RISE | Retrofit information, support & expertise

Preparing for the growing demand for solar in social housing

Supply chain advice pack

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Introduction

As housing providers explore options for reducing carbon emissions, lowering energy costs and supporting wider net zero ambitions, Solar Photovoltaics (Solar PV) is becoming an increasingly attractive investment. This creates significant opportunities for the retrofit supply chain. This Advice Pack aims to help organisations understand the drivers behind growing solar adoption and how they can prepare to support future demand.

Readers that would like this document in a more accessible format should contact **rise@turntown.co.uk**

What is solar PV?

Solar PV technology converts the Sun's energy into electricity using roof-mounted panels. The electricity generated can be used directly within a home, reducing reliance on electricity purchased from the grid. Any surplus electricity can either be exported to the national grid or stored in a battery for later use.

A typical solar PV system consists of solar panels, an inverter, metering equipment and, in some cases, battery storage as seen in the diagram and flow-chart below. Together, these components allow homes to generate, use, monitor and potentially store renewable electricity produced on-site.

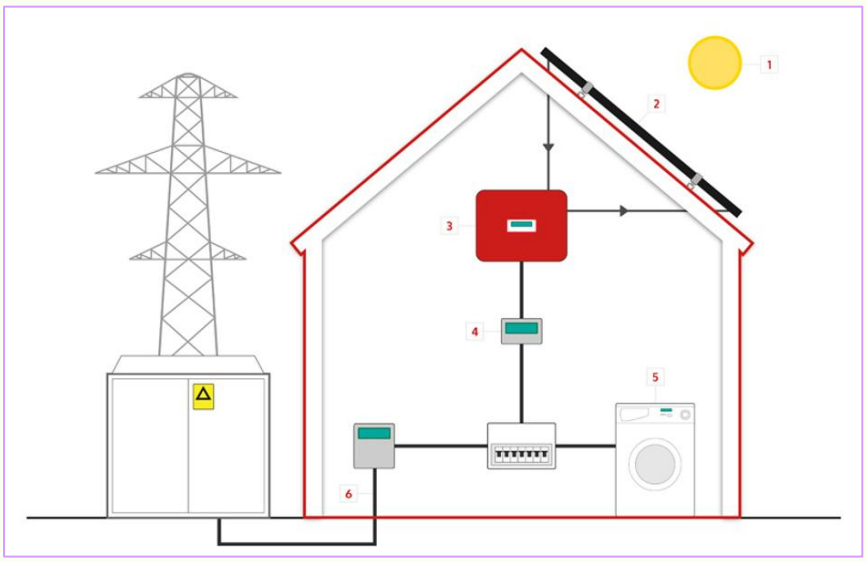
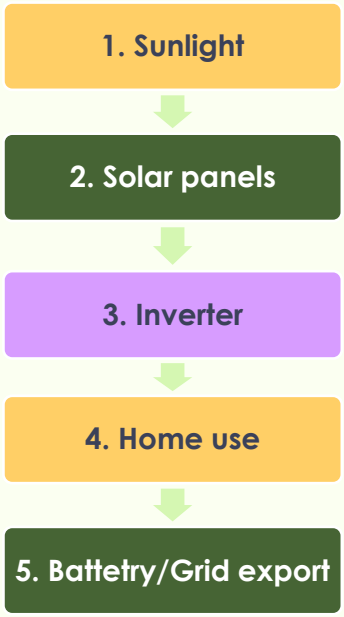


Figure 1: Diagram to show how electricity is generated, transferred and exported (Source: A Shade Greener).



The amount of energy generated depends on factors such as roof orientation, roof pitch, shading and weather conditions. Although generation is highest during spring and summer, solar panels continue to produce electricity throughout the year whenever daylight is available.

Why is solar PV important in social housing?

Solar PV is increasingly being used by housing providers to support multiple objectives at the same time. It can help reduce carbon emissions, improve the energy performance of homes and lower residents' electricity bills. Solar can also contribute to improved EPC ratings and support wider organisational net zero commitments.

Importantly, solar is no longer viewed simply as a renewable energy technology. It is increasingly seen as part of a broader strategy to improve housing quality, support residents experiencing high energy costs and futureproof housing stock.

For retrofit supply chain organisations, this growing interest is creating opportunities across stock assessment, design, installation, maintenance and resident engagement. Understanding how solar creates value for housing providers is therefore becoming increasingly important.

How does solar PV fit into whole-house retrofit/housing retrofit programmes

Housing providers are increasingly adopting a **whole-house approach** to retrofit. Rather than focusing on individual technologies in isolation, this approach considers how different measures work together to improve building performance, reduce carbon emissions and deliver better outcomes for residents.

