Sunsave

The Electric Roof Project

Pilot Phase Final Report

For the Green Home Finance Accelerator

Dec '23 -Feb '25

Electric Roof Project Pilot Phase Final Report

Table of Contents

Table of Contents 2
Executive Summary 4
Introduction 4
Key Dates 4
Grant Amount 5
Geographic Scope 5
Pilot Objectives 5
Barriers Addressed 6
Consumer Impact 7
Outcomes and Learnings 8
1. FCA Approval Process 8
2. Length of the Sales Cycle 8
3. Efficiency of the Sales Funnel 9
4. Building a Resilient Supply Chain 9
Readiness for Commercial Deployment 11
1. Pilot Project Summary 13
How These Requirements Shaped the End-Product 15
2. Pilot Timeline 16
Innovation and Partnerships 17
3. Integration and Utilisation of Technology 17
4. Integration of Design or Process Innovations 18
5. Pilot Partnership Learnings 19
6. Governance Frameworks 20
Pilot Product Components 22
7. Advice and Guidance utilised throughout the Pilot Phase 22
8. Installer Integration 26

9. Verification Processes and Quality Assurance in the Delivery of the Product/Service 27
Pilot Product Marketing and Market Penetration 30
10. Market Testing, Deployment and Distribution of Product/Service 30
11. Market Penetration 33
12. Customer Sales Success Metrics 34
The Customer Experience 40
13. Customer and Behavioural Insights through the Delivery of Product/Service 40
Outline of consumer/user research 40
Customer Needs and Market Segments 42
Customer Motivations and Journey 43
Engagement and Installation of Low Carbon Measures 43
Barriers to Engagement and Consumer Decision-Making 43
Lessons from Customer Pain Points and Future Implications 44
14. Commercial Viability 44
15. Final reflections 46
Summary of Key Insights 46
Final Conclusions 47

Executive Summary

Introduction

The Green Home Finance Accelerator (GHFA) Electric Roof Consortium, led by solar subscription provider Sunsave, in partnership with nationwide electrical installation specialist AES, set out to develop and pilot a novel 'Solar-as-a-Service' (SaaS) proposition for residential rooftop solar. This innovative product, presented to customers as the 'Sunsave Plus' solar subscription, was piloted with 110 customers during the Project. Through the Electric Roof Project, the Consortium aimed to address key barriers to solar adoption, such as high upfront costs, perceived risks, and lack of trust in the market. The project aimed to make rooftop solar accessible to all UK homeowners by offering a high-quality solar PV + battery system installation at no upfront cost, with payment in the form of a single monthly subscription fee. The subscription includes a full package of insurance, system monitoring and maintenance services, to ensure the continued operation of the system while the customer is making repayments. The innovative long-term nature of the financing enables the monthly subscription fee to be competitive with the traditional electricity bill, with many customers therefore saving money each year on a net basis after signing up for Sunsave Plus.

Key Dates

The following details the start date, product launch date, and end date of the Electric Roof Project, including key rollout and evaluation milestones.

- **Start Date:** December 2023
- **Product Launch Date:** January 2024
- **End Date:** February 2025
- **Milestones:**
    - MS1: First pilot installations (Month 3)
    - MS2: Pilot installations in progress; learnings from participant recruitment and install quality; Asset register Minimum Viable Product (Month 6)
    - MS3: Full learnings from consumer advice journey and demo of tooling (Month 10)
    - MS4: External financing; Monitoring platform (Month 13)
    - MS5: Evaluation and project close (Month 15)

Grant Amount

The Electric Roof Project was awarded a £1,968,518 grant by the Pilot Phase of the Department for Energy Security and Net Zero's Green Home Finance Accelerator programme (part of the Department's £1bn Net Zero Innovation Portfolio).

The overall total project cost was £3,357,119. Please see Fig. 1 for further details of project costs.

	M1	M2	M3	M4	M5	Total
Total Project costs	£ 627,704	£ 620,363	£ 961,581	£ 683,802	£ 481,192	**£ 3,357,119**
...of which Sunsave	*£ 606,273*	*£ 528,231*	*£ 881,984*	£ 683,802	*£ 402,751*	**£ 3,071,458**
...of which AES	*£ 14,538*	*£ 92,133*	*£ 79,597*	*£ 0*	*£ 50,958*	**£ 251,286**
Total Grant to be claimed	£ 371,033	£ 363,005	£ 568,989	£ 410,281.45	£ 267,130	**£ 1,968,518**

Figure 1: Total project costs (divided between Sunsave and AES) and the total grant to be claimed for the project.

Geographic Scope

England and Wales were targeted for the initial rollout of the Electric Roof project's solar-as-a-service proposition. Sunsave aimed to keep geographic coverage broad, to maximise potential for customer recruitment, and to ensure the project could demonstrate the potential of the innovation to make solar accessible to all households in the UK. Scotland and Northern Ireland were excluded from the trial due to installer coverage and regulatory differences, but Scotland represents an immediate opportunity for expansion after the conclusion of the project.

In terms of the supply chain for the product, the labour supply chain was predominantly developed in the UK, however some offshore outsourcing of solar design work was trialled towards the end of the project. The solar hardware supply chain is fully international, with the majority of manufacturers for both photovoltaic (PV) modules and battery/inverter kits being based in China.

Pilot Objectives

The objectives for the Electric Roof Project were:

1. To prove there is sufficient customer appetite for the solar-as-a-service business model
2. To develop a scalable operation for delivering it
3. To evidence this to financial institutions in order to raise the external debt financing required to support commercial viability

Sunsave's green finance product is intended for mass market adoption among homeowners and so is not restricted to specific domestic market segments. Indeed,

Sunsave have found evidence of solar-as-a-service suitability for a wide range of households across multiple demographics and house types.

The outlined objectives directly address opportunities within the green finance sector by demonstrating the market potential for solar adoption among UK homeowners. According to the Housing Stock of the United Kingdom Report (BRE Trust), there are approximately 28 million households in the UK, of which an estimated 16.2 million are owner-occupied and have the necessary roof space for solar panel installation. Current data from the Office for National Statistics (ONS) indicates that approximately 1.5 million homes have already adopted solar technology, leaving an addressable market of nearly 15 million owner occupied homes.

Barriers Addressed

User and market research during the Discovery Phase identified three key barriers to rooftop solar adoption: high upfront costs, concerns over maintenance and reliability, and a complex, trust-deficient purchasing process.

- **High upfront costs:** customers are looking for ways to save on their energy bills, and green technology presents a potential route to do this. However, the upfront cost is a barrier to many.
- **Maintenance concerns:** the former Department for Business, Energy and Industrial Strategy (BEIS) 2021 "UK Rooftop Solar Behavioural Research" report identified maintenance risk as a key barrier to solar adoption through their consumer research.
- **Trust concerns:** the basic level of knowledge about solar equipment and installation is low, the market is fragmented, and the buying journey is difficult. Customers feel vulnerable to mis-selling.

Additionally, securing long-term financing for residential solar posed challenges historically, due to high interest rates, concern around potential future home moves, and/or the negative perception of alternative long term financing agreements with roof lease requirements, due to widely reported issues regarding the impact on mortgage finance for the property.

To address these barriers, Sunsave developed a zero upfront cost solar subscription model that includes maintenance, reducing financial concerns and taking the risk out of the purchasing decision for the consumer. A dedicated Solar Advice Hub was created to educate consumers and support the purchasing decision through provision of transparent, unbiased information about solar PV as a product. Financing was structured as an unsecured loan to avoid roof lease complications, ensuring access to long-term debt. This financing structure helped the consortium overcome the potential objection from customers around what happens when they move home, as it enabled flexibility to either pass the subscription onto an incoming home buyer, or alternatively

pay off the balance of the contract with no fees in order to pass a complete solar system onto the next owner (included in the purchase price).

The biggest challenge was building consumer trust, requiring extensive refinements to the sales approach and the Sunsave Plus proposal to clearly communicate the product's benefits and financing structure. For example, clearly highlighting the potential for year 1 savings with the product, or showing Sunsave's Trustpilot score more prominently on the proposal.

Consumer Impact

The Sunsave Plus solar-as-a-service product provides access to the bill-saving potential of solar to a much broader segment of homeowners in terms of income, and has the potential to make solar accessible to every household in the UK.

Sunsave Plus removes the upfront cost and reduces the size of the monthly repayments to a level where they are cost-competitive with the traditional electricity bill. Given the fixed nature of the payments, the consumer can effectively freeze a large portion of their bill to insulate themselves from electricity price inflation.

In order to make this model accessible to consumers, Sunsave had to first integrate the financing and retrofit processes together into a single, effortless sign-up journey. In cooperation with AES, the lead installer of the Sunsave Plus product and partner under the Electric Roof Project Consortium, a streamlined delivery process for installing high-quality, verified solar and battery installations was developed, according to a strict process to enable external financing to be raised against the installed systems.

Through integrating these journeys into one simple process for the consumer, Sunsave Plus can improve the accessibility of green home financing, opening the possibility of solar retrofit to a much wider range of consumers who would otherwise be unable or unwilling to invest in solar.

Accessibility was further improved by enhancing Sunsave's underwriting policy to widen the eligibility criteria of the product:

1. Age: Initially the product required both applicants to be under 55 years of age; this was extended to require one applicant under 65. The key challenge to relaxing this constraint was proving from a compliance and credit risk perspective that it was sustainable and moral to serve these older customers, with a key focus on them having a higher chance of experiencing vulnerability during the 20-year term of the contract. This was overcome by enhancing the ways consumers could disclose vulnerability both during origination as well as on an ongoing basis via annual survey, as well as training all customer-facing staff to identify and manage vulnerability.

2. Credit Scores: Initially the product required one applicant with a credit score >660; this was relaxed to 620. Credit score is important as it helps estimate credit risk, which is a key focal point for institutions when assessing whether they wish to provide finance to Sunsave. This change was enabled through updating the method for credit risk calculation. Initially, data from only the last cohort provided by TransUnion was used. However, 24- and 48-month rolling averages were later adopted as this was deemed a fair approach towards smoothing out temporal fluctuations. In addition, as an increasing number of systems were sold, it was possible to focus on overall credit risk across the portfolio. More customers in lower score bands could then be onboarded as sensitivity to credit scores of individual customers reduced.

Outcomes and Learnings

The product pilot provided valuable insights into the challenges and opportunities associated with launching an innovative green finance solution.

1. FCA Approval Process

One of the most significant learnings from the pilot was the extended timeframe required for Financial Conduct Authority (FCA) approval. Given the innovative nature of the green finance proposition—the first of its kind in the UK—obtaining regulatory approval was a complex process. The FCA required an in-depth understanding of the product, leading to extensive engagement over a period longer than initially anticipated. Over the course of 12 months, Sunsave responded to over 150 queries aimed at proving the product met the FCAs Consumer Duty standard, before achieving final approval in October 2023. This experience highlighted the need for early and detailed regulatory engagement for novel financial products.

2. Length of the Sales Cycle

At product launch, Sunsave identified that the sales cycle was significantly longer than that of a traditional solar installation, averaging approximately 4 weeks compared with 1-2 weeks for traditional solar. This was primarily due to the complexity of the financial approval process and the novel nature of the product, which required additional consumer education.

To address this, product development efforts were focused on streamlining and digitising the sales journey. Key improvements included automating credit decisioning, loan origination, and management processes, as well as optimising the efficiency of the sales team. Additionally, shifting the majority of the technical installation assessment to the post-contract stage further reduced delays.

