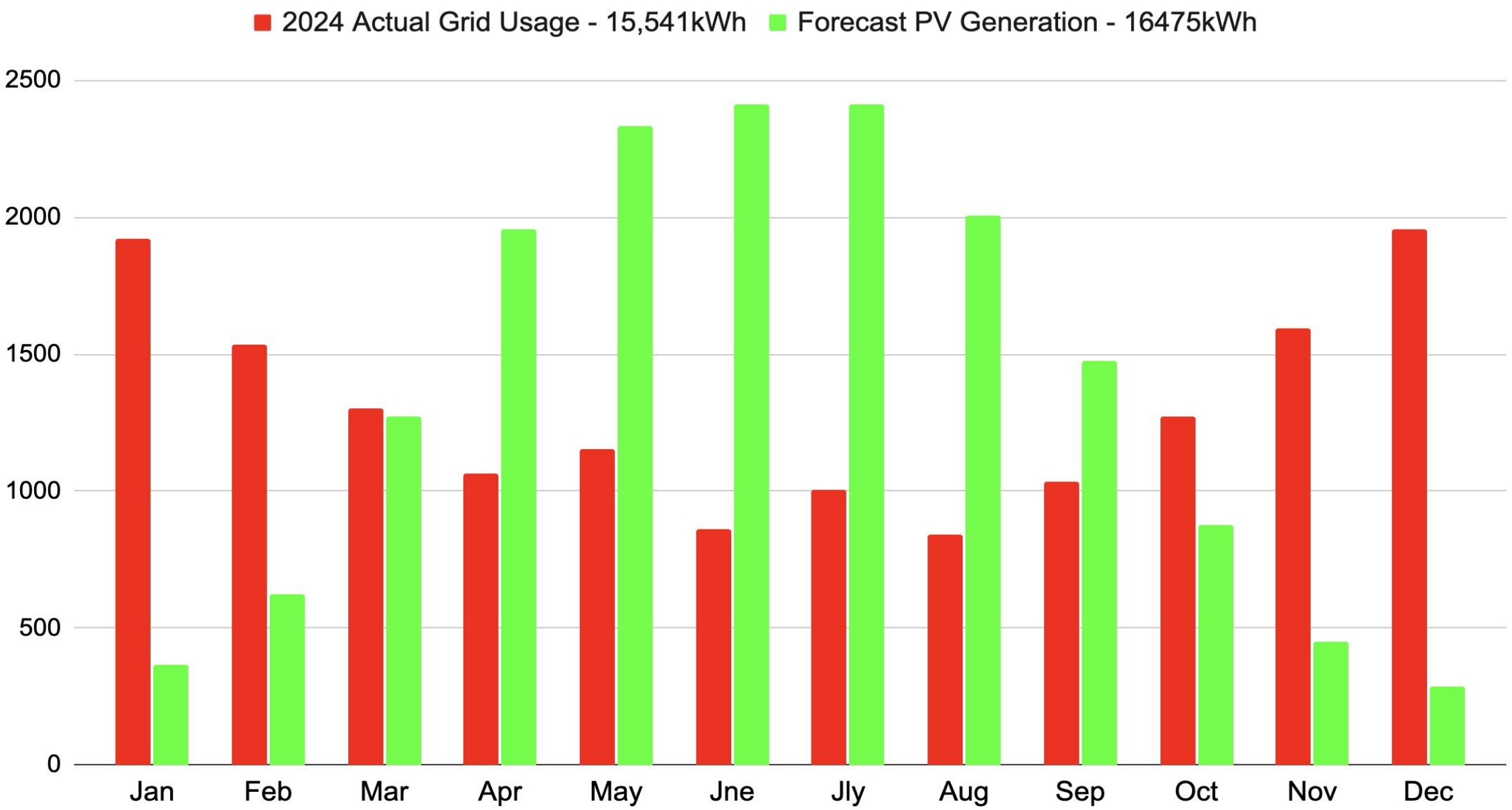
Gas supply disconnected and daily standing charges of £1k+ pa eliminated