A key principle of whole-house retrofit is the **fabric-first approach**. This prioritises improvements such as insulation, airtightness and ventilation before introducing renewable technologies. By reducing energy demand first, landlords can maximise the benefits delivered by measures installed later in the retrofit journey. This approach has been reflected in government-supported programmes including the former **Social Housing Decarbonisation Fund** and the current **Warm Homes: Social Housing Fund** (Source: GOV.UK)

Within this wider approach, solar PV can help generate renewable electricity on-site, reduce reliance on grid electricity and contribute towards improved energy performance. It is often installed alongside measures such as insulation upgrades, ventilation improvements, battery storage and low-carbon heating systems.

Supporting the transition to low carbon heating

Solar is becoming particularly important as housing providers explore alternatives to fossil fuel heating. Technologies such as heat pumps can significantly reduce carbon emissions but often increase electricity demand within the home. By generating electricity on-site, solar can help offset some of this additional demand and improve the affordability of low-carbon heating systems. This makes solar an important **enabling technology** within wider housing decarbonisation strategies.

However, not every property will be suitable for solar installation. Housing providers must assess factors such as roof orientation, roof condition, structural suitability, shading and available roof space before investing. These assessments play an important role in determining where solar is likely to deliver the greatest benefits. For retrofit supply chain organisations, this creates opportunities that extend beyond installation alone. Housing providers increasingly require support with stock assessments, feasibility studies, retrofit planning, system design and ongoing asset management.

Ultimately, solar delivers the greatest value when it is considered as part of a **wider retrofit strategy**. Organisations that understand how solar interacts with building fabric improvements, heating systems and resident outcomes are likely to be best positioned to support future demand.

Drivers of investment in solar technologies

Interest in solar PV is growing across the social housing sector because it can help housing providers deliver several objectives through a single investment. While priorities vary between organisations, investment decisions are often influenced by a combination of **environmental, financial and social drivers**.

Driver	Why it matters
Net zero commitments	• Solar helps housing providers reduce carbon emissions and support wider decarbonisation strategies.
Improving EPC ratings	• Solar can contribute towards improved housing stock performance and energy efficiency targets.
Tackling fuel poverty	• Generating electricity on-site can help reduce residents' electricity costs and improve affordability.
Supporting low-carbon heating	• Solar can help offset the additional electricity demand associated with technologies such as heat pumps.
Funding opportunities	• Government retrofit programmes have increased investment in energy efficiency and low-carbon technologies.
Long-term asset performance	• Solar can help futureproof homes and support wider asset management objectives.

These drivers rarely exist in isolation. For many housing providers, the attractiveness of solar lies in its ability to **contribute towards multiple strategic priorities at the same time**. A single installation can support carbon reduction, improve stock

performance, help residents manage energy costs and strengthen wider decarbonisation programmes.

For retrofit supply chain organisations, understanding these drivers is essential. The factors influencing investment decisions today are likely to continue shaping demand in the years ahead. Organisations that understand why housing providers are investing in solar will be better placed to develop services, skills and solutions that align with future market needs.

Emerging market opportunities

The housing sector represents one of the largest and most scalable opportunities for the solar PV retrofit supply chain. Growth is being driven by the convergence of decarbonisation targets, rising energy costs, fuel poverty reduction initiatives and increasing adoption of low-carbon technologies.

For the supply chain, the opportunity extends beyond solar installation. Large-scale housing retrofit programmes require a board range of services that span asset assessment, design, enabling works and installation. As retrofit programmes mature and solar deployment accelerates, demand is expected to increase for:

- Stock condition and roof suitability surveys.
- Structural, electrical and fire safety assessments.
- Roofing repairs and replacement works undertaken alongside PV installation.
- Solar PV, battery storage and EV charging installation services.
- Inspection, cleaning and repair services.

The scale of this opportunity is reinforced by the UK's ambition to more than double solar capacity by 2030, driving demand across the entire solar value chain, not just among installation contractors. As the market expands, opportunities are emerging for roofing contractors, electrical specialists, surveyors, retrofit coordinators, asset management providers and maintenance businesses to play a role in delivering solar projects that support both housing decarbonisation and energy affordability goals.

To help businesses understand and prepare for this growth, **a practical guide to expanding the UK solar supply chain**, developed by Chris Hewett of Solar Energy UK and Michael Shanks, Minister of State for Energy, provides an overview of market opportunities, priority growth areas and the capabilities needed to participate in this rapidly developing sector.

Challenges housing providers face when assessing solar opportunities

For social housing providers, the barriers to solar installation are often less about the technology itself and are more about funding, physical constraints and resident attitudes. While solar PV is a relatively mature technology with well-established benefits, successfully delivering installations across large and diverse housing portfolios can be complex. Housing providers must balance financial viability, asset management considerations and resident engagement to ensure projects deliver value for both the organisations themselves and the residents.

Upfront cost and funding constraints

Although solar can reduce resident energy bills, and support the journey to Net Zero, installation still requires significant capital investment. Housing providers are often balancing decarbonisation programmes against competing priorities.

A further challenge is that the main benefit of solar PV is often realised by residents through lower electricity bills and improved energy affordability. While housing providers benefit from supporting their residents with fuel poverty reduction, improving EPC ratings and progressing towards decarbonisation targets, these benefits can be more difficult to compare directly with the immediate costs of installation and programme delivery.