Sunsave have also invested significantly in Solar Advice Hub content so that consumers can find detailed answers to the most common questions and build trust in the product. These enhancements collectively contributed to a >50% reduction in the sales

cycle over the pilot period, reaching an all-time low in February of just 14 days on average.

3. Efficiency of the Sales Funnel

Improving the efficiency of the sales funnel remained a consistent challenge throughout the pilot. Two key bottlenecks—lead scoring and customer journey design—were addressed through strategic outsourcing and digitisation. By outsourcing both of these tasks, sales representatives were able to focus more on direct customer engagement, thereby increasing their daily call capacity. Furthermore, product development efforts focused on enhancing the digital customer journey, including the introduction of a customer portal and automated credit approvals. These initiatives significantly improved the efficiency of customer onboarding and conversion.

4. Building a Resilient Supply Chain

A robust and adaptable supply chain was essential to scaling installations effectively. Installers benefited from targeted support in upskilling and learning new "bankable" installation techniques, which require a combination of high-quality installation practices coupled with detailed photographic evidence of the install for quality verification.

A key strategy for ensuring installation quality and efficiency was diversifying Sunsave's installer base to improve coverage in all locations in the UK. Four additional installation partners were successfully onboarded through a rigorous due diligence process during the course of the project, verifying technical qualifications and insurances before in-depth auditing of a set of trial jobs with the installation partner.

The level of quality tracking was enhanced from a high-level overview to the installation partner (and even individual engineer) level, with performance data shared with installers to help them manage and improve their teams. Additionally, Sunsave facilitated training sessions in collaboration with manufacturers, further strengthening installation standards. These efforts led to increased installation volumes, improved quality, and greater transparency and cooperation with installers. As a result, Sunsave's ability to secure external financing was significantly enhanced.

These learnings have directly informed ongoing product and operational strategies, positioning Sunsave for greater efficiency and success in the future.

Most Successful Aspects of the Pilot

1. **Product Design**

One of the most significant successes of the pilot has been the product design, which has effectively addressed major barriers to consumer adoption of solar and battery technology. By implementing an innovative financing structure, Sunsave have eliminated the need for upfront costs, enabling customers to begin saving on their energy bills from day one. This financial model has proven to be a crucial factor in

making solar energy accessible to a wider audience, particularly those without the savings required for an outright purchase of a photovoltaic (PV) system.

2. **Integration of Consumer Advice**

Another major success of the pilot has been the integration of consumer advice throughout the sales process. Historically, solar savings modelling has been complex and, in some cases, misleading, leading to well publicised mis-selling accusations and successful claims made against solar finance providers. This has led to consumer hesitation and mistrust in the market. To address these concerns, we have employed best-in-class software to accurately model each PV system's potential savings and performance.

Each customer is assigned a dedicated advisor who provides clear and detailed explanations of complex solar concepts over the phone, coupled with taking them through a personalised solar design for their home. Furthermore, the Solar Advice Hub offers easily accessible answers to common concerns, empowering customers to make informed decisions. This structured approach to consumer education and support has played a pivotal role in building trust and ensuring that customers fully understand the benefits and risks of the solar-as-a-service product.

Unexpected Results

The primary aims of the project have largely been achieved, with a proposition successfully taken to market and with hypotheses about the attractiveness of the business model for raising institutional financing largely confirmed.
There were three main unexpected results from the project:

1. The process for raising external financing to support the Sunsave Plus proposition has taken longer than originally anticipated. In the project plan, Sunsave anticipated raising financing by Q4 '24. However, whilst substantial progress has been made towards financing raise at project close, including preparation of necessary due diligence materials, Sunsave are still pursuing completion of the external financing raise. Uncertainty around this timeline delayed the growth of Pilot phase installations.
    a. The primary cause of this delay was due to the length of the due diligence process, and the requirement to have sufficient processes and technology in place before engaging in due diligence with financial institutions; institutional lenders of the type that would support a proposition like Sunsave Plus typically expect to finance large, established businesses with fully-fledged systems for consumer finance provision and install quality verification.
    b. Engagement with financial institutions and selection of an appropriate financing partner has also been a lengthy process.
2. Selecting the right hardware (namely panels, inverters, and batteries) for Sunsave Plus was even more essential to the viability of the proposition than previously thought.

   a. The initial battery hardware deployed proved to have a significant number of maintenance issues, and it was more challenging than expected to get proper support on these from the manufacturer. Consequently, Sunsave tested other providers of inverters and batteries and found a significant increase in reliability, which gave higher confidence in the long-term functionality of the hardware.
   b. Sunsave also selected a panel manufacturer with a fully traceable supply chain, which as expected has proven essential in partnership and financing conversations due to wider Environmental, Social, and Governance (ESG) industry concerns about the solar module supply chain.

3. Whilst the primary driver of signing up to Sunsave Plus was found to be the potential to make 'day one' savings as expected, a surprisingly high number of customers were still keen to take the product without sufficient generation to make savings straight away.
   c. This segment of customers tended to either subscribe to the green benefits of solar, or believed the fixed-price guarantee with Sunsave Plus would protect them from future energy price rises.
   However, this segment was not sufficiently large to change the focus of targeting, which was on customers who could make 'day one' savings.

Readiness for Commercial Deployment

At the start of the Electric Roof project, no Sunsave Plus systems had been installed, and the systems and processes required to offer a subscription solar package were in prototype stage. Sunsave have now installed over 100 Sunsave Plus systems as part of the project (between Dec '24 and Feb '25). The processes necessary for offering convenient consumer finance linked with a verified quality install have developed to the point where the Sunsave Plus product is close to readiness for full-scale commercial deployment.

Whilst the vast majority of components required for commercial deployment have been built, a number of remaining critical factors need to be addressed before fully scaling up the rollout of the proposition.

Firstly, the technical systems that sit behind the consumer credit provision, quality-verified installation delivery and regulated sales journey need further development work to handle the true scale that the solar-as-a-service model requires for commercial readiness. Each system independently has been developed significantly through the project, but it is intended to continue post-project with further work to integrate these systems and lay the foundation for commercial scale.

Secondly, whilst Sunsave's quality verification systems have developed through the project and are well adapted for spotting installation errors, the rate at which the

installers correctly complete the install first time – the ‘first time fit rate’ – still lags slightly behind that needed to cost-effectively scale the proposition. Sunsave have identified the solution to this lies in diversifying across a wider base of installation partners and ramping partners volume up and down dependent on the quality with which they are currently delivering.

Finally, through the ‘external financing’ work package of the project, Sunsave have learned much more about the detailed terms and requirements of the external financing available to fund solar-as-a-service propositions like Sunsave Plus. Sunsave will be continuing exploration in this area after the project, and intend to put in place the external financing required in the near future after project close.

Overall, with the development of Sunsave Plus through the Electric Roof Project, Sunsave have created not just a single product, but a potential blueprint for how green home assets such as solar can be financed, through a combination of long-term consumer financing coupled with in-life monitoring and maintenance. Sunsave plan to broaden the product range funded through the Sunsave Plus subscription to go beyond just solar to include EV chargers and heat pumps. Sunsave anticipate the success of this model will also inspire other innovations in green home finance based around variants of the Sunsave Plus financing structure, allowing the consumer to own the asset whilst removing maintenance risk and spreading the cost into affordable monthly payments.

Main Report

Project Overview

1. Pilot Project Overview

Sunsave's 'solar-as-a-service' green home finance product, Sunsave Plus, provides homeowners in England and Wales with access to a rooftop solar and battery storage system with no upfront costs. Customers pay a single monthly subscription that covers the financed system, maintenance, and a generation guarantee. The product design and scope are in-line with the plan outlined at the end of Sunsave's Green Home Finance Accelerator - Discovery Phase project, and includes:

- High quality solar and battery installation with zero upfront cost;
- a fixed-sum loan agreement with affordable monthly repayments spread over up to 20 years;
- a comprehensive maintenance and servicing package across the full lifetime of the agreement;
- proactive monitoring and management to ensure continued high performance of the system;
- all-risks insurance policy over the solar asset.

A typical homeowner may sign up to Sunsave Plus, have a solar and battery system installed at their home, and thereby replace a significant portion of the variable payments they would have made to an energy supplier with a lower, fixed payment to Sunsave. In short, a Sunsave Plus customer may achieve 'Day One Savings' through signing up for the solar subscription. Day one savings are dependent on the customer being able to fit at least a moderate number of panels on the roof, and/or having a large electricity consumption that can be offset by taking advantage of a battery in conjunction with time-of-use tariffs.

Where a customer makes day one savings with the Sunsave product, they are also likely to make much greater savings in future years, given the likelihood of future electricity price increases coupled with the fixed nature of the Sunsave Plus monthly payments.

These savings are secured by Sunsave's monitoring and maintenance Guarantee, which ensures the system continues to operate correctly and generate savings for the customer across the full 20-year lifetime of the product (customers on Sunsave Plus are guaranteed at least 80% of the initial generation of the system at the end of the 20 years).

Through structuring the product based around a long-term consumer loan, Sunsave Plus provides maximum flexibility for customers wishing to exit the agreement at home move. Customers then have the option to either transfer the loan and subscription payments to the new homeowner, or to pay the outstanding principal balance.

The Electric Roof Project was carried out by a consortium between Sunsave, the lead partner, and AES Smart Metering Ltd, a solar installation and smart metering business located in South East London. The project aimed to develop, pilot and iterate the Sunsave Plus subscription solar model with an initial group of 150 customers, in order to assess this business model's suitability for wider rollout in the UK.

The primary target group for Sunsave Plus consists of UK homeowners with suitable properties for solar installation—specifically, owner-occupied houses (excluding flats), which total approximately 15 million. Based on internal qualitative surveys of Sunsave customer leads (c.1,600 respondents), it is estimated that around 18% of this addressable market, or approximately 2.7 million homes, fall within the core target audience.

Key customer segments include:

- Homeowners with high electricity usage and bills, maximising savings potential.
- Properties with larger roof space, allowing for more efficient solar PV systems.
- Households in southern UK regions, where higher irradiance improves solar efficiency.
- Customers with limited upfront capital for home improvements.
- Those seeking a hassle-free solar solution with full management, monitoring, and maintenance.

Sunsave targeted customers through a variety of marketing techniques including Google Search ads and producing educational content on solar and related topics. Furthermore, external partners (including Centrica) promote Sunsave to their customer base and introduce customers to the Sunsave Plus product (see Section 15 for further details on this partnership).

Extensive user and market research conducted during the Discovery Phase—including over 20 qualitative interviews and a quantitative survey of approximately 100 respondents—along with a literature review of key sources such as the former BEIS 2021 Rooftop Report[1], identified three primary barriers to the widespread adoption of rooftop solar:

1. High upfront costs – Many consumers lack sufficient savings to cover the initial investment required for solar panel installation.
2. Perceived risk and maintenance challenges – Concerns over installation quality, potential system failures, and the difficulty of accessing reliable and affordable repair or replacement services deter adoption.

[1] UK Rooftop Solar Behavioural Research, Department for Business, Energy and Industrial Strategy, 2021

3. Trust and complexity in the purchasing process – Limited consumer knowledge, a fragmented market, and a complex buying journey contribute to a lack of confidence. Many potential buyers feel vulnerable to misinformation and mis-selling.

There are also barriers for solar businesses securing long-term external financing, such as the issue of home move and resulting consequences on mortgages for roof lease agreements.

