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SME EV forecasting and vehicle usage characterization to improve energy system planning and tailor support

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Summary

Recognising the challenges faced by SMEs in push to decarbonise transport, UK Power Networks and Ricardo undertook an ambitious research project to investigate their specific needs and tailor support to them in the transition to a low carbon economy. The research analysed over 27,000 SME fleets data, reviewed over 80 documents, engaged with over 80 key stakeholders, and collected over 1,200 online survey responses from SMEs across the UK. This project developed the first of its kind segmentation of SMEs based on vehicle usage, identified key challenges faced by SMEs, and prioritised key actions to support SMEs in their EV transition.

Keywords: charging, commercial, energy network, EV (electric vehicle), research

1 Context

The UK's 5.5 million small businesses make up the vast majority (99.2%) of total businesses, accounting for 60% of employment and 52% of turnover in the UK private sector [1]. The transition to electric vehicles (EVs) for Small-to-Medium sized Enterprises (SMEs) is therefore critical for the UK to achieve Net Zero targets.

In recent years, Distribution Network Operators (DNOs)[1] have developed technical and commercial network solutions that enable EV uptake for groups of potential users such as residents without access to charging infrastructure. However, the UK's SMEs have very different needs to the widely studied domestic and large commercial customers, often operating small fleets of vans across large distances. Notably, smaller businesses have shorter-term focus and have been particularly affected by global factors such as COVID-19, Brexit, and the energy price hikes. It is increasingly important to provide SMEs with the tools they need to transition to EVs. DNOs currently have a limited understanding of SME specific needs in transport decarbonization, and by extension have minimal direction on how to support them in their switch to EVs. As a result, this hard-to-reach customer segment may struggle in their transition to e-mobility if there is no tailored strategy to address their specific challenges.

[1] DNOs are responsible for connecting newly installed electric vehicle charge points to the local power network

UK Power Networks (UKPN), the UK's biggest distribution network operator, deliver power to 8.3 million homes and businesses across the East and Southeast of England and Greater London. They recognised the vulnerability of their SME customers in the EV transition, and the risk that some could be left behind without adequate support. Together with Ricardo Energy and Environment (Ricardo) an ambitious research project was launched (White Van Plan) to investigate the unique challenges and needs of this large and diverse group of businesses to tailor bespoke support for them.

This paper presents the 'White Van Plan' research project[2], sharing the key findings, and techniques that were used to: develop a comprehensive understanding of the SME customer base, capture SME vehicle usage, identify barriers SMEs' face in the e-mobility transition, and crucially, identify how DNOs can support this vulnerable customer group on their Net Zero journey. While the research was focused on SMEs within UKPN's licence areas, the analysis and results can be considered relevant for SMEs across the UK and for any DNO. The recommendations put forward are also relevant to other key stakeholders such as local authorities working with SMEs to enable the Net Zero transition.

2 Methodology

The research project was built upon a literature review and data collection campaign, which included an extensive stakeholder engagement activity, which enabled SME segments to be developed in early stages of the research. The segments represent specific customer archetypes related to EV adoption and charging needs, while also facilitating a more effective assessment of the SME's transition to EVs, including the barriers, solutions, and future projections of EV fleets and corresponding energy demand.

2.1 Research

The research undertaken can broadly be divided into two key elements: desk research & secondary data collection, and primary data collection. These activities are described in more detail below while Figure 1 provides an overview of some of the main research metrics.

Figure 1 Scope of the White Van Plan research

2.1.1 Desk research

The first stage of the customer research methodology involved carrying out an extensive analysis of secondary publicly available datasets and literature. Understanding the distribution of SMEs and their mobility characteristics was a key focus of this activity, including vehicle ownership, operation and EV uptake.

It became clear from the literature review that existing publicly available data could not sufficiently cover all topics. This informed the decision to purchase a fleet dataset and helped structure certain questions in the stakeholder engagement activities.

[2] The final report can be found on the innovation page of UK Power Networks' website

2.1.2 Stakeholder research

The quantitative primary research methodology consisted of an online survey of individual SMEs, which received over 1,000 responses. The main objective of the quantitative survey was to collect data (such as parking and charging data) that could feed into the segmentation of SMEs into different customer groups. As noted above, the objectives of the data collection were also informed by the findings and gaps from the initial desk research that included vehicle fleet composition, ownership, and usage patterns.

