

Decarbonisation schemes for private homes in Stevenage

1. Introduction

- This document outlines the schemes introduced in recent years to support the retrofitting of private homes in Stevenage.
- These efforts align with Stevenage Borough Council's (SBC) and the UK Government's broader commitments to reducing Greenhouse Gas (GHG) emissions, mitigating local pollution, and addressing fuel poverty.
- The objectives of this document are:
 - Summarise recent UK retrofitting schemes for private homes.
 - Outline key delivery aspects in Stevenage.
 - Assess the delivery of these schemes in Stevenage and alignment with climate targets.

2. Emissions from the residential sector in Stevenage

- In 2019, SBC set an ambitious target to achieve net-zero emissions by 2030, covering both the Council and the town.
- Stevenage's climate target includes addressing GHG emissions from the residential sector, which encompasses both public and private housing.
- The residential sector is a significant contributor to Stevenage's GHG emissions, accounting for 25.8% of its total emissions, making it the second-largest emitting sector after transport (31.2%).
- According to the SAVA "*Carbon Footprint and Path to Zero Carbon*" report, prepared for SBC on 31st May 2024, total emissions from the Council's housing stock (7,848 properties) were 20,733 tCO_{2e}/year, approximately 22% of the town's residential emissions (93,738.8 tCO_{2e}).
- This implies that approximately 78% of the town's total residential GHG emissions are derived from private homes (73,005 tCO_{2e}/year).
- With 80% of the UK's 2050 building stock already in place, retrofitting represents a critical challenge for both the UK and Stevenage in meeting climate targets.

3. Retrofit and decarbonisation schemes for private homes

3.1. Local Authority Delivery (LAD)

- The Local Authority Delivery (LAD) programme is funded by the UK Government.
- It aims to improve energy efficiency in low-income and low-energy-performance homes, especially those ineligible for other schemes but still needing support to reduce energy bills and enhance heating.
- Local Authorities (LAs) administered funding, managed delivery, and ensured assistance reached those most in need.
- LAD targeted hard-to-heat homes with poor energy ratings, implementing measures such as insulation and heating system upgrades.

- It supports energy efficiency improvements across various tenures, including owner-occupied, private rented, and social housing.
- Homeowners could receive full funding for eligible upgrades, capped at £10,000 per property.
- Landlords (private and social) were also eligible but must contribute at least one-third of the upgrade costs.
- Funding was allocated in phases throughout the years. Under the LAD1B round, SBC secured funding to upgrade 150 social housing properties from March 2021 to May 2022.
- Under LAD3 round, only £26,171 was spent in Stevenage, retrofitting just seven private homes with cavity wall insulation, double glazing, energy-efficient doors, flat roof insulation, heating controls, loft insulation, and PV panels.
- Low uptake was mainly due to the strict eligibility criteria, including:
 - A relatively low income threshold, limiting qualifying households.
 - Landlord match-funding requirements, discouraging participation.
 - Many eligible residents being renters rather than homeowners, reducing the applicant pool.

3.2. Home Upgrade Grant (HUG)

- The Home Upgrade Grant (HUG) funded energy efficiency improvements for homes with poor insulation and outdated heating.
- It targeted off-gas-grid households (e.g., those using heating oil or electric heating).
- Grants covered upgrades like insulation, air-source heat pumps (ASHPs), and PV panels.
- LAs and energy suppliers administered the grants, funded by the UK Government.
- LAs managed funding and delivered energy-saving measures to eligible households.
- No homes in Stevenage were upgraded under the 1st round of the scheme (HUG 1), despite allocated funding.
- SBC actively promoted the 2nd round, HUG 2 (April 2023-March 2025), offering free upgrades to low-income, off-gas households.
- Promotion included direct letter drops to 481 homes, outreach to 257 stakeholders, and a social media campaign reaching 19,000 people, along with posters on digital screens, buses, and community noticeboards.
- Despite initial interest, many applicants failed to respond to follow-ups, a common issue in similar schemes due to administrative challenges and strict eligibility criteria.
- High administrative costs and the risk of reduced funding due to underdelivery discouraged some organisations like GSEnz (Greater South-East Net Zero Hub) from administering subsequent schemes like the Warm Homes Local Grant (WHLG).
- The main barrier to HUG deployment was stringent eligibility criteria, particularly income thresholds and property requirements. Eligible households needed a combined annual income below £36,000, properties not connected to the main gas grid, and poor energy efficiency ratings (specifically EPC bands D to G).
- Strict conditions significantly reduced the number of eligible applicants, leading to lower uptake in the area.
- Although marketed as free, HUG only fully funded improvements for homeowners. Private landlords had to cover at least one-third of costs, while social housing providers contributed 50%, discouraging landlord participation.