All these key barriers have been overcome during the project through the design of the product. The high upfront cost of solar was mitigated through offering a solar subscription product with zero upfront cost. Perceived risk was mitigated through inclusion of full maintenance coverage and insurance. Trust in the purchasing process was addressed through Sunsave's build of a comprehensive Solar Advice Hub that educates consumers on the purchasing process and solar market.

Building trust with consumers has been the most challenging barrier to overcome and has required extensive iterations on the sales pitch and resources, including the Sunsave Plus proposal, in order to explain the product and give reassurance on the financing aspects.

The regulatory/ industry bodies engaged for the rollout of the product included the Financial Conduct Authority (FCA), as well as solar-related bodies such as the Energy Performance Validation Scheme (EPVS), Home Insulation and Energy Systems Contractors Scheme (HIES) Consumer Code, and the Micro Generation Scheme (MCS).

FCA approval for the loan was required prior to launch of the product. FCA regulation played a critical role in shaping the consumer advice and sales journey. Specifically, it ensured that the proposition was fairly described to customers in alignment with Consumer Duty principles. This led to the development of a sales process that prioritises transparency, clarity, and fairness, ensuring that customers fully understand the product offering and its suitability for their needs.

How These Requirements Shaped the End-Product

1. Fair and Transparent Communication – The need to comply with Consumer Duty meant refining marketing materials, sales scripts, and online content to ensure they provided clear, balanced, and non-misleading information.
2. Enhanced Customer Understanding – The journey was designed to support informed decision-making, avoiding jargon and ensuring key features, risks, and benefits were easily digestible.
3. Suitability and Appropriateness Checks – The sales process incorporated assessments to ensure recommendations aligned with the customer's needs, reducing the risk of mis-selling.

4. Compliance and Oversight – Internal governance processes were strengthened to monitor adherence to these standards, ensuring continuous compliance and proactive issue resolution.

By integrating these regulatory requirements into the sales journey, Sunsave ensured that the end-product was not only compliant but also customer-centric, driving both trust and long-term value.

2. Pilot Project Timeline

Fig. 2 provides a visual timeline of the Electric Roof Project, with notable milestones including the Project Start date (18th December 2023), Product Launch date (24th January 2024) and Project Close (28th February 2025).

This timeline is unchanged from the original plan and there were no significant delays to the five predetermined milestones.

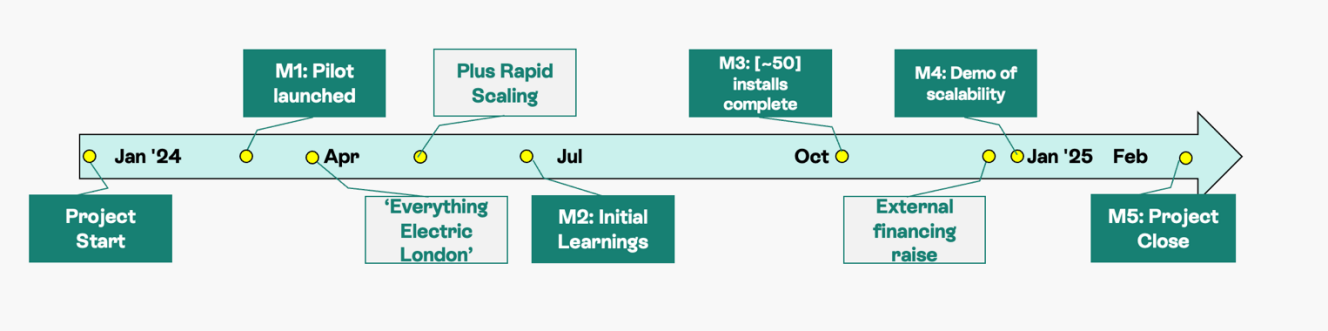

Figure 2: Timeline of Electric Roof Project

The Pilot phase of the Electric Roof Project followed the 6-month Discovery Phase, during which the Sunsave Plus proposition was researched and initial iterative development work completed.

Innovation and Partnerships

3. Integration and Utilisation of Technology

Whilst the Sunsave Plus solar subscription proposition is a first-of-a-kind innovation in the UK market, much of the innovation stems from integrating existing technologies coupled with novel financial and business model structuring. The commercial model is however complex and hence requires advanced technology systems to sit behind it and enable scaling up of the proposition.

At the heart of Sunsave's architecture is the Orchestration Layer, which is known as SOL. This acts as a middleware to connect various disparate tools together in a seamless platform.

Firstly, Sunsave focused on building out the key components of the sales journey. This included configuring Sunsave's Customer Relationship Management tool (CRM) - a third party off-the shelf solution for customer communication handling - and building a website[2] and customer account, which connected via SOL to existing third party tools for key steps such as creation of solar designs and contracting.

Secondly, a Finance Platform was developed and integrated into the sales flow via SOL. This enables Sunsave to create finance quotes for the solar systems designed for consumers, underwrite them to confirm who is eligible, process payments and manage the loans on an ongoing basis. This platform includes a number of user interfaces and automations, as well as orchestrating connections to specialist third party tools such as Credit Reference agencies, the Land Registry (for home ownership verification) and payments processing software.

The other key technology that was developed during the Project to enable future scaling up of the Sunsave Plus model is the Sunsave Monitoring Platform. This platform connects via a software layer to each of Sunsave's solar and battery systems, and gathers data at regular intervals to ensure that even a large portfolio of devices can be kept operational, whilst minimising overhead. The solution developed was an Application Programming Interface (API)-based monitoring platform that harvests data from systems in the field, and automatically alerts based on set criteria to detect system issues.

For a complex, multi-faceted proposition like Sunsave Plus, there are always multiple areas where technology could be used to accelerate uptake of the product. The key technological learning from this project is about the importance of prioritisation in building technology. With limited resources in Sunsave's product and engineering team, choosing the right things to build, and generally building things just-in-time for when

[2] www.sunsave.energy

they were needed, was key to avoiding wasted work and building the most impactful software tools.

This process was managed through use of Notion project management software, set up according to Agile principles, with a weekly product planning meeting to prioritise between tasks. Additionally, following an iterative approach to technology development and waiting for customer, or team feedback, on each technology solution was essential.

In developing the Finance Platform, Sunsave faced the challenge that many of the industry standard loan management software solutions are designed for enterprise businesses. A significant amount of effort therefore was invested into customising existing solutions and coupling these to Sunsave's more agile, start-up oriented software stack.

Following the project, Sunsave intend to build further links between the different tech platforms created under the Electric Roof project, such as between the Finance Platform, Monitoring Platform and Sunsave's CRM, to ensure that we can scale the proposition whilst maintaining data integrity and accuracy at each stage of the installation journey.

4. Integration of Design or Process Innovations

The flagship product from the Electric Roof project, Sunsave Plus, was developed through extensive user-centric design, built on the foundation of research conducted during the Discovery Phase of the project.

During the Discovery Phase, the consortium found that customers were concerned about two primary aspects relevant to a solar subscription product: the rising cost of energy, and the maintenance risk of having solar installed.

These user needs were taken into account in the design of the Sunsave Plus proposition, which makes solar affordable through long-term financing, whilst removing the maintenance risk through a fully-fledged monitoring and maintenance guarantee (the Sunsave Guarantee discussed in the Pilot Project Summary section above).

User-centric design has further been incorporated in every detail of the Sunsave Plus sign-up journey and in-life experience. In order to explain the Sunsave Plus proposition to customers, a detailed 'Proposal' document was found to be required to act as an aide during consultation calls with prospective customers. In the development of the Sunsave Plus Proposal, Sunsave conducted extensive user testing to iterate from an off-the-shelf 3rd party solar proposal solution at the start of the project, into what is now a fully bespoke solar-as-a-service proposal that clearly lays out the benefits of the product to customers, allowing them to make a fully informed buying decision.

To conduct this research, Sunsave initially carried out trial consultations with test customers and quizzed them on how different aspects of the proposal had landed. Once sales of Sunsave Plus were underway, analysis of customer objections and

reasons for not buying the product, in addition to approaches such as A/B testing, and extensive call recording and listening informed further Sunsave Proposal development work. The key insight from this process was that clearly laying out the financial benefits of the green finance product, through comparison of the financing costs with the traditional energy bill, and showing how this evolves over the long term, was the essential towards driving conversion through the proposal.

Developing scalable operational processes was another important lever to enable delivery of the pilot Sunsave Plus installations and prepare the proposition for commercial scale. These included:

- Iterations on a technical survey of installations to ensure compliance with industry standards and adequate kit preparation. In the latest version this has included moving the majority of checks to after the customer has signed with us, to increase the speed of the sales journey.
- Monitoring processes for in-life customers for both the Minimum Viable Product (MVP) and 2.0 Monitoring Tools, to ensure we can deliver on Sunsave's commitments to proactively diagnose customer issues.
- Automating the sending of install information to partners in a streamlined workflow, using the photos customers have uploaded to their Sunsave account during the technical survey.

5. Pilot Partnership Learnings

Between the two Electric Roof Consortium partners, the full end-to-end journey for financed solar-as-a-service installations could be provided to Pilot customers. Sunsave took responsibility for development and distribution of the Sunsave Plus customer proposition. AES, the consortium partner, took responsibility for developing scalable processes for verifiable quality solar installs.

To make solar-as-a-service propositions commercially viable, it is essential that they can be delivered at scale. The intention of including an installation expert on the project was therefore to inform the technical and logistical side of handling solar installations in high volumes, whilst maintaining consistent and verifiable installation quality. AES, an existing partner of Sunsave, were an ideal choice given their experience delivering high volume smart meter installations coupled with a recent diversification into solar and battery installs.

The partnership has been successful in several ways, with some learnings for how consortia for similar projects could be improved in future. AES has successfully delivered a significant number of the Pilot installations, and provided verified quality documentation that has enabled Sunsave to progress the financing process whilst delivering a positive customer experience.

However, through the project, Sunsave has also learned that having a diverse network of installers is likely to provide more scalable and robust coverage for nationwide delivery of solar-as-a-service installs. One installer managing nationwide coverage has presented some challenges for AES, including engineer recruitment and kit delivery logistics. Additionally, when a main partner's quality dips in a certain area, it is important to have back-up installation partners who can pick up coverage there while quality recovers.

The other key lesson learned from the partnership is that the technology to manage installations at scale is a key part of the solar-as-a-service product, and hence needs to be housed centrally with Sunsave's other systems (such as the finance platform and customer CRM). Relying on installers to develop systems for installation planning, scheduling and quality management works at small scale, but as the number of installations has increased, Sunsave found that this is much more effectively managed through an internal delivery platform. Coupled with this, Sunsave have learned that it is a more effective division of responsibilities on the project when the installation partner is able to focus on installation operations. This allows Sunsave, as a more tech-driven business, to take the lead on development of technology to facilitate efficient scaling of the proposition.

Sunsave have incorporated these learnings while successfully delivering the main aims of the project. The consortium with AES, a UK wide electrical installations business, has ultimately been effective in delivering 100+ Pilot installations. Coupled with this, the partnership has helped deliver the Social Value aims set out at the start of the project through exposure to the more stringent financed solar requirements of solar-as-a-service. These requirements included detailed install quality verification, certification and training oversight of individual engineers, and advanced inventory management to ensure only Sunsave-authorised hardware is installed on site, which strengthened AES hiring, engineer training and supply chain management processes.

6. Governance Frameworks

The Electric Roof project team was structured from across the Sunsave and AES businesses, and required at various points a large number of Sunsave team members to successfully deliver each project milestone. This required extensive governance, to ensure that the aims of the project continued to be represented in Sunsave's business strategy.