Stakeholder engagement was also used to collect qualitative data collection via interviews with SME representative organisations. The objective of this was twofold, firstly to collect insights to inform the development of a UKPN's long term engagement strategy with SMEs; and secondly, to supplement the quantitative research, acting to validate results and help to fill in any gaps identified from the survey and literature. For example, interviews were used to discuss fleet decarbonisation ambition and collect information on how a DNO could best engage SMEs in the future. In total, there were almost 90 engagements (formal interviews and ad-hoc calls) with SMEs from across all industry sectors.

2.2 Approach to segmentation

In the development of the SME transportation customer segments, four key parameters were selected for their influence on EV adoption and charging requirements, their relevance to UKPNs interests and their variation across the SME population:

- **Fleet size** is key parameter that influences the barriers and challenges faced with EV adoption
- **Parking location** is key determinant of the likely location of EV charging
- **Vehicle type** is an important characteristic linked to barriers to EV uptake and EV operational trends, including parking location vehicle mileage
- **Vehicle mileage** is an important operational factor linked to barriers to uptake and challenges of EV operation

Data underlying these parameters were collected and combined to construct seven segments. Figure 2 shows how each segment is constructed.

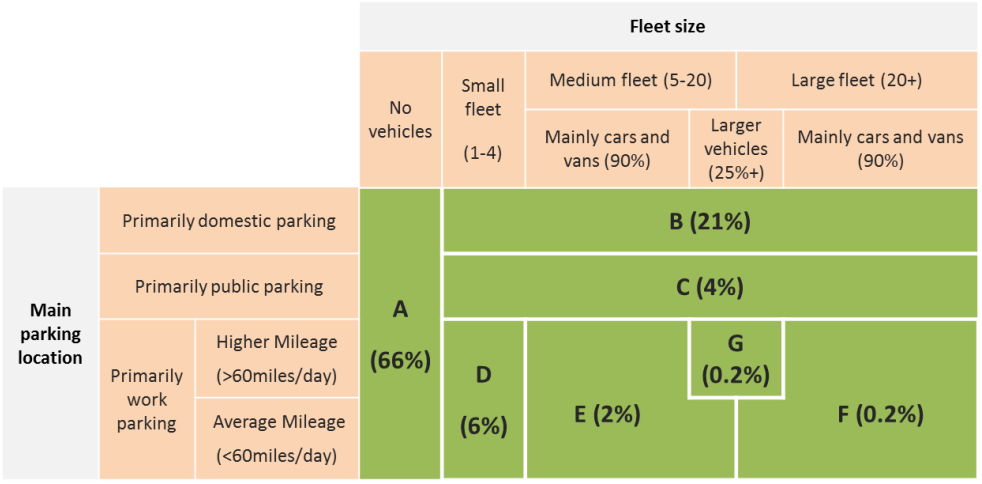

Figure 2 Building and visualising segments (percentages represent proportion of SMEs in each segment)

The characteristics of each segment are summarised below:

Segment A – Car free: represents the SMEs that do not operate vehicles. Typically, it is the smallest businesses that are not reliant on vehicles for business activity.

Segment B – Home parkers: This segment is predominantly made up of smaller businesses that operate cars and vans, and from UKPN's perspective, they can be treated similar to domestic customers with most charging events taking place at home using a regular charger.

Segment C - Public parkers: This is a relatively diverse segment with the defining characteristic of frequent use of public parking and therefore, its relatively greater reliance on public charging infrastructure. This segment is not broken down further (i.e., by fleet size) as reliance on public charging is the key defining characteristic.

Segment D – Small work fleets: Represents smaller fleets (1-4 vehicles) typically parked at work premises. The composition is a less important factor with research showing that smaller fleets are more likely of be comprised of cars and vans only, compared to larger fleets. Furthermore, these vehicle types displayed more consistent mileages compared to larger vehicle types and so different mileage categories are not used.

Segments E and F – Medium and large work fleets: Represent medium and large fleets (majority cars and vans) and fleets with a higher share of larger vehicle types with average mileage. Average mileage is most consistent for cars and vans and so average mileage is not used to further disaggregate these fleet types.

Segment G – Heavy duty fleets: Represents medium to large fleets that have a high share of larger vehicle types with a higher average daily mileage. The vehicles are mainly parked and charged at a central location.