- These factors limited the impact of HUG in Stevenage. Of 41 applications under HUG 2, 36 were cancelled or rejected, with only five homes upgraded.

3.3. Sustainable Warmth

- Sustainable Warmth, launched in 2021, is a UK Government strategy to improve energy efficiency and reduce GHG emissions, focusing on low-income and vulnerable households.
- It supported national climate change and energy security efforts by lowering heating costs, tackling fuel poverty, and enhancing home comfort.
- As its core, Sustainable Warmth served as an umbrella strategy, including several programmes like LAD and HUG, which financed insulation, heating upgrades, and renewable energy integration.
- Sustainable Warmth was a policy framework, not a funding scheme, aimed at reducing emissions from the residential sector, a major contributor to national emissions.

3.4. Solar Together Scheme

- Solar Together is a group-buying scheme that helps homeowners install solar PV panels and battery storage systems (BESS) at competitive prices.
- By aggregating demand, it secures better deals from vetted installers, making renewable energy more affordable.
- The initiative is a collaboration between LAs and experts like iChoosr Ltd, ensuring a streamlined process and quality installations.
- In Stevenage, the *"2023 End of Project Report"* recorded 210 residents registering interest, with 46 proceeding with PV installations and 2 opting for BESS.
- The third round of the scheme in Hertfordshire is currently open for registrations, including for residents and businesses in Stevenage. Further information is available [here](#).
- The current registration period runs until 4 April 2025, with a likely extension to May 2025. Registration is free and non-binding.
- After registration, a reverse auction allows pre-vetted solar suppliers to bid competitively. Participants receive a personalised recommendation on costs and system specifications. If accepted, installation follows a technical survey.
- Based on the latest available *"Registration Report for March 2025 Auction"*, issued on 24 February 2025, 81 registrations were recorded in Stevenage: 78 for solar installations, 3 for BESS, and 34 also interested in EV charge points. No businesses had registered by that date.

3.5. Energy Company Obligation (ECO)

- The Energy Company Obligation (ECO) is a UK Government scheme requiring energy suppliers to fund energy-efficiency improvements, primarily for low-income and vulnerable households, aiming to reduce GHG emissions and alleviate fuel poverty.
- The ECO scheme supports insulation, heating upgrades, and energy-efficient appliances.
- While LAs do not directly deliver ECO measures, they assist by identifying eligible households and coordinating referrals, especially for those in fuel poverty.
- Its third round (ECO 3), running from 2017 to 2022, expanded on previous phases, targeting vulnerable households and areas with hard-to-heat homes. It focused on insulation, heating systems, and low-carbon technologies, such as ASHPs and solar thermal panels.

- The ECO Flex scheme allows LAs to broaden eligibility beyond standard criteria, helping households in fuel poverty that do not meet traditional qualification requirements. It has enabled more people to access energy-efficiency upgrades.
- According to the SBC's records, a total of 15 ECO 3 Flex declarations were signed under this scheme.
- The fourth round (ECO 4), launched in 2022, builds on previous phases with a stronger focus on achieving net-zero emissions by 2050.
- ECO 4 targets vulnerable households with an Energy Performance Certificate (EPC) rating of D or below and promotes whole-house retrofits. The scheme includes more low-carbon technologies like air-source heat pumps and smart controls.
- Currently, SBC is delivering the ECO 4 Flex scheme, which is open for referrals. Further information can be found [here](#).
- Recent news has highlighted concerns over mould, damp, and decay in homes following ECO works. Insulation and heating upgrades, if not properly installed or managed, can trap moisture, exacerbating these issues. This has raised concerns about the long-term effectiveness of ECO measures.