The project was led by the Project Director, the Head of Operations at Sunsave, with a full-time dedicated Project Manager responsible for day-to-day running of the project. Weekly / fortnightly consortium meetings were conducted to ensure alignment between AES and Sunsave, in particular to ensure successful delivery of the Pilot installs.

Governance alignment between AES and Sunsave was largely successful during the Project thanks to regular meetings between the respective project teams. However, one

challenge did arise due to a change of leadership at AES. The incoming management team and new AES project leads had to rapidly get up to speed with the details of the project, which included quick familiarisation with the background to the GHFA programme as well as the solar subscription model itself. To overcome this, multiple in-person meetings were held with new AES management to ensure their project milestones would continue to be met, and we completed the project with minimal delays on the AES side.

The key decisions on the project were taken by the Project Director. However, given these were often also strategically important to Sunsave as a business, most decisions were discussed with Sunsave's co-founders, and in some cases, board of directors. The Project Director met with the cofounders weekly to update on project direction and discuss any decisions requiring input.

Through this process no significant governance issues were encountered on the Electric Roof project.

Pilot Product Components

7. Advice and Guidance utilised throughout the Pilot Phase

Benefits and customer journey

During the pilot a comprehensive suite of educational resources was provided to help customers understand the benefits the Sunsave Plus solar-as-a-service product and its associated buying journey. These included:

- Marketing collateral such as social media ads to generate awareness,
- Sales collateral like a digital customer proposal linked to the Open Solar tool, and explanatory PowerPoint presentations used during sales calls,
- The Solar Advice Hub on the Sunsave website. This became a key resource in addressing customer concerns and improving the efficiency of the sales team.

The pilot found these resources to be generally effective in educating consumers on solar as a technology, and the different purchase methods, including solar-as-a-service. The digital proposals, as seen in Fig. 3, helped customers visualise their solar setup and explain the novel financing method, while well-trained advisors played a crucial role in delivering clear explanations. The Solar Advice Hub became a vital tool in addressing questions throughout the sales process, ultimately helping drive signup to the product.

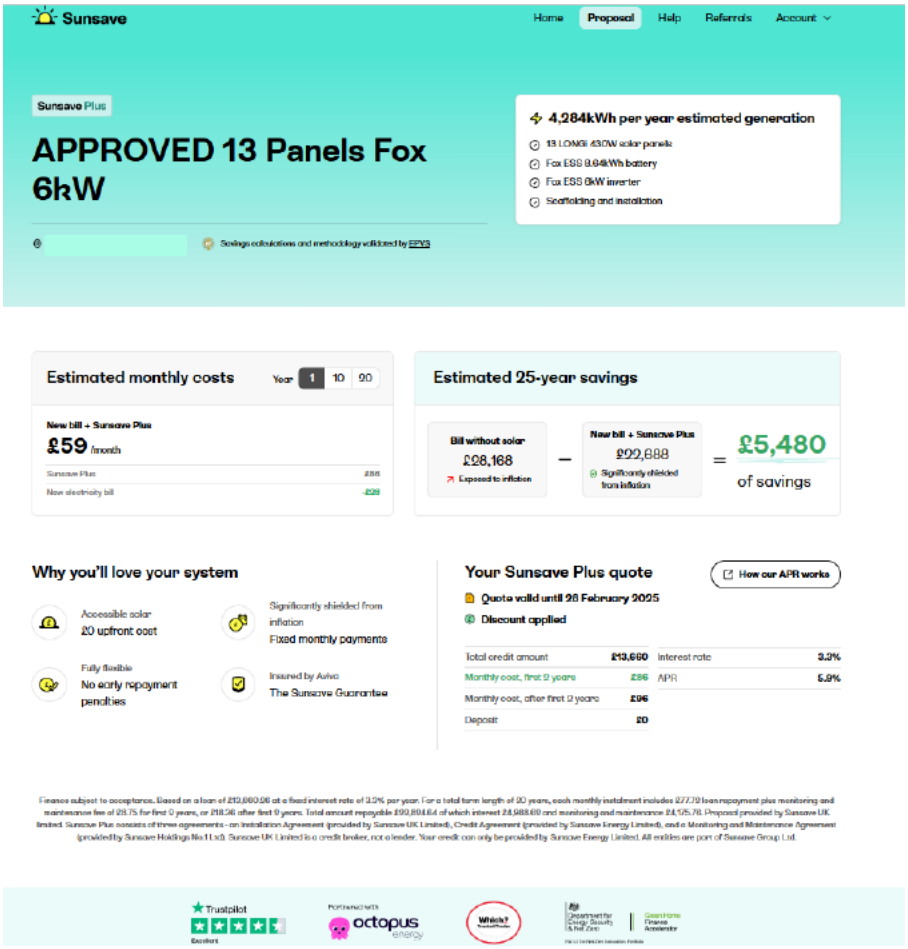

Figure 3: Front page of Sunsave's bespoke Solar-as-a-service sales proposal

Finance and retrofit advice

Advice and information on the solar-as-a-service product was presented to customers through bespoke Sunsave Plus customer proposals that outlined cost structures and expected savings, and guided consultations where advisors explained the financing process and system benefits. Further informative advice was provided to consumers in the form of the Solar Advice Hub on Sunsave's website, containing knowledge base articles detailing tariffs, solar hardware, and financial implications.

Customer understanding was measured through customer interviews conducted post-sale and post-installation, and follow-up interactions where advisors clarified key points and addressed any concerns.

Some challenges emerged during the pilot. Customers were often confused about payback periods, particularly in comparisons to rent-a-roof schemes. The fluctuating energy prices affected perceived value, which required adjustments in sales messaging. There were also varied levels of consumer financial literacy, necessitating tailored explanations. These challenges were addressed through enhanced sales

training, real-time adjustments to digital proposals, and continuous updates to the Solar Advice Hub.

Advice was tailored based on customer eligibility for Sunsave Plus financing, solar installation feasibility, energy consumption patterns and tariff selection. By working with a savings accreditation body, the Energy Performance Validation Scheme (EPVS), Sunsave have developed a transparent way of modelling savings to customers based on the generation of their system and the potential use of their battery in conjunction with a time-of-use tariff. Customers responded positively to personalised recommendations, which improved trust and engagement, and encouraged greater adoption of tailored tariffs, with many customers opting into optimised energy plans.

This tailored approach led to a smoother and more informed customer journey, reducing drop-offs and increasing confidence in the Sunsave Plus offering.

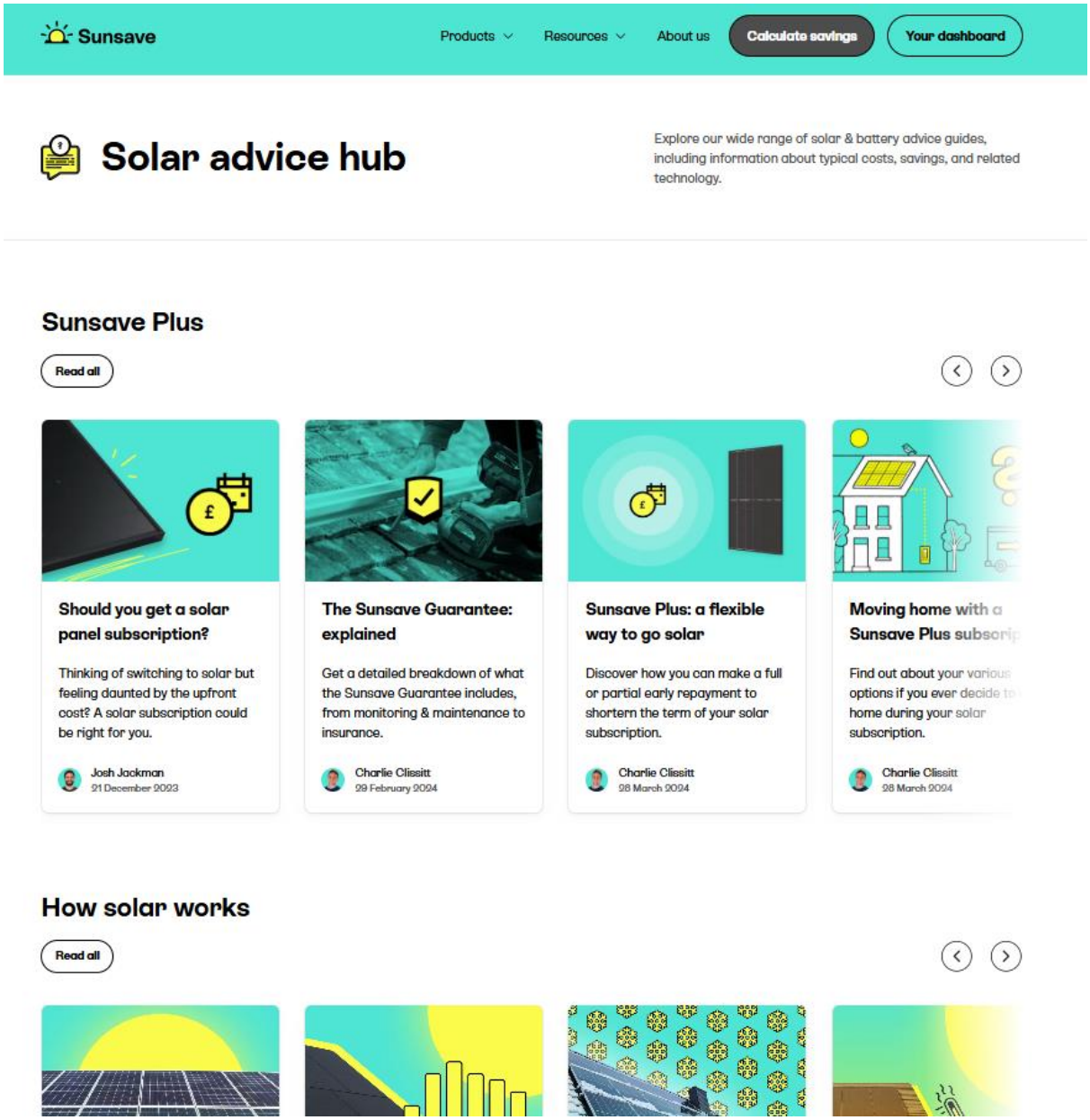

Figure 4: Sunsave's Solar Advice Hub

One of the highlights and key learnings of the project was the success of the Sunsave Solar Advice Hub, as seen in Fig. 4. Extensive consumer advice was created by Sunsave in the form of blog articles and explainer videos, hosted on Sunsave's website. Engagement with this consumer advice has been extensive, with the hub now having collected thousands of page visits per week. Encouragingly, we have been able to see in many cases customers click through a number of the advice articles before they sign the solar-as-a-service contract, indicating that these are helping customers make an informed buying decision.

The articles also play the role of dispelling myths and misconceptions about retrofit consumer finance, such as customer confusion with rent-a-roof schemes where the customer does not own the system.

8. Installer Integration

The Electric Roof consortium included AES, an installer of solar and battery systems, alongside Sunsave as the developer of the Sunsave Plus solar-as-a-service proposition. This increased the ability to manage installations in close collaboration with an installer.

AES were selected based on their experience managing smart meter installations at national scale, highlighting a commitment to quality and compliance that could be harder to achieve with smaller installation businesses. They took responsibility for hiring and onboarding electricians and roofers across the UK.

