



The future of energy for smaller businesses

CORNWALL INSIGHT
CREATING CLARITY

**Imperial College
London**
Consultants

Independent analysis by
Dr Jeff Hardy of Imperial College
London and Cornwall Insight,
produced for Smart Energy GB

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1 Introduction

Smaller businesses are a critical part of the UK economy. They are also significant consumers of energy through their diverse activities – from bakers to hairdressers to plumbers using around 85TWh of electricity a year¹. In the future, they could form an important part of a zero-carbon and smart energy system. Here we explore the potential opportunities and impacts for smaller businesses and their customers from the uptake of smart meters and smarter and innovative energy business models. We examine new interactions and collaborations between smaller business customers and parties within the energy market through three case studies that characterise new opportunities.

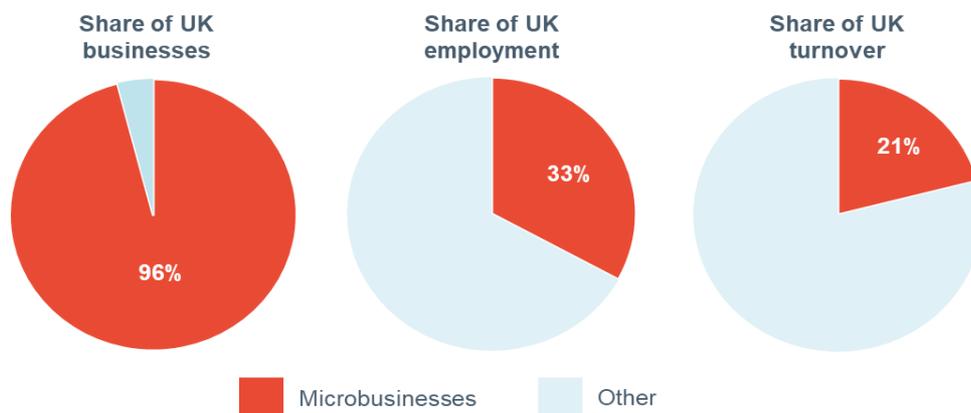
For this report, we adopt a wide view of the smaller business market. This encompasses both businesses specifically captured under the smart meter installation mandate, alongside other companies that could experience similar impacts from potential smart-enabled propositions. As such, these smart meter enabled propositions, associated customer journeys, and potential benefits can be applied to many small and medium enterprises.

Our report is structured as follows. First, we give an overview of the smaller business energy market landscape. Next, we explore the smarter future for microbusinesses through three scenarios, in each we explore the benefits to fictitious smaller businesses from potential future energy supply propositions. Finally, we pull out some conclusions and thoughts on next steps. Please note that, where company names have been used to illustrate the energy services being examined, these are fictitious businesses, with any correlation to existing company names entirely coincidental.

2 Small business market overview

The smaller business community plays a critical role in the UK economy. In 2020 there were 5.7mn UK microbusinesses alone in this community, comprising 96% of all businesses, 33% of employment and 21% of turnover². This covers a range of organisations and sectors, including pubs and restaurants, shops and retail businesses, schools, and local authority buildings. These companies are also an important part of the energy market, using around 85TWh of electricity a year and a combined expenditure of £3.4bn in 2020.

Impacts of microbusinesses on the UK economy



¹ Based on average consumption of 15MWh per business per year from Ofgem - <https://www.ofgem.gov.uk/publications/microbusiness-strategic-review-statutory-consultation-modify-slcs-all-gas-and-electricity-supply-licences>

² <https://researchbriefings.files.parliament.uk/documents/SN06152/SN06152.pdf>

However, despite this crucial role in the market and economy, many smaller businesses experience challenges engaging with, and securing positive outcomes from, the energy market. These challenges can arise from a combination of energy system and company specific factors, including:

- **Limited time to engage in the complex energy market** – particularly where energy is a secondary consideration for the business due to relatively low spend. This can be exacerbated for the smallest businesses due to the complexity of the current energy market, including the dizzying range of offerings and providers
- **It can be hard for businesses to access their energy data and transparency in the energy market is poor.** Data access costs and processes applied by suppliers range across the industry, with data requests (for example, to access smart meter data) sometimes taking several months to be granted. Similarly, energy tariff pricing is still not fully transparent, and it can often be difficult to compare prices and offers
- **These two barriers combine to cause smaller businesses to disengage from the energy market** and the cost of this disengagement is higher energy bills and worse customer outcomes

There are a range of measures being taken to address these challenges directly and indirectly. These include improving protections around switching energy supplier, increasing areas of cost transparency, and rolling out smart meters. In the non-domestic market 3mn gas and electricity smart meters are being installed across 2mn small business sites. Currently, 46% of these businesses have a smart meter installed. These smart meters can reduce the barriers to participation highlighted above, as well open a wide range of new propositions that can bring multiple benefits.

In the next section, we take a walk down Electric Avenue, a smart-enabled high street, to stop and look at three different near-term energy services for small businesses that are enabled by the uptake of smart meters.

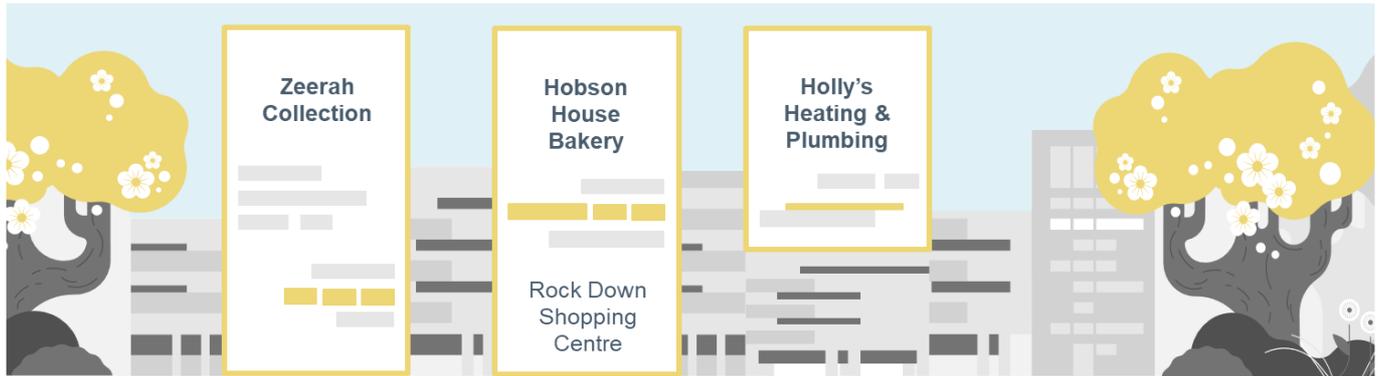
3 Electric Avenue

Our journey in this section will take us to three stops:

- Zeerah Collection; a high street speciality clothes and homeware shop using innovative intermediary services to minimise costs and hassle
- Hobson House Bakery; a café and bakery using the energy-as-a-service offering from its landlord-owned shopping centre premises to access smart, bespoke services
- Holly's Heating & Plumbing; a home-based company benefiting from an integrated e-mobility offering

Each of the businesses that we will visit in this section are imagined archetypes, presented to show the opportunities that could emerge for smaller businesses. These archetypal companies are benefiting from services that could characterise the energy market in the near future. All these services considered here build on smart meter enabled capabilities that can be seen in the market today. Along the way, we will examine the potential benefits that these services bring to the different types of business using them and how they affect smaller businesses engaging with and benefiting from the energy market.