2.3 EV adoption and future SME energy demand

The research also aimed to map SMEs and their expected charging profiles in UKPN's licence areas in addition to understanding the barriers faced by SMEs. This would feed into UKPN's Strategic Forecasting System (SFS) supporting network impact modelling analysis. The main steps are outlined below, with input data taken from the literature stakeholder responses:

- Fleet electrification rates were developed for each segment and vehicle type for the years 2025 and 2030, based on current market and regulatory trends and supplemented by survey responses
- These rates were applied to the estimated fleet of SME vehicles across the UKPN licence area that was calculated from the fleet dataset and current business population
- The electricity demand of the predicted EV fleet is calculated by applying average daily mileages to each vehicle and then converting to energy by considering the relevant vehicle efficiencies
- Total EV energy demand has been disaggregated charging locations and charger types, and charging profiles applied to review peak demand

2.4 Barrier analysis

Barriers were grouped and screened for DNO influence, considering a) the barriers that a DNO has a direct impact over, b) barriers where a DNO could have an influence, and c) those that a DNO should be aware of. The barriers were then scored to determine those most prominent and how UKPN could assist in alleviating them. They were rated by severity and scale, to understand the extent of which UKPN could contribute to the alleviation of.

3 Results

3.1 SME business and fleet composition

There are an estimated 2.3 million SMEs located within the UKPN's licence areas, the majority of which (~95%) are the smallest SMEs with up to four employees. This estimate includes registered businesses [2] and unregistered sole traders, which are calculated from the UK Department for Business, Energy & Industrial Strategy (BEIS) 'business population estimates' report [3]. Considering the segments that were introduced in

Section 2.2, Table 1 shows the distribution of business sizes between segments as well as the total segment size share and actual numbers of all SMEs.

- Segment A (car free) is the most populous segment, representing 66% of SMEs;
- Segment B is the next largest segment, representing over a fifth of all SMEs. Over 90% of Segment A and B are comprised of the smallest SMEs (0-9 employees), which make up of 95% of all SMEs in the UKPN area;
- Segment C represents 4% of all SMEs; and,
- Segments D, E, F, and G, which are characterised by majority work parking by SME fleets, represent just under 10% of SMEs, the majority of which are in Segment D (6%).

Employee size band	A Car free	B Home parkers	C Public parkers	D Small work fleets	E Medium work fleets	F Large work fleets	G Heavy-duty vehicles
0 to 4	69%	21%	4%	4%	1%	0.1%	0.1%
5 to 9	43%	19%	9%	20%	8%	0.3%	1%
10 to 19	33%	22%	10%	18%	15%	1%	1%
20 to 49	8%	30%	13%	19%	24%	5%	2%
50 to 99	8%	29%	15%	15%	21%	11%	2%
100 to 249	5%	27%	18%	15%	18%	15%	2%
Total share	66%	21%	4%	6%	2%	0.2%	0.2%
Total SMEs	1.7m	537,294	113,300	144,839	54,679	5,621	5,422

Table 1 Distribution of business sizes across each segment (shading represents increasing value)

The distribution of SMEs between sectors, and the sectoral composition of each segment is presented in Table 2. This table highlights that the segments are comprised of a range of sectors, typically weighted towards the largest sectors overall; *Professional*; *Construction*; and *Arts, entertainment, & recreation*. Notably, the *Accommodation & food* sector stands out for its relatively high share in Segments E and F given its average overall sector size, while businesses in the *Transport and storage* sector makes up over half of all businesses in Segment G (Heavy-duty vehicles).

Sector	A	B	C	D	E	F	G	Total
Accommodation & food services	3%	4%	2%	7%	13%	15%	4%	**4%**
Agriculture, forestry & fishing	1%	1%	1%	1%	1%	0%	2%	**1%**
Arts, entertainment, recreation	13%	14%	11%	1%	1%	1%	0%	**12%**
Business administration & support	9%	9%	13%	8%	12%	12%	7%	**9%**
Construction	15%	18%	15%	15%	14%	8%	9%	**16%**
Education	5%	5%	3%	4%	5%	8%	2%	**5%**
Financial & insurance	2%	2%	2%	3%	3%	5%	2%	**2%**
Health	8%	10%	3%	7%	9%	11%	2%	**8%**
Information & communication	8%	6%	9%	7%	6%	6%	0%	**7%**
Manufacturing	3%	2%	4%	5%	3%	3%	3%	**3%**
Mining, quarrying & utilities	0%	1%	0%	1%	1%	1%	2%	**0%**
Motor trades	1%	1%	1%	4%	4%	4%	1%	**1%**
Professional, scientific & technical	17%	13%	19%	12%	8%	6%	2%	**15%**
Property	2%	2%	3%	3%	3%	3%	1%	**2%**
Public administration & defence	0%	0%	0%	0%	0%	0%	0%	**0%**
Retail	5%	5%	5%	9%	7%	3%	3%	**5%**
Transport & storage	6%	5%	7%	8%	5%	11%	56%	**6%**
Wholesale	2%	2%	2%	5%	5%	4%	3%	**2%**