The key learnings from working with installers during the project were:

1. Engineer recruitment and retention can be challenging, especially when significant travel time is required to achieve national coverage.
    a. Even when engineers of the right quality are onboarded, extensive training is still required to ensure all of the elements of 'bankable' solar installations are learned.
2. Integrating the installation process within the financing journey has huge potential to create a streamlined green home financing customer journey – and has significant advantages over financing solutions that are separate from the installation experience (e.g. those that are provided as point-of-sale financing by installers making their own sales). Working with subcontracted installation partners makes installation quality easier to control, and Sunsave's development of an in-house sales journey ensures that FCA principles of Consumer Duty can be monitored and adhered to for every sale.
3. New hardware always comes with challenges. Sunsave switched main hardware provider for Sunsave Plus during the project, due to hardware with better functionality and flexibility becoming available. This has proved a good decision, however it introduced pain in the operational process due to installers learning the new hardware installation techniques. More training for installers on specific hardware should be given when introducing something new.

As the project has continued, and the reputation of solar-as-a-service has grown, larger numbers of installers have begun contacting and seeking to work with Sunsave. This has provided opportunities to diversify Sunsave's network, and allowed learnings on best practice from other installers to be transferred across the network to improve overall install quality and reliability.

9. Verification Processes and Quality Assurance in the Delivery of the Product/Service

Sunsave implemented a rigorous multi-stage verification process for solar PV and battery installations, ensuring high performance and compliance with industry standards.

The verification framework starts with a pre-installation remote assessment, which evaluates solar suitability, structural integrity, and logistical feasibility. This is followed by structured job preparation, where technical managers review installation plans, including cable routes, inverter placements, and safety measures.

On installation day, Sunsave utilises a digital workflow tool, as shown in Fig. 5, which guides engineers through quality control checks at multiple stages—before, during, and after installation. The Solar Installation Report, generated through the tool, documents key parameters, ensuring compliance with technical and regulatory standards. Post-installation, 10% of projects underwent physical audits, performed by Sunsave's qualified technical managers or independent third-party assessors. This approach ensured that installations met high safety, performance, and aesthetic standards.

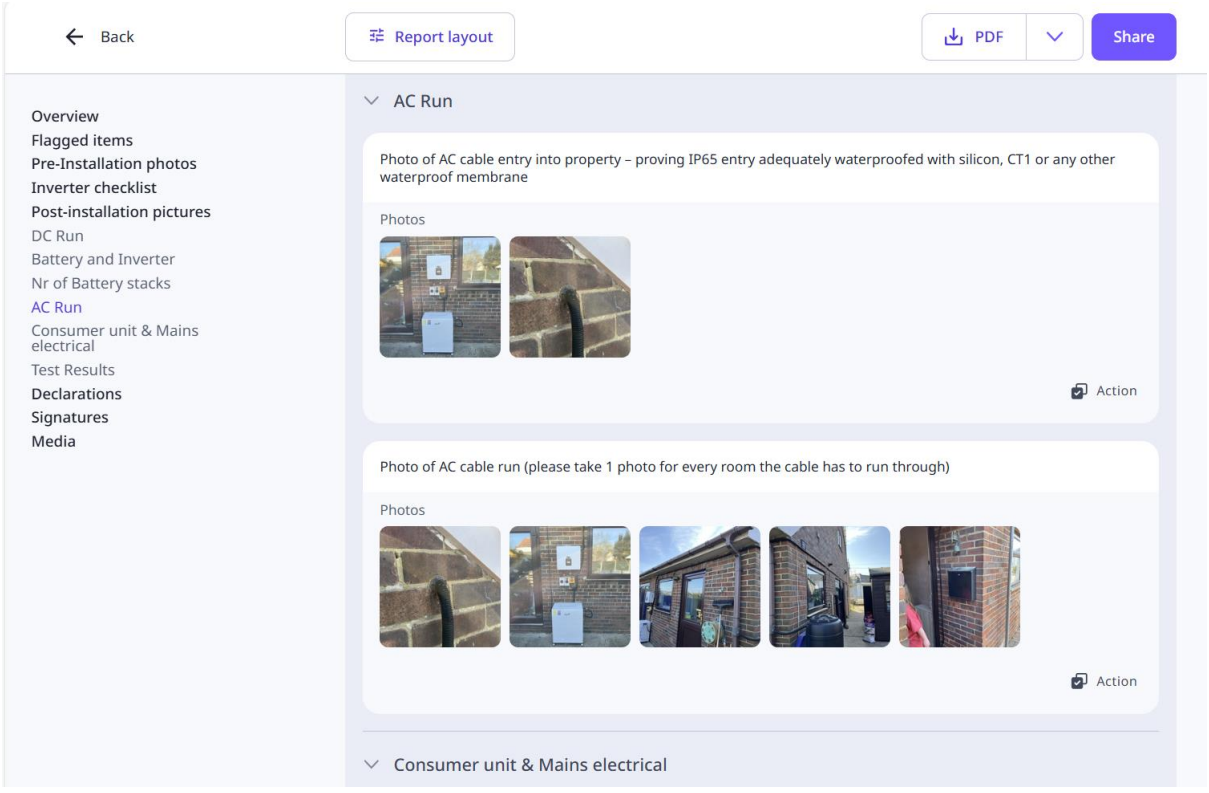

Figure 5: Screenshot of Sunsave's quality management tool

Supply chain partners, including subcontractors and installation teams, responded positively to this process due to its structured and transparent nature. The collaborative feedback mechanism, where subcontractors could access their performance data through shared dashboards, allowed for real-time quality improvements and enhanced communication between Sunsave and installation partners. Customers also benefited from this structured approach, as it ensured clarity in expectations and minimised post-installation issues.

Challenges

One of the main challenges encountered was customer misunderstanding regarding structural suitability. Some customers expected installations on roofs that were later deemed unsuitable due to structural risks. Sunsave addressed this by refining the pre-installation qualification process to filter out unsuitable properties earlier.

Another challenge was installation quality variations among subcontractors. To address this, Sunsave implemented a dual-layer review process, where both the subcontractor's technical team and Sunsave's in-house quality assurance team reviewed the Solar Installation Report before approving an installation. Additionally, repeat quality issues triggered mandatory retraining for engineers and, in some cases, contract reviews with subcontractors to ensure compliance with Sunsave's standards.

Post-installation issues, such as minor aesthetic errors or incomplete documentation, were logged in Sunsave's project management system. Issues requiring rework were categorised as major or minor findings, with major issues requiring immediate resolution (often before scaffolding removal) and minor issues being addressed through process improvements and training.

Best practices

There are several best practice approaches that improved the service and could have broader applications in the green finance sector.

- First, the integration of digital verification tools streamlined on-site inspections, reducing human error and increasing efficiency.
- Second, the tiered quality control approach—including subcontractor self-assessments, Sunsave technical reviews, and random physical audits—ensured comprehensive oversight without significantly increasing operational costs.
- Another best practice is data-driven contractor performance management. By maintaining a quality scorecard system, Sunsave could track subcontractor performance over time and adjust training, resources, or contracts accordingly. This approach created a continuous improvement loop, benefiting both Sunsave and its installation partners.

A key lesson was the importance of proactive customer communication. By explaining the structural assessment process upfront and incorporating visual guides into customer consultations, Sunsave reduced misunderstandings and installation cancellations.

Overall, the verification and quality assurance processes implemented during the Sunsave Plus pilot were critical in ensuring high installation standards, regulatory compliance, and customer satisfaction. By employing a multi-layered quality control system, leveraging digital workflow tools, and implementing data-driven performance monitoring, Sunsave created a scalable and effective quality management framework.

New technologies

Technology played a crucial role in verification processes, and its potential for further improvements is significant. The use of AI-powered remote surveys could in future enhance pre-installation assessments by automatically detecting roof pitch, shading issues, and potential structural concerns.

Advancements in IoT-enabled (Internet of Things) solar monitoring could further enhance post-installation verification. By integrating real-time system performance data into the quality assurance workflow, potential installation defects could be identified immediately, rather than relying on periodic physical audits.

Machine learning could also in future be leveraged to predict quality issues based on historical data, helping refine training programs and installation guidelines dynamically. Future improvements could include automated drone inspections for assessing roof conditions before and after installation, reducing the reliance on manual site visits.

Pilot Product Marketing and Market Penetration

10. Market Testing, Deployment and Distribution of Product/Service

Marketing Strategy and Rationale

Sunsave's marketing strategy focused on targeting new audiences for solar energy solutions. Research indicated that a significant segment of potential customers were not actively searching for solar options due to concerns over the high upfront costs. By addressing this specific barrier, Sunsave aimed to capture a previously untapped market and drive greater adoption of the product.

Messaging and Effectiveness

To overcome consumer hesitations regarding upfront costs, Sunsave's messaging emphasised the fact that the solar product requires no upfront payment. This approach was highly successful, leading to 110 customers signing up for the Sunsave Plus product during the Pilot. By making affordability a key focus, it was possible to increase interest and engagement among individuals who had previously dismissed solar energy as financially unfeasible.

Market Trends and Impact

A key trend affecting the success of Sunsave's strategy has been the increased competition from other financed solar products entering the market. As more companies introduced similar financing options, differentiation became critical.

To mitigate this challenge, Sunsave reinforced the product's unique benefits. Messaging highlighted that this was the first product of its kind, distinguishing it from competitors by emphasising its exclusive advantages. Key differentiators included the instant net savings and immediate payback that customers could experience, as well as the fact that they would own the solar system rather than leasing it. This positioning helped maintain Sunsave's competitive edge and sustain interest in the offering despite the growing number of alternatives in the market.

Target Audience, Customer Personas, and Market Segments

Building on initial customer group research, Sunsave identified two primary customer personas and market segments that align with the solar offering.

1. **Prime Targets**

This segment comprises 6% of the market (i.e. of solar-addressable homeowners) and typically consists of younger, higher-income adults who live with their children in a southern urban setting. They have already expressed strong interest in installing solar energy solutions and possess a higher level of knowledge about the process. However, their efforts to transition to solar have previously been stalled due to upfront cost barriers. These customers have a long-term financial mindset and are motivated by both immediate and future savings. The Sunsave model presents an ideal solution for this group, offering an easy gateway to solar adoption. Among the available options, the Sunsave subscription model is particularly preferred due to its affordability and accessibility.

2. **Route In**

This segment represents 13% of the market and consists of individuals in their midlife stage, typically between 40 and 60 years old. They are settled in suburban areas, often with older children and smaller households, but higher utility bills due to larger / older properties. They have given more serious thought to installing solar panels and demonstrate strong interest in renewable energy solutions. However, financial considerations have prevented them from moving forward, as the traditional upfront costs are too significant. This group tends to be financially focused and requires substantial reassurance before making a decision. While the existing solar models do not fully meet their needs, the Sunsave subscription model presents an attractive solution, offering a structured route to solar energy adoption with a supportive framework that aligns with their financial concerns.

Barriers to Entry and Mitigation Strategies

Entering the retrofit finance market presented several challenges, primarily around consumer scepticism and financial constraints. Many potential customers were wary of financing options due to concerns over hidden costs or unclear long-term benefits. To address these barriers, Sunsave focused on transparent communication, emphasising the no upfront cost nature of the product and highlighting the long-term financial benefits. Additionally, partnering with well-known and trusted brands helped alleviate concerns, reinforcing the credibility and reliability of the offering.

Uptake and Increase in Engagement

To measure the overall effectiveness of the marketing campaign, Sunsave closely tracked key metrics related to conversion and dropout rates.