Electric Avenue overview

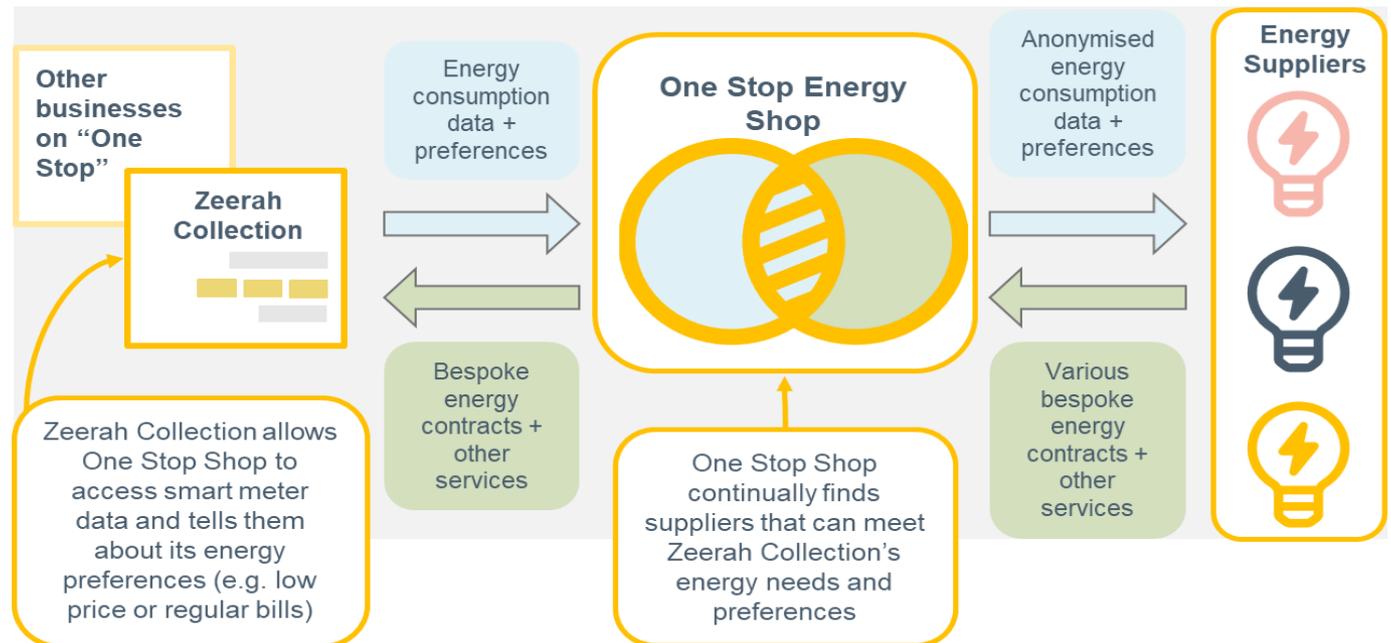


3.1 Stop one – Tariff matchmaking and ongoing support

Our first stop is to Zeerah Collection, a high street specialty clothes and homeware shop, where an intermediary, One-Stop Energy Shop, has revamped the process of selecting an energy contract and the shop engaging with its energy data. Under this service:

1. With the consent of Zeerah Collection, One-Stop Energy Shop uses the business’s individual energy consumption smart meter data, alongside some simple customer preferences to search the energy market for relevant energy tariffs. These include preferences for cost stability vs. lower, but more volatile costs, through to environmental preferences, like zero-carbon energy tariffs. In other words, Zeerah Collection are only offered tariffs that suits their business and brand
2. Zeerah Collection is then able to use One-Stop Energy Shop’s platform to compare characteristics like its energy consumption levels, patterns and costs with other similar businesses, using the anonymised, aggregated profiles of other users. This helps Zeerah Collection understand if they can make changes to their business, like energy efficiency measures such as LED bulbs, to reduce energy usage or bills
3. Drawing parallels to Open Banking services that have become increasingly prevalent, our shop is also able to access a range of other associated services and products through the platform, such as other contracts like phone, broadband and insurance

Overview of One Stop Energy Shop’s offer to Zeerah Collection



Through a service like One-Stop Energy Shop, small businesses could access a wide range of benefits, in return for sharing their energy consumption data and outlining preferences. These include:

- **Lowering costs and improving outcomes.** Ultimately, businesses receive more relevant, and potentially advantageous, energy tariff quotes. Under this service the tariff rates provided are bespoke to our retailer. However, wider elements of the tariff, such as tariff structure, are also tailored towards the company's characteristics, such as opening hours and peak periods (for example the chosen tariff might offer cheaper rates during opening hours). This is because energy suppliers can work with the intermediary to focus its offerings on different customer types that use the platform, providing offerings for customers to choose from that are more relevant and useful. This has an advantage for the energy supplier too, as knowing the energy usage patterns of their customers allows them to procure energy with greater certainty of demand
- **Lowering complexity of engaging with the energy market.** The simple preference setting approach, and platform structure where suppliers compete to present relevant offers to the customer can support positive engagement with the market by lowering the information requirements on the business and minimising the decision-making and time requirements on the businesses
- **Improving ease of using its energy data.** Should the small business opt-in to the ongoing analysis and comparison components of the service, then valuable contextual information is provided that can support both ongoing cost control and activity planning, alongside supporting future switching or tariff decisions. This is a crucial role of the intermediary – to manage the data access and communications requirements with the supplier and wider energy system where required, minimising the effort required of our business to access these benefits

During our short stop at Zeerah Collection, we have seen the potential for third party service providers like One-Stop Energy Shop to deliver a range of services into the small business customer using (with consent) their smart meter data. These services could help tackle the disengagement penalty faced by many smaller businesses by restructuring the dynamics of finding suitable energy contracts and delivering meaningful ongoing information and support.

As we carry on down the street, we come to a small shopping centre which is home to our next business.

3.2 Stop two – Enabling businesses with as-a-service offerings

The landlord-owned Rock Down Shopping Centre is home to a wide range of different small, local businesses and large chain stores. We are here to visit Hobson House Bakery, a locally owned bakery and café that has been in the site for the last few years. The bakery relocated to the shopping centre to take advantage of the cost savings and services contained within the integrated energy and rental offering from the site.

After running an integrated energy and rental service for several years, the shopping centre recently completed deploying rooftop and car-park solar panel arrays, alongside installing a battery. This further increased the benefit of the site's energy-as-a-service products that companies like Hobson can access. This is because the greater flexibility afforded to the site and the wider array of energy management options available to the energy management provider, benefiting both the site landlord and the business tenants that operate in the shopping centre.

The shopping centre landlord offers an integrated service to all its shops. The service is structured as follows:

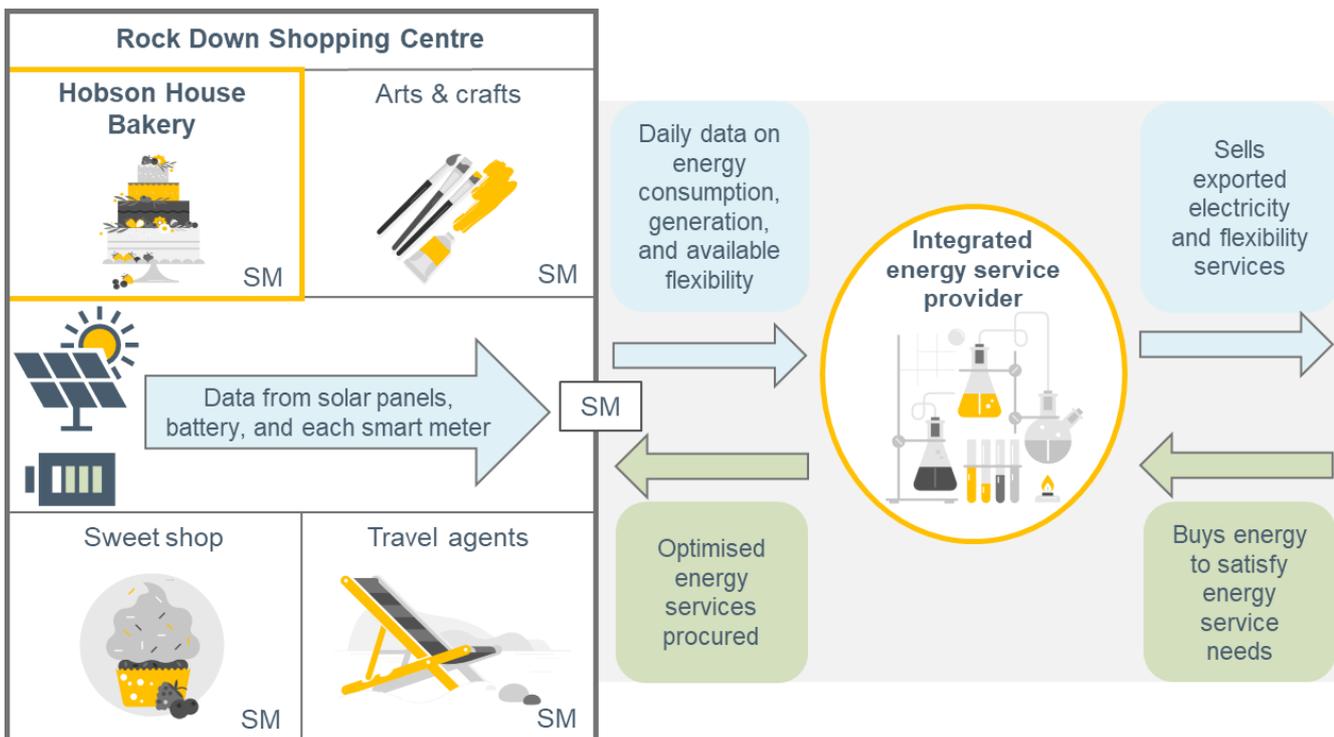
- The shopping centre landlord has secured an energy contract for the whole centre, which includes the installation of smart meters at each of the individual shopping units within. Under this arrangement, individual commercial tenants can choose to access managed energy services as part of their overall rental agreement – they are also free to choose a standard energy supply contract
- The integrated energy service uses the smart meter-enabled energy data to understand energy consumption patterns of each tenant, and smart monitoring and control devices to deliver energy and heat to meet their specific needs under a service-based energy contract



- The energy-as-a-service platform works with the bakery to establish its requirements, from its operating hours to the amount of energy it uses for its heating, cooling, lighting and other needs. Using these parameters, alongside the level of cost flexibility or stability (e.g., whether the business can flex its demand for energy) the company wants to have, the platform provider delivers our bakery and café with a fixed monthly fee for all of its energy service needs
 - Whilst each customer gets a monthly bill, the energy-as-a-service platform is also delivering optimisation services at the site, in line with parameters set by each tenant, including the Hobson House Bakery. The shopping centre faces dynamic energy prices and the energy-as-a-service platform is working to minimise the costs of delivering energy services, and enable lower fixed payments each tenant
 - For example, when the bakery is making bread in the morning using a lot of electricity, the energy-as-a-service platform turns down some other non-essential devices elsewhere in the shopping centre, like the on-site chillers. Conversely, because the Hobson House Bakery closes mid-afternoon, the energy-as-a-service platform knows it will have that lower demand to offset other energy demands in the shopping centre in the afternoon. Ultimately, this enables the platform to deliver optimised energy services across the whole diversity of its tenants

The diagram below sets out an illustration of the shopping centre arrangement, including the newly installed solar and storage assets, and how Hobson House is able to access energy services.

Overview of Rock Down Shopping Centre service offering. Note, SM = smart meter



Although Hobson House Bakery did not select its energy supplier when it entered the shopping centre, it has accessed the fixed monthly payments for its energy requirements that provide it with the cost stability and predictability it needs. The smart-enabled energy-as-a-service contract is discounted compared with the fixed-term tariff it used in its previous premises. As a result, the company is able to positively disengage from the energy market. The landlord having secured a beneficial contract that is tied to the benefits of the overall site lease means that regular switching is not required. This **reduces time required to engage in the energy market** for businesses and **limits any disengagement penalties**. In fact, the more the energy-as-a-service platform learns about the tenants, the greater the discount is possible – so a loyalty reward,

rather than a loyalty penalty. It is up to each tenant whether they want to be even more flexible in their energy demands, in return for greater discounts.