Table 2 Sectoral composition of each segment (shading represents increasing value)

The fleet size belonging to SMEs in the UKPN's area is estimated to be around 2 million vehicles. The majority of which are vans (1.18 million), followed by cars (640k), and trucks (177k). Fleets are most likely to be composed of cars and vans. Sectors such as *Financial* and *Arts and recreation,* that are less reliant on vehicles for their business activity, display a strong preference for passenger cars, as such their fleets are often used for both business and personal travel. The same can be said for smaller business, while larger business are more likely to contain HGVs and buses and operate fleets of commercial and company vehicles that are primarily business use focused.

Many SMEs are dependent on the operation of their own vehicles while some are indirectly reliant on others using vehicles to access the SME services or to enable the SME business operations. However, this varies significantly across sectors and operations, and it is worth noting that a large proportion (~as high as 60%) of SMEs don't use vehicles. The *Transport and Storage* sector stands out for its reliance on vehicles, and typically operates quite large fleet sizes (average of 60) while the *Arts and recreation, Accommodation & food* and *Education* sectors typically operate smaller fleets (less than 10 vehicles). Figure 3 shows the proportion of vehicles operated by each segment in the UKPN area. The proportions are broadly aligned with the number of businesses in each segment.

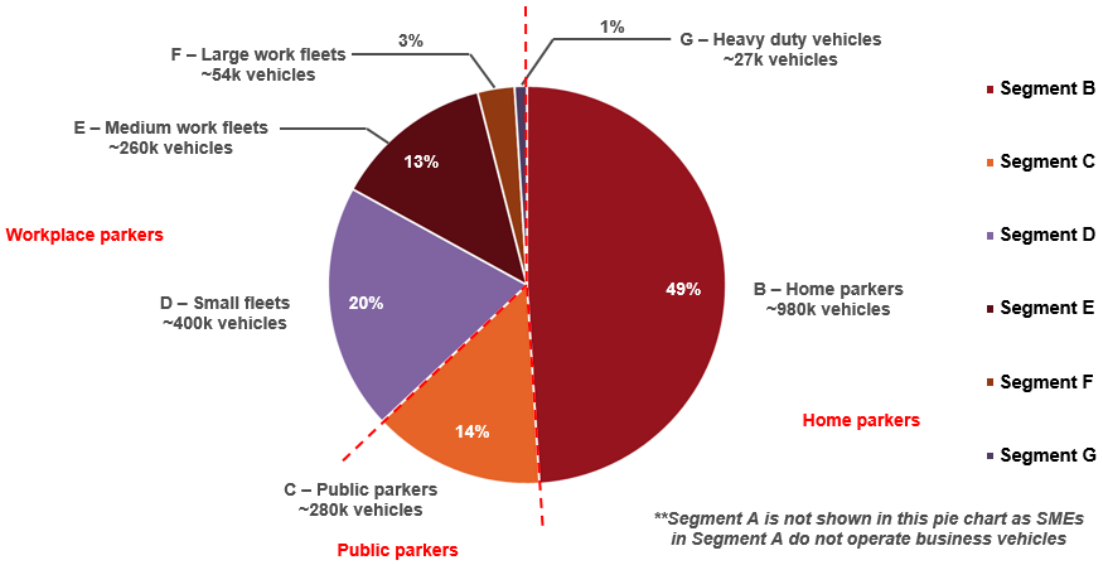

Figure 3 Proportion of vehicles in each segment in UKPN area

3.2 SME vehicle usage

The *Public administration* sector has the highest average mileage which is a result of the services typically offered that cover large regions, such as local authorities. For other sectors, higher mileage can also be linked to the business activity, there is also however, a strong relationship between vehicle type and mileage, with larger vehicles displaying higher average mileages.