Additional costs may also arise from:

- Roof repairs or replacement works required before installation.
- Upgrading existing electrical infrastructure.
- Grid connection constraints that require reinforcement works.
- Ongoing monitoring, maintenance and resident engagement activities to ensure long-term performance.

Roof suitability and building constraints

Not every home is technically suitable for solar PV, and housing providers often need to undertake detailed surveys before determining whether installation is feasible. Many social housing portfolios contain a mix of property types, ages and construction methods, creating varying levels of complexity across the stock.

Common issues include:

- **Poor roof orientation or excessive shading** from neighbouring buildings, trees or other structures, reducing the amount of electricity that can be generated.
- **Ageing roofs that require replacement before panels can be installed**, making solar uneconomical until wider maintenance works are completed.

- **Structural limitations**, particularly within older housing stock where roof structures may not be capable of supporting additional loads without reinforcement.
- **Complex ownership arrangements**, particularly where leaseholders occupy properties within mixed-tenure blocks.
- **Planning or heritage restrictions** affecting listed buildings or properties located within conservation areas.
- **Limited electrical capacity** within the local distribution network, potentially requiring expensive upgrades before installations can proceed.

Resident attitudes

Resident engagement can be one of the most significant challenges to successful solar deployment. Even where funding is available and a property is technically suitable, projects can be delayed or disrupted if residents are reluctant to participate.

Some residents may be concerned about the disruption associated with installation work, including scaffolding, contractor access requirements and temporary inconvenience during electrical upgrades. Others may be sceptical about the potential benefits, particularly if they have limited experience with renewable technologies or have previously experienced unsuccessful maintenance programmes.

Common concerns include:

- Misunderstanding how solar technology works.
- Uncertainty about whether energy bill savings will be realised.
- Perceived increases in rent or service charges.
- Concerns regarding ongoing maintenance and responsibility for repairs.
- Lack of trust in housing providers or contractors delivering the works.
- Anxiety about changes being made to their homes.

Housing providers can also face access issues where residents decline surveys or installation appointments, making programme delivery more difficult and increasing costs. Effective communication through the clear explanation of benefits and engaging with the residents early are important to achieving high participation rates that enable installations of solar PV.

Ultimately, while the technology is proven, overcoming financial pressures, housing stock constraints and resident concerns remains essential to unlocking the full potential of solar across the social housing sector.

Supply chain skills and capabilities

For supply chain organisations looking to support the growing solar PV market in social housing, success depends on more than the capacity to install alone.

Housing providers are looking for those that can assess opportunities, manage risks, engage residents and deliver high-quality installations at scale.

Theme	Why it matters?	Example skills
Technical design and surveying	A robust assessment and design process helps to make sure systems are technically suitable, maximise generation potential, and deliver the best value for both residents and landlords.	• Roof condition and structural assessments • Solar PV system design and specification • Electrical load and consumption analysis • Site surveying and shading assessments
Installation and Electrical Competence	High-quality installation is essential for system performance, safety, reliability and achieving long-term resident benefits.	• Solar PV installation • Qualified electrical installation and testing • Working at height and roof safety • Testing, inspection and certification
Compliance and Quality Assurance	Housing providers need confidence that installations meet industry standards, funding requirements and expected performance outcomes.	• MCS compliance knowledge • Installation auditing and inspection • Handover documentation • Health and safety management • Warranty management
Resident Engagement and Customer Service	Resident understanding and cooperation are critical to successful delivery, helping minimise disruption and maximise the benefits households receive from their solar systems.	• Appointment scheduling and coordination • Managing resident concerns and expectations • Providing user guidance and training

Conclusion

Solar PV is becoming an increasingly important component of housing decarbonisation programmes, helping housing providers reduce carbon emissions, improve EPC ratings, support residents with rising energy costs and enable the transition to low-carbon heating. As investment in solar continues to grow across the social housing sector, opportunities for the retrofit supply chain extend far beyond installation alone, encompassing surveying, design, compliance, resident engagement, maintenance and long-term asset management.

For supply chain organisations, success will depend on understanding how solar fits within wider whole-house retrofit strategies and developing the skills, capabilities and partnerships needed to support housing providers throughout the project lifecycle. Organisations that can combine technical expertise, strong resident engagement, high-quality delivery and robust compliance processes will be best positioned to support future solar deployment and play a key role in delivering warmer, more energy-efficient and lower-carbon homes.

Podcast: All RISE podcasts are available here.

Podcast: "Heat pumps in retrofit schemes" available here.

Masterclass: All RISE masterclasses are available here.

Masterclass "Solar Sharing with Allume" available here.

Advice pack: All RISE advice packs available here.

Advice pack: "Solar Pholtovoltaic in domestic retrofit" available here.

This pack aims to share insights, good practices, and lessons learned from the sector. It is intended for informational purposes only and does not constitute as recommendations or endorsements of specific suppliers, products, or services or as legal advice. Please always check the latest regulations.

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