This type of service benefits smaller businesses like Hobson House Bakery that are tenants at this type of site and can also bring a range of benefits to the landlord themselves.

- Predictable and potentially lower energy bills could attract and increase the loyalty of tenants to the site
- The value-added services delivered under the energy-as-a-service energy and related services can help to differentiate the shopping centre leasable units, providing opportunities to attract different tenants that can access and benefit from these offerings
- Additionally, the running cost reductions enabled by these managed energy services opens the opportunity for a greater share of the overall rental rates to be retained
- Specialist engagement with the energy and related data that is made accessible through the smart meter can also support additional services such as detailed energy efficiency assessments and improvements, which in turn could reduce overall energy costs
- Partnering with an effective supplier or intermediary to provide the service can manage changes of tenancy at leased sites, with these providers engaging with new tenants to continue delivering the optimised and managed services
 - At our shopping centre, the landlord is working with its energy supplier to access these services as the single contact point for the service, with the supplier then leveraging its partnership with a dedicated energy-as-a-service provider and energy optimisation provider to facilitate the service
 - This could also be delivered through direct engagement with a dedicated new model intermediary or an existing third-party intermediary in the market. In each case, we see improved intermediary functions able to facilitate positive disengagement experiences for small and microbusinesses

The presence of smart meters at the shopping centre are key to facilitating the data access, data analysis, site optimisation, and energy system integration components. These combine to enable the lower-cost delivery of energy contracts into the shopping centre landlord and its tenants under a range of different contract models. In our example, value is being delivered through managing the demand of the businesses at the shopping centre. For the tenant businesses, they are still able to benefit, even without full participation in these managed energy services at the site. Because our shopping centre reduces its overall energy costs through these smart-enabled management tools, and all energy costs are included within the lease offering to tenants, they are still able to benefit from reduced costs against standard microbusiness tariffs. They are also able to avoid the time, effort, and challenges of intermediary, energy supplier, and energy tariff selection.

Leaving Hobson House Bakery, we move on to join our third and final stop of this trip to explore the benefits of integrated energy and mobility services.

3.2.1 Stop three – mobilising smart energy

Our third visit is to Holly's Heating & Plumbing, a small local home-based plumbing company based in an upper-floor flat along the street. The owner, Holly, invested in a battery electric vehicle (EV) in 2020, one of over 75,000 EVs to be registered by companies during the year. Travelling between customer sites is a consistent part of the day for Holly and the associated costs are a key area that she must manage. Since changing from a diesel van to an EV, our Holly has been using an energy and charging management service to help understand, control, and plan for the travel costs of the business, as well as supporting a smooth charging experience. When Holly leased her EV, it came with a package that included installation of a chargepoint at her private, off-street parking spot and a contract with a specialist charging services provider who supports Holly's by:

- Providing a smart charging service that integrates with the EV-specific time of use tariff at the home to minimise the costs faced when charging the EV overnight, the most common charging times for Holly's EV. This allows Holly company to minimise the energy costs for charging her EV, whilst being able to set