- Visit to Lead Conversion Rate: A strong conversion rate from website visitors to leads was achieved, indicating encouraging initial interest in the proposition. This was measured as a KPI throughout the Project.

- Lead to Consultation Rate: The number of leads that successfully converted into consultations was also tracked, with the 110 installations completed during the Project demonstrating the effectiveness of the targeted outreach efforts.
- Tracking and Analysis: Sunsave utilised analytics tools and internal reporting systems to monitor engagement and conversion rates, thereby allowing data-driven decisions to optimise the approach.
- Addressing Drop-off Points: One significant drop-off point was the booking rate for consultations. To mitigate this issue, Sunsave optimised the Sales Development Representative (SDR) processes to ensure leads were contacted quickly. Additionally, enhancements to the web experience were made to enable leads to self-serve, reducing friction in the booking process.

These strategies contributed to increased engagement and improved conversion rates, ensuring the success and sustainability of project marketing efforts.

Marketing Strategy Insights and Effectiveness

Through this campaign, Sunsave gained valuable insights into marketing strategies and the effectiveness of different deployment avenues:

- Reaching a New Audience: Marketing to an audience that was not actively looking for solar proved to be highly effective. By addressing key barriers such as upfront cost concerns and emphasising the bill-saving potential of the Sunsave Plus product, the project successfully engaged a market segment who would not otherwise have considered solar as an upfront investment and were therefore previously un-addressable for solar.
- Power of Partnerships: Partnerships with trusted brands were particularly valuable. As a startup introducing a new solar financing product, trust was a significant barrier. Collaborating with well-known brands (such as the partnership with British Gas and Hive, discussed in Section 15) helped build credibility and reassure potential customers.
- Limitations of Direct Mail: Tests of Direct Mail as a marketing tactic did not yield strong results. This was attributed to low brand awareness at the time and the lack of personalisation in the mail campaigns. Future efforts in this area would need to focus on more targeted and personalised messaging to improve engagement.

By strategically targeting a previously overlooked audience and crafting messaging that directly addressed their concerns, Sunsave successfully expanded market reach. While new competitors introduced similar financing options, Sunsave's ability to clearly communicate the product's unique benefits ensured continued success and sustained market interest.

11. Market Penetration

Distribution Channels

To effectively reach the target audience, Sunsave employed a multi-channel distribution approach that integrates digital marketing, strategic partnerships, and public relations initiatives.

- Paid Social Advertising: Sunsave leveraged paid social media campaigns to target audiences who may not be actively searching for solar solutions but would benefit from increased awareness. These campaigns are designed to educate and inform, creating new interest in product offerings.
- Paid Search & SEO: For audiences who are already searching for solar solutions, Sunsave implemented paid search advertising and search engine optimisation (SEO) strategies. This ensures the product is prominently visible when potential customers are actively looking for options, increasing engagement and conversion rates.
- Partnerships: Sunave have partnered with trusted brands that share relevant audiences, such as Centrica (Hive). These collaborations help build credibility and provide access to engaged customer bases that are likely to be interested in solar solutions. See Section 15 for further discussion of partnerships made during the Project.
- Public Relations (PR)**:** Through PR campaigns, Sunsave raised awareness and built trust in the brand. Media coverage, industry publications, and thought leadership initiatives have all contributed to strengthening Sunsave's reputation and increasing consumer confidence in the product.

Other marketing channels were tested during the project, including direct mailouts to prospective customer properties, trade show appearances and local community engagements, however these were found to be less effective at driving customer signups than the marketing channels above.

The Sunsave Plus product is currently best adapted for the segment identified above as 'Prime Targets': younger, higher-income adults who live with their children in a southern urban setting.

However, there were other originally unanticipated customer segments that were very receptive to the product. A significant number of sign-ups were owners of larger homes, who could consequently benefit from more panels and hence higher monthly savings. Another (partially overlapping) archetype consisted of more well-off individuals who could afford solar upfront but were attracted to the product due to its low-hassle / low-risk nature. In some cases, these customers were prepared to carry out a detailed 'business case' style comparison between the Sunsave solution and pay-upfront solar, incorporating the benefits from investing the saved capital under the Sunsave option in

an interest bearing account, finding that financing the solar asset over its full lifetime made financial sense as well as being the lowest hassle option.

Market Penetration Measurement

Market penetration was measured using two key metrics:

- Sales as a Percentage of the Market: In 2024, there were 136,704 solar installations, and Sunsave Plus pilot installs accounted for 0.15% of these installations.
- Share of Relevant Solar Traffic: In January 2025, Sunsave captured ~3% of the total relevant solar search traffic, indicating strong brand visibility and market engagement.

12. Customer Sales Success Metrics

Customer Segmentation and Sales Strategy Insights

The analysis of customer segments reveals that those who experienced higher savings from solar and battery installations were often more likely to convert to a sale. Several factors were identified that contribute to the higher savings observed in certain customer segments. These include:

- Home Size: Larger homes can generally fit more solar panels. Since the fixed costs associated with installation, such as scaffolding, remain consistent, larger homes benefit from economies of scale. The increased number of panels leads to a higher total energy generation, resulting in a better kWh/£ cost efficiency and ultimately higher savings for the customer.
- Higher Energy Consumption: Homes that consume more energy often realise greater savings from solar and battery systems. With a large enough solar and battery system these properties can offset a significant portion of their energy usage. Combined with the switch to a time-of-use tariff, and the original high cost of their energy, the modelled savings can look very attractive.
- Geographic Trends: Homes located in areas with higher solar irradiance, such as the South East of the UK, typically saw greater savings than those in regions with lower irradiance, like the North of the UK. The greater availability of sunlight enables these homes to generate more energy from solar panels, thus increasing savings and boosting sales potential. However, the project found a fairly even distribution of customer signups, correlating with population density across the whole of England and Wales.
- Installation Complexity: Homes with more complex installation requirements, such as additional scaffolding or structural modifications, incurred higher installation costs. These increased costs reduced the overall savings from the system, making these homes less likely to result in high sales compared to properties with simpler installation requirements.

Adoption Rates by Demographic

Based on Sunsave's analysis of customer adoption during the pilot period, Fig. 6 shows the breakdown of customer adoption by age group.

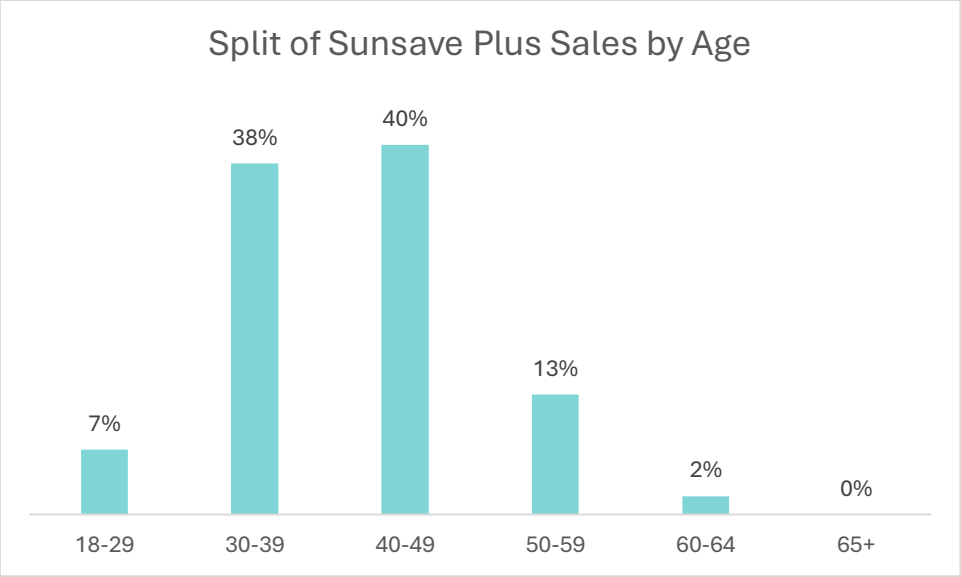

Figure 6: Sunsave Plus sales by age. Total number of customers in each age bracket; 18-29: 18, 30-39: 97, 40-49: 102, 50-59: 33, 60-64: 5, 65+: 0.

- 18-29 Age Group: This group accounted for 7% of the 255 Pilot sales. While this segment showed the second lowest adoption rate, they may still represent a potential growth opportunity. Future marketing efforts for this demographic should emphasise the long-term financial savings and sustainability of the product, as younger customers are often more environmentally conscious and tech-savvy.

- 30-39 Age Group: Second-highest adoption rate, representing 38% of total customers. Customers in this age range often have established careers and families, making them more likely to invest in energy-saving solutions for their homes. They may be motivated by the desire to reduce long-term energy costs and contribute to sustainability, and they generally have the financial stability to commit to products with long-term benefits.

- 40-49 Age Group: This age group showed the highest adoption rate, with 40% of total customers, or 102 customers. This group is likely to be in a more financially stable position, with established households and long-term goals for energy efficiency. They are prime candidates for home retrofits, as they tend to focus on making home improvements that provide long-term value and sustainability for their families.

- 50-59 Age Group: Customers in the 50-59 age range represented 13% of the total. While the adoption rate here is lower than in the 30-39 and 40-49 groups, this demographic still presents opportunities for targeting based on their desire

to reduce energy costs and future-proof their homes. Targeted marketing should focus on the benefits of reducing energy bills for those looking to maximise retirement savings and enhance the value of their homes.

- 60-64 Age Group: Accounted for just 2% of customers. This segment shows the lowest adoption rate, which could be attributed to concerns about the long-term commitment required for a 20-year product. Marketing efforts aimed at this group would need to address potential concerns related to system longevity and ensure peace of mind regarding warranties and customer support.

By definition, 100% of customers for Sunsave Plus chose a financed option. Sunsave also offer a very small number of "Standard" systems, which are purchased outright by the "able to pay" segment of the market. These customers are typically older individuals who have accumulated savings or have access to liquidity, allowing them to afford the upfront cost of approximately £10,000. As such, this group does not require financing options and represents a small portion of the overall customer base.

Core value propositions

Sales have been primarily driven by three core value propositions that resonate deeply with the target customer segments. Each of these factors addresses key customer needs, ultimately making the solution more attractive in a competitive market.

1. Affordability: One of the strongest drivers of sales is the affordability of the Sunsave offering. The £0 upfront cost solution positions the product as a financially viable option for customers looking to reduce energy costs without the barrier of high initial investments. By offering a subscription model that spreads the cost of installation over time, Sunsave ensures that the monthly payments align with or are competitive to the typical energy bill, making it easier for customers to see the immediate financial benefits. This pricing strategy has been particularly attractive for customers who are budget-conscious or who may not have the available funds for a large, upfront expenditure. This affordability factor has been a key selling point for customers seeking to reduce their energy bills while avoiding significant financial strain.

2. Peace of Mind: Another core value proposition that has contributed to sales success is peace of mind. Sunsave offers customers ongoing monitoring and maintenance of their solar and battery systems, combined with insurance coverage from Aviva. This comprehensive support package reassures customers that their investment is protected and that the system will be continuously monitored and maintained for optimal performance. Knowing that any potential issues will be addressed proactively by the provider offers significant peace of mind. This has proven to be a strong selling point for customers who may be hesitant about the complexity or long-term maintenance of solar installations, ensuring that they feel supported throughout the lifecycle of their system. The added assurance of insurance coverage from a reputable provider like Aviva further enhances customer confidence, knowing that their system is protected from unexpected risks. This peace of mind has been a crucial factor in

converting leads to sales, particularly among customers who may be more risk-averse or who value long-term reliability in their energy solutions.