3.6. Great British Insulation Scheme (GBIS)

- The Great British Insulation Scheme (GBIS) provides free insulation to low-income households, reducing heating costs and GHG emissions.
- As with ECO, while LAs may play a role in identifying eligible households, they are not the main deliverers of the scheme itself. Energy suppliers or other delivery partners generally handle the installation of insulation measures.
- Unlike ECO, which covers a broader range of energy efficiency measures, GBIS focuses solely on insulation and is delivered by energy suppliers or partners.
- While both schemes target low-income households, pensioners, and social housing residents, ECO has a wider scope, including heating upgrades and broader eligibility based on benefits or fuel poverty.
- GBIS scheme funding is provided by energy suppliers.
- GBIS is typically a short-term programme linked to specific government initiatives, while ECO is an ongoing programme with regular updates and new phases.
- Currently, SBC supports GBIS alongside the ECO 4 Flex scheme, as shown in the link provided in the previous section.

3.7. Warm Homes: Local Grant

- The Warm Homes Local Grant (WHLG) is part of the UK Government's effort to meet the 2030 fuel poverty target, aiming to reduce energy bills and improve home energy efficiency.
- WHLG applies to on and off-gas properties, with EPC ratings between D and G, and includes owner-occupied or privately rented homes (social housing only as infill).
- Landlords receive full funding for their first property and 50% for others. For properties with EPC ratings of F or G, registered exemptions are required, and funding cannot be used to bring these properties into compliance with existing regulations.
- WHLG eligibility is based on three pathways:
 - Pathway 1: Households within Index of Multiple Deprivation (IMD) 1 and 2 areas.

- Pathway 2: Households receiving specific means-tested benefits, including housing benefit, jobseeker's allowance, income-related employment & support allowance, income support, pension credit, universal credit, or those meeting at least two specified proxies.
- Pathway 3: Annual gross income below £36,000 or below a specified threshold after housing costs.
- WHLG will begin delivery in 2025, providing energy performance upgrades and low-carbon heating to low-income households with EPC ratings D to G.
- Eligible homes will receive tailored upgrades, such as insulation, solar panels, and ASHPs.
- Low-income occupants will pay no costs.
- LAs, including SBC, will manage the delivery, with SBC aiming to upgrade 40 homes in the first year, and 60 in each of the next two years, though final allocations may be capped based on past delivery performance.
- Eligible measures include fabric improvements (i.e., insulation, draughtproofing, double glazing, energy efficient doors); smart technologies (i.e., solar PV, smart controls, BESS); heat pumps, and high retention storage heaters.

3.8. Summary & Conclusions

- Retrofitting private homes in Stevenage is crucial for achieving the town's net-zero emissions target by 2030.
- The residential sector accounts for about 25.8% of total emissions, with private homes responsible for 78% of the residential emissions.
- Some retrofitting schemes, such as LAD and HUG, have been designed for LAs to manage and deliver directly.
- LAD's success in Stevenage has been limited by strict eligibility criteria, such as low income thresholds and landlord match-funding requirements, which have deterred participation. Additionally, many eligible residents are renters, reducing the pool of applicants, resulting in minimal uptake for private homes under the programme.
- HUG also faced limited success due to stringent eligibility criteria, including income thresholds and property requirements. As a highly urbanised area, the number of eligible off-gas-grid homes in Stevenage is small. Despite active promotion, many applicants did not follow through. Landlord contributions further reduced uptake.
- Schemes like ECO and GBIS were not designed for LAs to directly deliver but to assist in identifying eligible homes. These schemes have also faced delivery challenges in Stevenage, including strict eligibility, low engagement, and administrative hurdles. Additionally, the quality of works under ECO has raised concerns, with mould and damp issues reported across the country after installations.
- More recently, WHLG has been designed with broader eligibility criteria, aiming to improve delivery by offering various pathways to meet requirements, making it more accessible, including to on-gas properties. SBC has expressed its interest in delivering between 40 and 60 homes annually under this new scheme, starting in spring 2025.
- Finally, despite the introduction of WHLG and other schemes, the challenge of reducing GHG emissions from the private residential sector in Stevenage remains immense. With private homes accounting for 78% of the town's residential emissions, achieving a town's net-zero target will require substantial progress in retrofitting efforts, particularly considering the limitations of existing infrastructure and the UK's aging building stock.