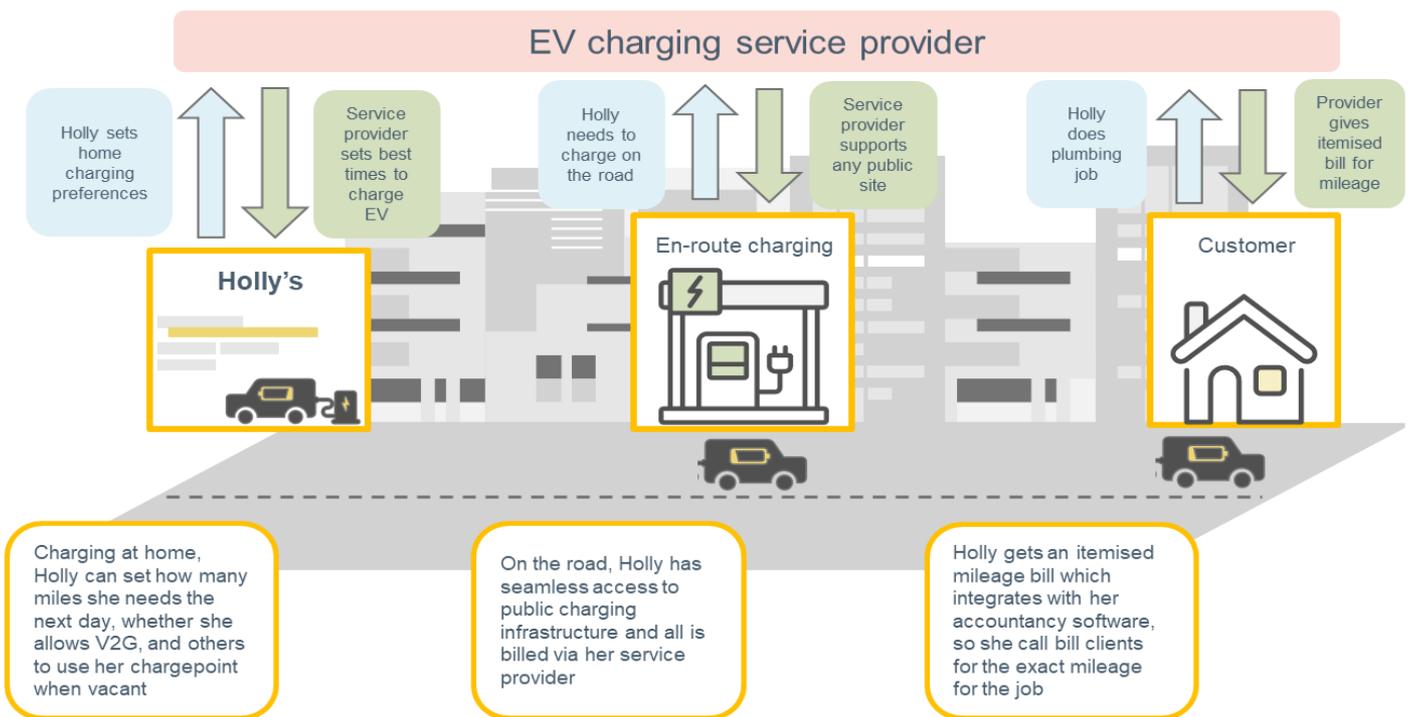


key parameters such as the timing window for charging and miles needed, and to override the charging schedule when needed. Using this smart charging service has seen Holly reduce her home-based charging costs by up to 60%³

- Separating EV charging costs from the rest of the businesses' electricity consumption and providing transparent and predictable refuelling costs for the EV. This means Holly can easily split out the business electricity costs from her home costs
- Each trip that Holly makes is also recorded by the charging service, which makes it easy for Holly to bill her travel costs to each of her clients
- Leveraging partnerships with publicly accessible chargepoint networks to provide access to charging facilities at numerous locations including motorway services, supermarkets, and on-street sites. Through these partnerships and the billing capabilities of the management platform, the service provides Holly a central billing tool that combines all transport costs faced by the business in a single payment platform
 - This billing service also helps address the complexities associated with tax treatment of electricity consumption, across both the combined domestic-business electricity consumption treatment and the separation of business travel where required

Accessing and applying numerous data sources is at the heart of this proposition, with significant effort undertaken by the charging services provider. Within the range of data sources and delivery channels for activities like smart charging, a smart meter is a key enabler for the service. It supports the tracking of energy costs and facilitates the time of use tariff that is used to reduce the overall fuel costs for Holly's EV.