There is a similar relationship between vehicle type and time of operation. Fleets that contain larger vehicle types, such as HGVs and buses, are more likely to have evening and night operations that may reflect long-haul journeys or a preference for travelling when roads are quieter. While the morning and evening is consistency the most common operation time for all sectors, some display a more even spread of vehicle operations across the 24-hour period, which may indicate the 24/7 service that some sectors need to provide, such as the *Food and Accommodation.* Other such as Retail and Motor trades are skewed towards predominantly daytime operation when most people (potential customers) are awake.

The work premises was the location that respondents selected most frequently as the usual place vehicles are parked, followed by the employees' home, work site, and then public carparks and on-street. This trend was relatively consistent across all sectors, although the smallest SMEs (0-4 employees) are more likely to park at home. This trend is most clear for passenger cars, while the work premises is always the most common location for vans and HGVs.

Some sectors highlighted a higher interest in public charging, which is either explained by high mileage (*Transport and storage)* or typically more public parking (*Arts and recreation*). This could be linked with business size, as the smallest businesses are least likely to park/charge at work (due to often being home based), with public charging location therefore typically ranking higher as the only other alternative to home charging.

3.3 Attitudes towards EV adoption and EV fleet projection

The relative ambition for full fleet electrification is broadly consistent between sectors, with all sectors demonstrating plans for significant fleet electrification over the next decade. Stakeholder associations highlighted that policy drivers were increasing the prevalence of the green agenda in many sectors, with an expectation that uptake and ambition levels will continue to increase rapidly.

The Public administration sector in particular displays high levels of existing and planned EV uptake which is not surprising to stakeholders who highlighted that a priority target for electrification in policy is ensuring that local authorities adopt EVs into their fleets first, exemplifying a position of leading by example.

Sectors that are particularly reliant on vehicles and larger businesses tend to have more ambitious plans for fleet electrification, while business that operate heavier vehicles are more hesitant to commit to EVs due to the lack of suitable vehicles on the market, or uncertainty around the role of other alternative fuels (such as Hydrogen) that may offer an alternative to EVs. Comparatively, switching fleets of cars and vans to electric will be relatively easier and driven forward by the upcoming phase out of new petrol and diesel cars and vans from 2030 and proposed phase out of hybrids by 2035.

Stakeholders also noted that existing knowledge and skills for maintenance and repair of combustion engine vehicles in the *Agriculture* and *Motor Trades* businesses may result in a natural tendency to resist the switch given the added burden of needing to re-skill parts of the workforce. The analysis of SME attitudes towards fleet electrification combined with current market and regulatory trends provide an estimated 165,000 EVs operated by SMEs in 2025, rising to 590,000 in 2030 in the UKPN licence area, equal to about 30% of all SME vehicles.

3.4 Energy projections

The electricity demand from electric vehicles in SME fleets in the UKPN area increases from 4GWh each day in 2025 to just over 14GWh in 2030. Annually, this equates to around 1,050 GWh in 2025 and 3,668 GWh in 2030[3]. It shows that demand from electric vans makes up over half of all electricity demand from the SME fleet, while cars form a relatively smaller share (30%) of electricity demand. This is a result of the lower average mileages and better efficiencies of cars compared to vans and trucks.

3.5 Key SME barriers to EV transition

The customer research carried out in the White Van Plan has identified several key barriers and drivers that are the most common in shaping the attitudes of SMEs towards switching to electric vehicles. The key barriers can be categorised into three overarching themes of cost, infrastructure, and awareness (see Figure 4).

[3] Assuming 262 working days when vehicles are operational.