3. Customer Journey: Finally, the customer journey plays a significant role in driving sales. The digital-first approach has streamlined the customer experience, making it easier and more convenient for customers to engage with the service. By automating much of the pre-installation process and eliminating the need for home visits, it has been made easier for customers to explore, purchase, and install systems without the disruption or inconvenience of in-person consultations. This approach has been especially popular among customers who value efficiency and a modern, tech-savvy experience.

A key component of this digital journey is the online proposal tool, as shown in Fig. 7 which includes interactive components designed to engage customers after the consultation. This tool allows customers to visualise their potential solar and battery solution and interact with their proposal at their own pace, empowering them to make informed decisions without pressure. Many leads have specifically highlighted this tool as a standout feature, as it not only provides a clear, detailed proposal but also offers an engaging and personalised experience. This self-service option has proven to be highly appealing, particularly in an era where many customers prefer to handle transactions and make decisions on their own terms.

The digitised customer journey, combined with the interactive proposal tool, has contributed to higher levels of engagement and, ultimately, a higher conversion rate from leads to customers. It offers an experience that is seamless, transparent, and accessible—key attributes that have driven customer satisfaction and contributed to positive word-of-mouth referrals.

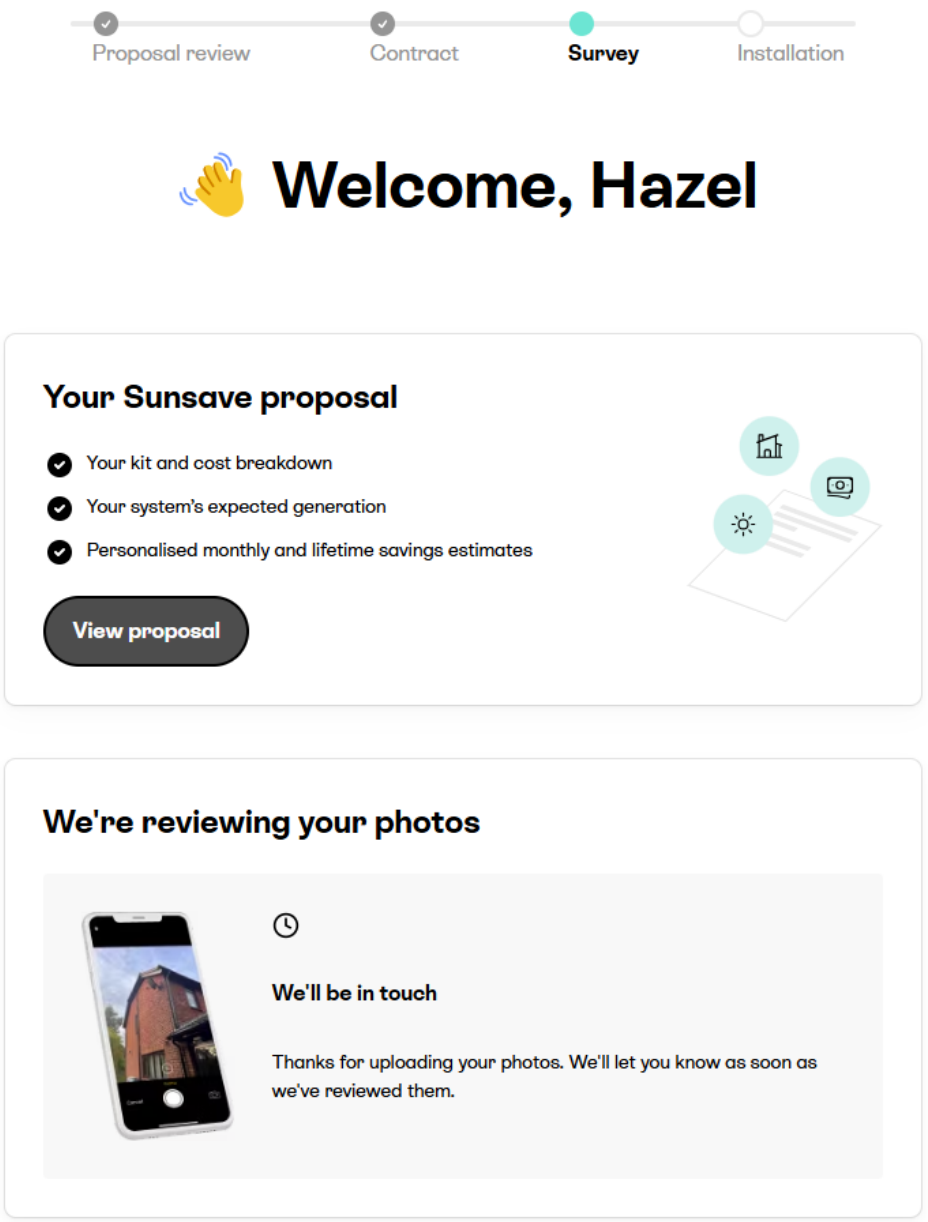

Figure 7: A screenshot from Sunsave's digitised customer journey developed through the Electric Roof Pilot Project.

Optimising the sales the end-to-end marketing and sales journey

Optimising the sales 'funnel' (that is, the end-to-end marketing and sales journey) was a key focus of the project, and occupied more time than originally forecast. Rather than something that can be built and then run, it was found that requirements in the sales funnel change constantly and need continuous focus to get right.

The key barriers to higher sales in the project were:

- Product Understanding: A significant number of customers initially misunderstood the nature of the product. Many believed it to be a "roof lease"

arrangement, a concept that is generally viewed negatively in the market. Customers were wary of the long-term implications of committing to such a model, particularly the perceived complexity or restrictions related to property transactions. This misunderstanding created a barrier to purchase as customers hesitated to move forward due to concerns about their ability to retain ownership of the system or transfer it with ease when selling their property.

- Trust & Brand Recognition: As a new start-up offering a long-term product with a 20-year commitment, many customers were understandably cautious about brand reliability and track record. Being a new entrant in the market, some prospective buyers felt that Sunsave lacked the established credibility and track record necessary to inspire confidence in the longevity and support of the product.

- House Move Concerns: Another key barrier was customers' uncertainty regarding what would happen to their solar systems if they decided to move home. This concern was amplified by fears that the system would become a financial or logistical burden during a home sale, or that they might not be able to take full advantage of their investment if they were to move.

Having identified these barriers, Sunsave worked to mitigate them throughout the Project, which resulted in consistent month-on-month sales growth:

- Product understanding: through constant iteration of the Sunsave Proposal, and further development of the Solar Advice Hub, Sunsave boosted the speed of achieving customer understanding of the product to assess whether it was right for them, increasing efficiency in the sales journey.
- Trust & Brand Recognition: Credibility was built through cultivating a Trustpilot review page (achieving 4.6* by Project close) and through PR activity in the national press.
- House Move Concerns: whilst a 20-year product like Sunsave Plus may not be the right fit for someone imminently expecting to move house, Sunsave were able to substantially mitigate concerns about the home move through clear customer education of the options that would be available to them should they look to move. Case studies from similar solar subscription models in other geographies such as Germany and the US boosted understanding here.

The Customer Experience

13. Customer and Behavioural Insights through the Delivery of Product/Service

Outline of consumer/user research

The Electric Roof project included a significant amount of research conducted, both with signed Sunsave Plus customers (the trial participants), as well as prospective customers who did not proceed.

Research was conducted for a number of key reasons: to better understand customer appetite for the core Sunsave Plus proposition, to inform new feature development, and to refine the Sunsave Plus service sales and consumer advice journey.
Research methods included long-form qualitative interviews with customers, as well as more automated methods including email feedback surveys.

Outcomes of consumer/user research

The Sunsave Plus product was found to resonate well with customers during the Pilot. Sunsave experienced consistently high consumer demand for the product, increasing through the project as marketing and consumer advice resources improved. Customer demand was driven in particular by excitement over potential savings that the product could make on energy bills. As discussed above, strong success was noted amongst homeowners who could make savings on 'day one' with the product, enabled by having a sufficiently large roof or high energy demand.

One of the most exciting findings of the project was that Sunsave Plus appeared to resonate both with consumers who would not otherwise have been able to consider investing in solar PV, and with customers who could afford solar but chose to finance it in order to invest their money elsewhere. Without the solar-as-a-service product being available, the latter 'able to pay' customer segment may have at some point chosen to invest in solar. However, the unable-to-pay segment would never have gone ahead with this investment. This leads us to conclude that a widespread rollout of the Sunsave Plus product would lead to a significant uptick in solar PV adoption.

Whilst solar-as-a-service at first seems simple to explain, we did find a wide variation in levels of product understanding among prospective customers throughout the Pilot. The majority of engagement came at first through the prospect of instant energy bill savings.

Once customers had established that they could make savings, further value was perceived in the 'Monitoring and maintenance' guarantee that Sunsave offers with the

product. It was however found that this resonated more with some customers than with others, with those it appealed to tending to be more risk averse and/or aware of the faults that can occur on complex electrical systems like PV and battery set-ups.

Once installed, customer engagement with the solar-as-a-service proposition followed a largely similar model across the Pilot customer base. Engagement with Sunsave is naturally high around the point of install, as customers are focused on getting the best-looking installation for their property. On average customers are contacted 5 times regarding general questions surrounding the install, in addition to automated communications. First responses are typically received within 34.9 hours, factoring in out-of-hours periods.

There is then a period of high engagement after the installation, in which customers are eager to learn how the equipment works and understand the battery management apps. At this stage customers are also eager to sign up to be paid by their energy supplier for exported electricity.

Once customers have had their installations for a while, there tends to be a drop-off in engagement with Sunsave, which is in line with expectations. At this stage of the lifecycle, the customer is making savings on their energy bill and is fully up to speed with how the system works. Customers in this stage only tend to engage in the rare event that there is an issue with their system, or if they lose connection to the management apps (such as when changing WiFi provider). As shown in Fig. 8, it was found customers that were generally very satisfied with the operation of their PV system after installation.

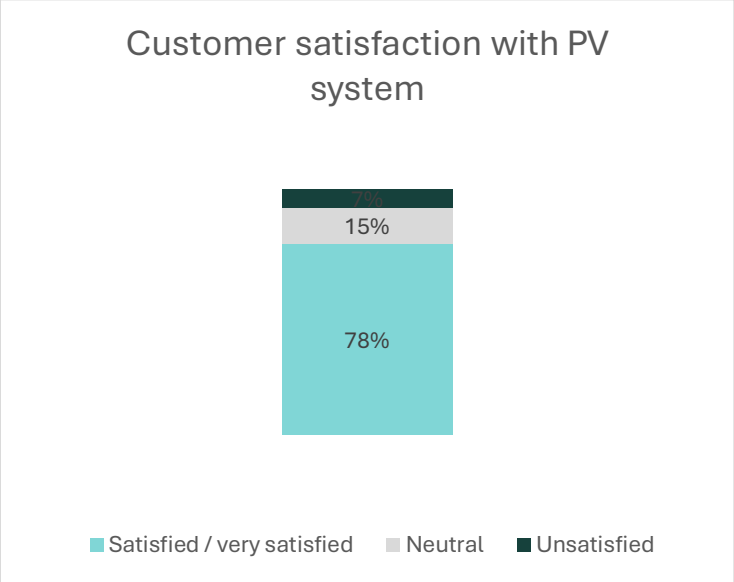

Figure 8: Results of in-life Sunsave Plus customer feedback survey (N = 27). Customers were for the most part happy with operating the solar PV and battery system themselves and were satisfied with their installed equipment.