2025 Rooftop Solar PV Installation

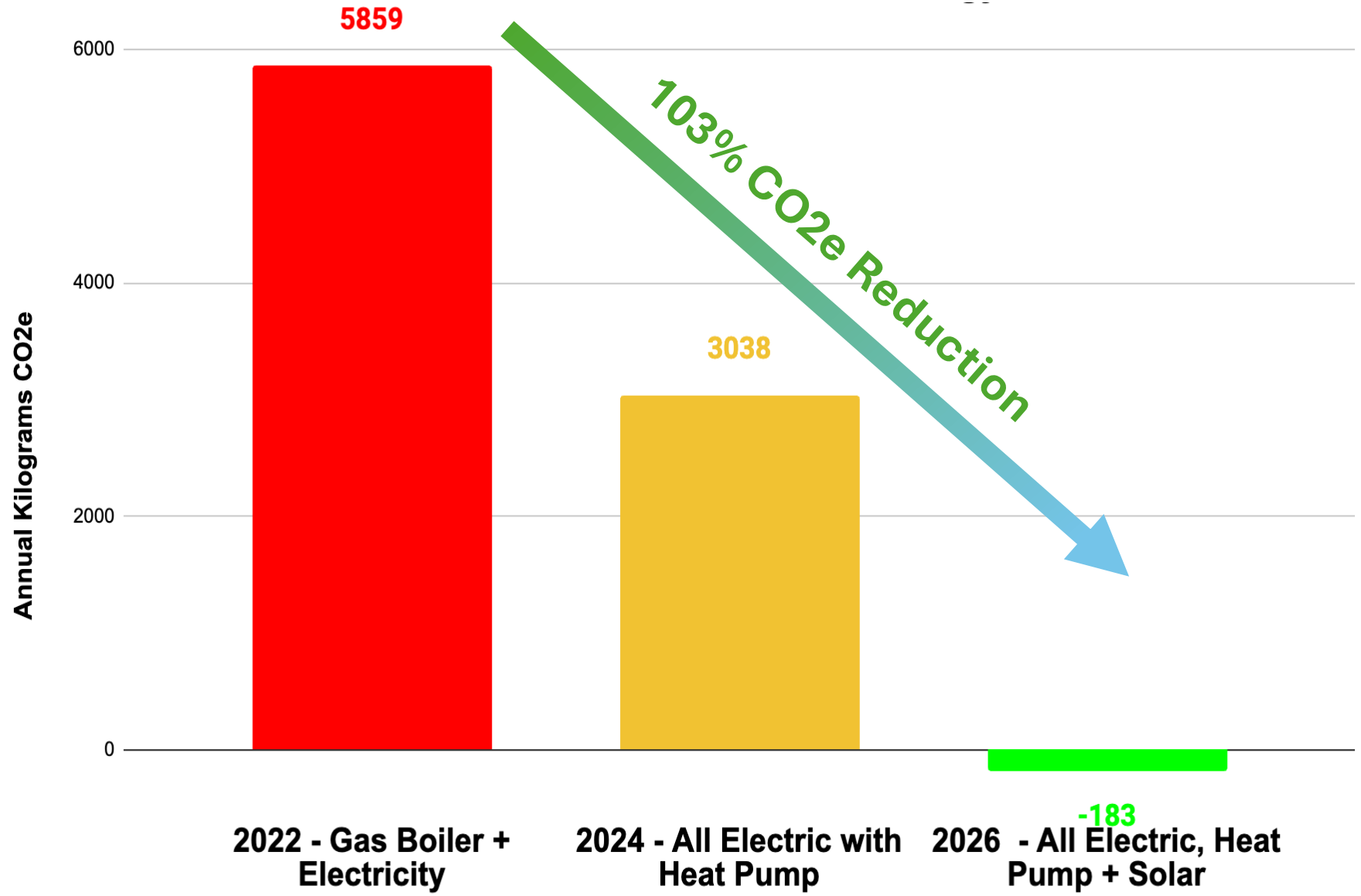
- **21kWp, 36-panel System** (maximum allowed by SSEN) on the shallow-pitched east-facing roof with 3-phase Inverter
- New **Smart Meter** installed to enable Solar Export metering contract with Scottish Power