Example use case for Holly's e-mobility service



Although this product is focussed on improving the mobility elements of Holly's Heating & Plumbing business, it also addresses many barriers of energy market engagement that would otherwise be faced:

³ Based on optimising charging activity against a fixed £0.05/kWh off-peak tariff compared to a £0.20/kWh flat-rate tariff (representing the average unit rate of domestic electricity tariffs available as at 31 July 2021). Additional savings available from participation in flexibility services.



- The bundling of a dedicated and relevant energy tariff into the overall mobility offering, alongside the work undertaken by the mobility service provider, **reduces the time and effort required to secure a positive outcome** from engaging with the energy market. This sees energy cost consideration moved into the core business function of mobility, supported by the ability to take up the service as part of the overall package for the vehicle
- The cost reduction and convenience afforded by the smart charging service help to **reduce the energy market disengagement penalty** that could otherwise be faced by Holly's, whilst providing a transparent and simple way to be involved in what electricity means for the business. This availability of information also supports detailed analytics on key work elements, for example apportioning travel costs to individual jobs and supporting precise cost control and is a low effort way to reduce overall running costs

Building on its mobility management service, Holly's Heating & Plumbing is also now looking at how to add extra services in as part of its mobility package. There are two that can be added could fit well with the business – participating in a vehicle-to-grid (V2G) service and renting out access to the company's home chargepoint when it's not in use.

One of the new EV models that the company can upgrade to under its lease is set to include V2G capability, meaning that the electricity in the battery can be sold back to electricity market when it is not needed for travel. Under the mobility package, Holly would receive a £30 per month discount on her electricity bill by making the vehicle available overnight when it is plugged in. The V2G activity is scheduled around the company's travel needs so that the vehicle is ready when it is needed.

With the home chargepoint often empty during the day, the charging services provider could also list the chargepoint on a public charging platform, meaning that Holly can be paid if people come and use the chargepoint as part of their own journeys without impacting its main business needs. Alongside the mobility service provider, the data availability and energy system interface provided by the installed smart meter are key to opening these new opportunities for the business.

Simple smart meter benefits

Our visits to different business types have focussed on the benefits available to smaller businesses from the products and services that can be enabled by smart meters. However, there are also benefits available from the take-up of a smart meter, ahead of and on top of engaging with these types of propositions.

This rollout of smart meters is estimated to lead to £1.5bn of energy savings, driven by consumers engaging with the energy consumption data recorded by their smart meter. For example, this can come from using smart meter data to identify ways to save energy and costs by changing the amount or time that energy is used, or by supporting upgrades to more energy efficient equipment and processes. From the companies that have taken up smart meters to date, small businesses have recorded up 11% reductions in energy use, worth ~£135 a year on average⁴.

⁴ <https://www.business electricityprices.org.uk/micro-business/>, accessed August 2021



4 Summary

During our trip along the smart-enabled Electric Avenue, we have seen how different small businesses can benefit from taking up smart meters. The improved interface with the energy market, granularity of data available, and range of potential services supported can bring forward a wide variety of innovative propositions to help address the challenges faced by small and microbusinesses in the energy market. Through the case studies and examples covered, we have seen innovative ways to:

- **Lower the time, effort, and expertise barriers** faced by many small businesses when looking to engage with the energy market
- **Introduce a loyalty reward for businesses that stick with an energy supplier** because the more the supplier learns about the business, the better the service it can provide
- **Deliver cost savings and improved stability of the energy costs** that are faced through smart management of electricity requirements and integration with energy market opportunities, without increasing the burden on the benefitting company
- **Create smart energy propositions tailored to the needs of different businesses** that enable greater engagement or positive disengagement in the energy market

From supporting intermediaries to deliver more relevant and beneficial energy tariffs and ongoing energy support under revamped channels and models, to enabling as-a-service propositions that turn complexity and costs into stability and predictability and non-energy products that translate energy demand to direct benefits like mobility, the range of currently available and near-term services make for a vibrant and exciting opportunity.