One key barrier for customer adoption of the product, identified in the Discovery Phase, was concern around how a customer subscribing to Sunsave Plus could move home in future. Sunsave Plus was designed to answer this question, by providing two options to the customer. Firstly, customers can exit the contract at any time with no fees by paying off the outstanding loan balance. Secondly, they can transfer the contract to an incoming homebuyer; in a similar way to an energy bill where that homebuyer is onboarded as a new Sunsave customer and resumes the subscription from where the prior customer left it. Through clear explanation of these options, the 'home move objection' was found to be largely mitigated, with the exception of customers who knew they were planning to move home within a small number of years.

Another key area of customer frustration uncovered was the process of signing up for an export tariff and 'smart' import tariff to make the most of the solar and battery system. With these tariffs being relatively new to the market, many customers are not aware of the process involved in signing up for these types of tariff, including the fact there can be multiple week wait times for some elements. In response to this Sunsave created extensive guides for customers to follow, depending on the particular tariffs they were signing up to.

Overall, a key finding was that customers were generally very satisfied with the savings they were making from their Sunsave Plus system, showing that the product is correctly addressing the underlying customer need of lowering energy bills.

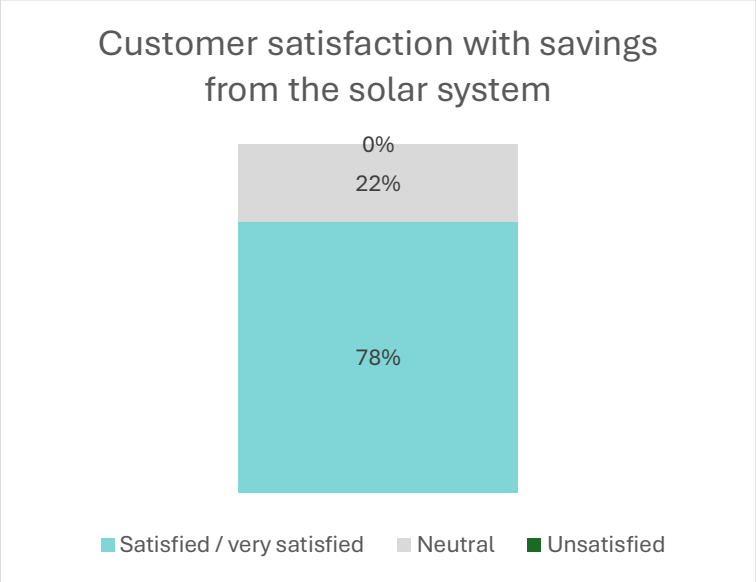

Figure 9: In-life feedback survey answers indicate customers are overwhelmingly satisfied with the savings from the system (N = 27)

Customer Needs and Market Segments

The Sunsave Plus Solar-as-a-Service model effectively addressed customer needs by eliminating upfront costs and providing a fixed monthly subscription. The product met expectations by offering financial savings, energy security, and environmental benefits.

Customers responded positively to the affordability and simplicity of the subscription model.

Market segments that showed the most interest included:

- Homeowners with high electricity consumption, as they could achieve greater savings.
- Larger homes, which benefited from economies of scale due to increased solar panel capacity.
- Households in southern UK regions, where higher solar irradiance improved energy generation.
- Financially stable mid-life homeowners aged 40 to 49, who had the highest adoption rate at 40 percent, primarily driven by long-term savings and energy cost stability.

Unexpectedly, some customers subscribed without immediate financial savings, driven by environmental concerns and a desire for fixed-price energy security.

Customer Motivations and Journey

Customers progressed through the journey based on affordability, predictable fixed payments, a seamless sign-up process, and ongoing maintenance and monitoring services. Key motivators included potential energy bill savings, consumer trust built through the Solar Advice Hub, and the environmental benefits of solar energy.

Challenges preventing customer progression included confusion around the financing structure, brand trust concerns as a new entrant, uncertainty about system transferability during home sales, and perceived complexity of solar savings due to fluctuating energy prices. To address these concerns, Sunsave refined its sales education, automated financing decisions, and enhanced the Solar Advice Hub with clearer explanations of product benefits.

Engagement and Installation of Low Carbon Measures

Customer engagement with Sunsave Plus actively encouraged the installation of solar technology, even among those who had not originally planned to adopt renewable energy measures. The affordability and accessibility of the model introduced new consumer segments to low-carbon technologies. The success of the model also indicated potential for expansion beyond solar to other green home measures such as electric vehicle chargers and heat pumps.

Barriers to Engagement and Consumer Decision-Making

Key barriers to adoption included confusion over financing, concerns about brand trust, uncertainty about system transferability during home sales, and an initially long sales cycle. These challenges were addressed through clearer sales messaging, brand partnerships with recognised companies such as Centrica, improved customer

support, and process optimisations that reduced the average sales cycle from 34 days to 14 days.

Retention efforts focused on providing ongoing support through the monitoring platform, a dedicated advice hub, and a seamless digital experience.

Lessons from Customer Pain Points and Future Implications

The key learnings from customer pain points included the necessity of simple and transparent financing structures, early brand credibility building, and the importance of a diversified installer network for scalable operations. Trust was a significant factor in consumer decision-making, and future product development should emphasise clear communication and reliable partnerships with established brands.

The pilot findings highlight the potential for expanding the financing model beyond solar panels to other green home technologies. This approach would further drive mass-market adoption of sustainable home energy solutions while maintaining affordability and accessibility.

14. Commercial Viability

A solar-as-a-service product like Sunsave Plus has the potential to achieve retrofit solar installations at signficant scale. This has been seen in other geographies such as the US and Germany, and market conditions (including solar kit prices, electricity prices) are now ripe for this model to take off in the UK.

Considerations for scalability

To ensure commercial sustainability of this model, external financing partners need to be sourced to support Sunsave's balance sheet (as Sunsave acts as the lender for the financing included in the Sunsave Plus proposition). This process progressed significantly through the Pilot phase of the GHFA.

Alongside suitable financing support, the business model must be supported by highly scalable technology systems to allow a streamlined marketing, sales and operational process for selling and delivering high quality installations. This is required to achieve the required scale for the model to reach commercial viability, which requires thousands of assets to be deployed. In addition to the transformative work done on these systems during the Pilot Phase, further work will be required after the project to develop these systems into fully scalable platforms that can support this growth.

An identified operational challenge was in managing the booking of initial consultations with customers. Through the Pilot Phase Sunsave grew a team of Solar Specialists who introduced the product to customers in an initial 'Solar Consultation'. However, ensuring that each Specialist had a full diary of calls was challenging, given the variability of customer lead volume coupled with customer behaviour such as no-

shows. Extensive work was carried out during the Pilot to optimise the booking process, and as a result dramatic improvement was made to the conversion from lead to completed consultation.

The key competitive advantage of the Sunsave Plus solar-as-a-service proposition is the ability for customers to save money on their energy bills from day one. This sets it apart from most other solar financing solutions, that finance the solar asset for only a fraction of its lifetime, hence requiring monthly payments that are higher than the traditional electricity bill.

Additional selling points of the Sunsave Plus product included the fixed monthly payments over 20 years (giving customers certainty that a large portion of their bills is effectively 'frozen' and immune to any further inflation), and the monitoring and maintenance guarantee, which appealed to customers due to the peace of mind it offers.

At the end of the Electric Roof Project, the consortium is ready to scale the proposition further and we believe to reach commercial viability within ~6-9 months. The barriers to scale, such as putting in place scalable tech systems to coordinate verified quality installs, have been overcome during the project.

Partnerships

As well as offering the Sunsave Plus product through direct marketing channels, Sunsave have partnered with large organisations that have customers who are potentially interested in taking up solar-as-a-service. In the latter months of the project, Sunsave agreed a partnership with Centrica, the owner of British Gas and Hive, to refer customers to the Sunsave Plus product. Hive and British Gas customers are engaged with their home energy set up at the point of interacting with these companies, and trust these established brands. Hence customers introduced to Sunsave by Hive are likely to be highly engaged with exploring energy bill savings through the Sunsave Plus solar subscription. Additionally, when Sunsave installs for a Hive referred customer, Sunsave will install a Hive monitoring device, to allow customers to view information about their Sunsave Plus system in their Hive app.

Partnerships such as with Centrica have proven effective channels for customer acquisition, and it has been found that there is a strong overlap between engaged energy supplier customers and Sunsave's target customer archetype. It is planned to continue to build partnerships in the space after the conclusion of the project.

The GHFA has been transformational for the Sunsave Plus product, and the wider path to commercially viable solar-as-a-service propositions in the UK. Without the support the project provided, it would have been challenging to invest in the build-out of the advanced, scalable internal infrastructure required to offer a proposition like Sunsave Plus, such as the consumer credit management platform, delivery platform and end-to-end retrofit financing advice process.

The GHFA also supported the investment required to take the product to the financial markets, in order to secure the future scalability of the model.

15. Final reflections

Summary of Key Insights

The GHFA Electric Roof Project has provided valuable insights into the challenges and opportunities associated with launching an innovative green finance solution. Key learnings that should inform the wider industry include:

- Affordability and accessibility drive adoption – The zero-upfront-cost model was the single most important factor in customer adoption. Consumers are receptive to financing options that reduce immediate financial barriers while ensuring long-term savings.
- Consumer trust is crucial – Misinformation and complex financing structures have historically hindered solar adoption. A transparent, well-structured consumer journey, supported by clear guidance and an advisory service, significantly enhances trust and conversion rates.
- Technology integration is key to scale – The project demonstrated that for solar-as-a-service to be commercially viable, seamless integration between financing, sales, installation, and monitoring platforms is essential. This ensures efficiency and supports scalability.
- Regulatory approval and financial readiness take time – Obtaining FCA approval and securing external financing required extensive due diligence. Future green finance products should engage regulators and financial partners at the earliest stages to avoid delays.

If starting the project again, Sunsave would:

- Diversify the Installer Network from the Start – Relying on a single installation partner created capacity challenges. Building a wider installer network earlier would have ensured more robust coverage and quality assurance.
- Emphasis on Monitoring & Maintenance – Given the strong market competition in long-term financing, the key differentiation for Sunsave Plus has become the Monitoring & Maintenance package, which includes proactive remote diagnosis, insurance and a guarantee of system operation for the lifetime of the product (including free replacement parts). The sales strategy has increasingly focussed on this aspect of the product during the Pilot as Sunsave gathered consumer feedback and intel on competitors. The pilot validated the commercial potential of a solar-as-a-service model, confirming strong consumer demand and a viable pathway for external financing.

Moving forward, the focus of future work on the Sunsave Plus product will be on:

- Further developing technical systems – Enhancing backend systems for financing, customer management, and monitoring to support higher sales volumes.
- Securing long-term financing – Finalising agreements with institutional lenders to expand Sunsave Plus beyond the pilot phase.
- Expanding product offerings – Leveraging the financing structure to offer additional green home technologies, such as EV chargers and heat pumps.
- Refining the customer experience – Using insights from customer interactions to improve communication, streamline the onboarding process, and further enhance consumer trust.

Final Conclusions

The Electric Roof Project demonstrated that innovative finance models can accelerate the adoption of green technologies, but success depends on consumer trust, seamless technology integration, regulatory engagement, and installer scalability. The Pilot provides a potential blueprint for future green finance solutions, showing that well-structured financing can unlock mass-market adoption of sustainable home energy solutions.