+ Generation, consumption and export **real-time data logging**

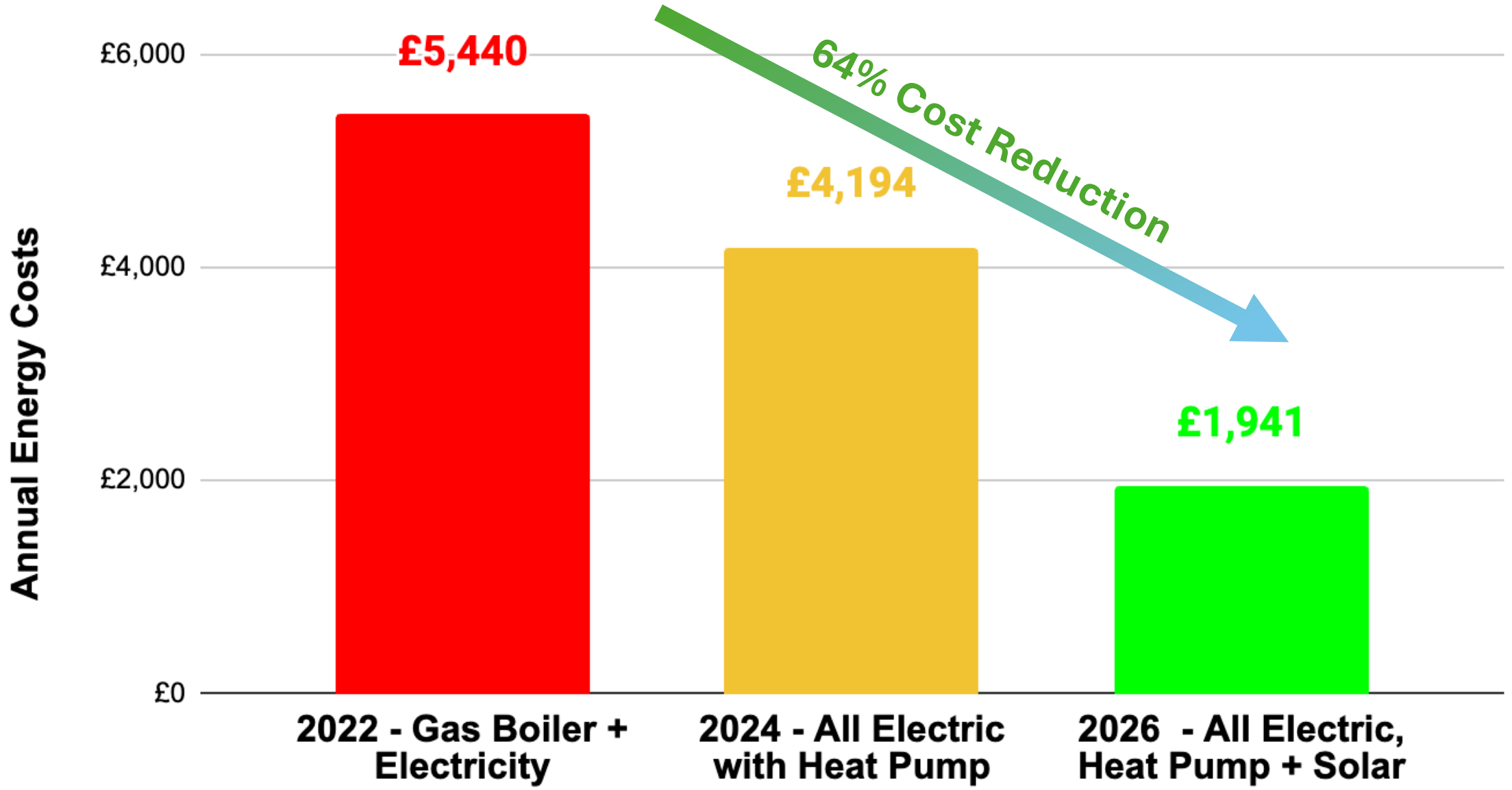
Hub Actual electricity Consumption vs Predicted Generation



Hub Annual Net CO2e Energy Emissions

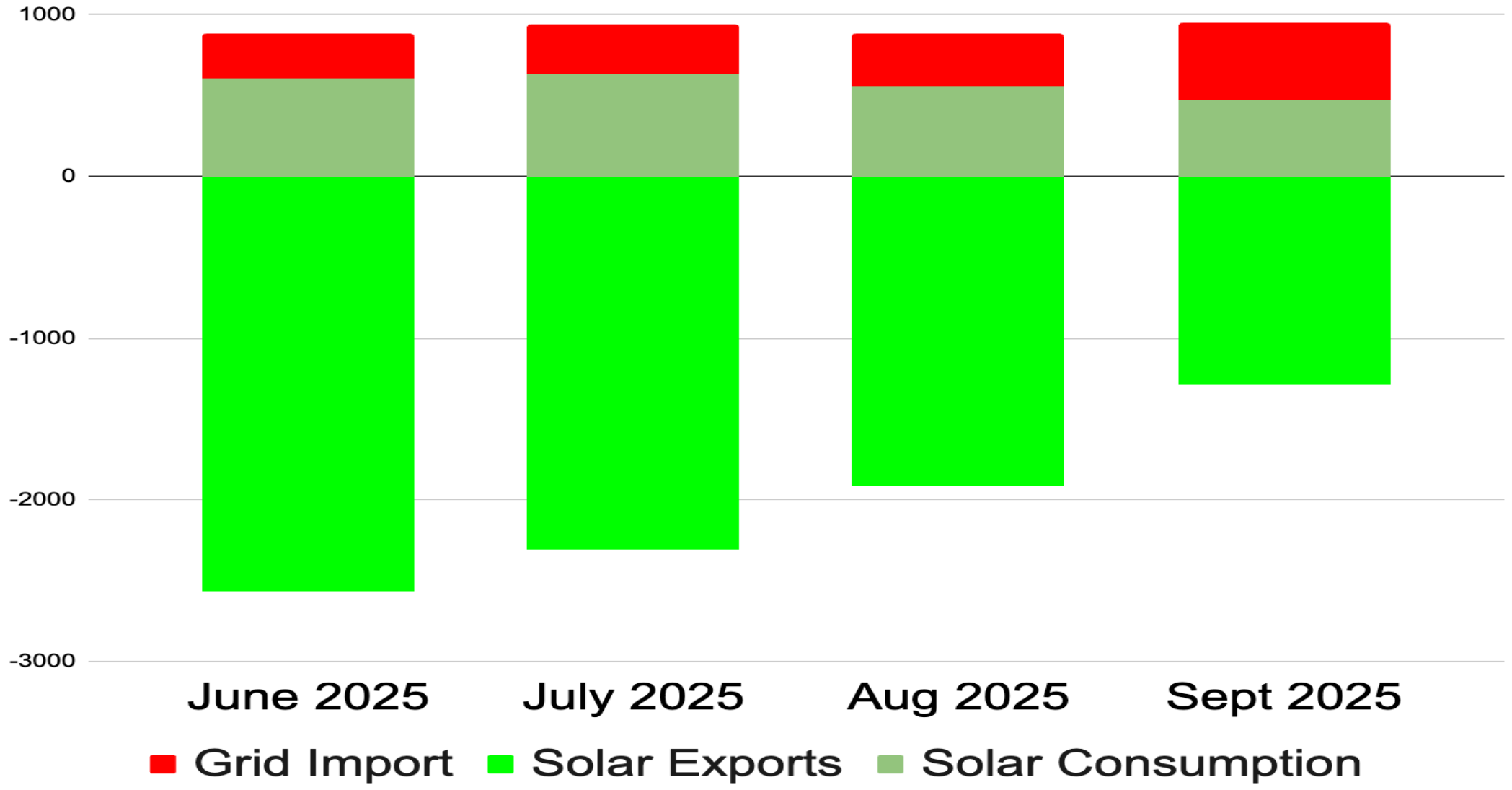


Hungerford Hub - Annual Energy Costs (Calculated at 2025 Tariff Rates)



2025 Actuals – first four months with Solar PV generation

Solar Generated 10,346kWh vs 8,310kwh forecast, Exported to Grid 8,073kWh, Solar used by Hub 2273kWh (62% of Hub consumption)



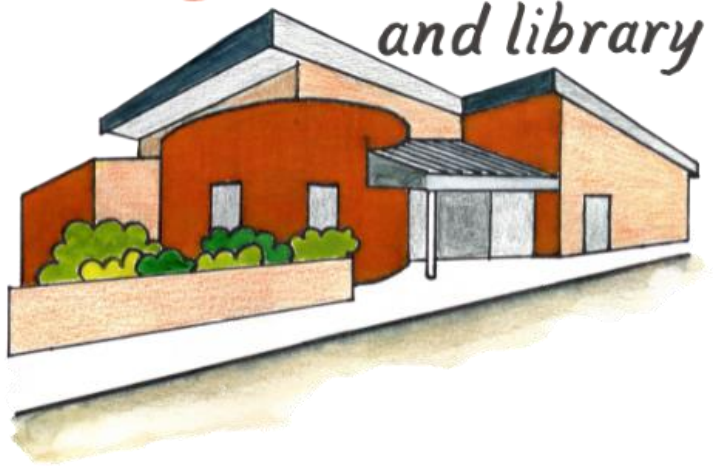
Observations from the Hub's Journey

- Net Zero is possible in a public building and can also dramatically reduce energy costs
- Be able to take advantage of boiler failure – pre-empt if it is old / inefficient
- Maximise solar installation size whilst scaffold in place - batteries can be added later
- Value of a 3-phase supply re solar installation scale
- Build-in data logging of all energy flows – for system optimisation and battery analysis

Hungerford Hub and Library Journey to Net Zero – and much lower running costs!

22nd October 2025

Hungerford Hub and library



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