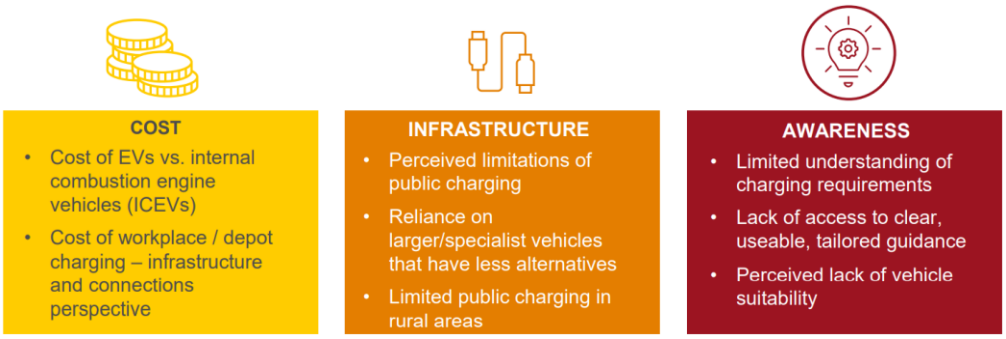

Figure 4 Key themes of SME barriers to EV transition

The barrier to EV uptake most frequently selected by SMEs in the survey, irrespective of sector, is the **upfront cost of electric vehicles**. Furthermore, 100% of sector associations who were interviewed highlighted that SMEs are currently facing a challenging economic and financial climate, particularly in the context of the COVID-19 pandemic. SMEs have a low level of interest in investment into new technology that is perceived to be risky and that is not seen as business-critical, especially at a time when business survival is the priority for SMEs.

Several different barriers were highlighted around the **lack of understanding of EV charging options and requirements**, with a general lack of access to clear and SME-tailored guidance on charger installations and network connection options. Other barriers were based on a **lack of public and private charging infrastructure**. Sector associations agreed that a lack of access to private charging infrastructure that is fit for purpose is seen as a key barrier by SMEs.

The research showed that the operation of larger vehicles in fleets can often be a reason behind more conservative ambition for fleet electrification. In the survey, respondents from these types of SMEs typically selected **vehicle suitability and unsuitable charge points** as relatively more important barriers compared to SMEs with fewer larger vehicles. Interestingly, the smallest businesses identified a **lack of knowledge or not feeling informed**, as a much more significant barrier compared to the larger businesses. This supports findings that smallest SMEs are less likely to have a dedicated employee(s) for fleet management and generally a lack of internal capacity to develop and implement energy efficiency projects.

The analysis of the most prominent barriers affecting SMEs across all segments in their transition to EVs is presented in Table 3 below. The analysis was based on a combination of the average scoring (see section 2.3) of barriers experienced by SMEs in different SME customer segments.

Barrier	Drivers
1. Cost of EVs vs. internal combustion engine vehicles (ICEVs)	• SMEs are driven by short term benefits rather than long term savings and they are cost conscious • Investing in EVs can be seen as risky and not cost-effective
2. Challenging economic and financial climate for SMEs	• The lasting impact of the COVID-19 pandemic has resulted in SMEs being more focused on business survival • SMEs are resource constrained and do not prioritise exploration of new technologies if not business-critical or do not produce tangible short-term benefits
3. Limited understanding of charging requirements (e.g., installation, charger suitability and network constraints)	• SMEs do not have time to research new technologies • SMEs frequently perceive grid capacity to be limited, which can discourage switch to EV
4. Lack of access to clear, useable, tailored guidance to assist full fleet EV transition	• SMEs value information that is tailored to their needs • Some SMEs are unaware of the key stakeholders involved

5. Cost of workplace / depot charging from an infrastructure and connections perspective	• SMEs are very cost conscious and hesitant to invest in new technologies without certainty that the technology or policy direction will not change • SMEs do not fully understand the cost saving options available to them for both infrastructure and connections
6. (Perceived) limitations of the public charging network and negative perception of multiple contracts required for different public charging networks	• SMEs often rely on dated information and negative press articles from unreliable or misinformed sources • SMEs value vehicle operations being similar to ICEV
7. Lack of understanding/awareness of solutions available to reduce connection costs	• SMEs are unaware of technical/commercial solutions • SMEs are time-limited and do not have the resource to assess their suitability to network solutions • SMEs are unaware of who to contact to assist with their EV transition
8. Differences between EV & ICEV operation not fully understood resulting in perceived lack of vehicle suitability	• The duty cycles of some SME fleets can limit the opportunities to charge their vehicles • SMEs do not fully understand the differences between EV and ICEV operation
9. Reliance on larger/specialist vehicles that have less suitable electric alternatives and require higher-powered chargers	• Few electric HGV/specialist options currently available • SMEs need certainty before investing in new technology • SMEs are cost conscious
10. More limited public charger provision in rural locations; potential for higher connection costs from civil works	• SMEs located in rural locations perceive EVs suitability to their operations to be limited • SME perception of higher connection costs in rural areas can deter them from transitioning their fleets

Table 3 Most prominent barriers affecting SMEs in their transition to EVs

4 Key findings

4.1 Insights for DNOs

An important intention of the barriers analysis was to determine the main challenges faced by SMEs and, crucially, how a DNO can contribute to alleviating these barriers. The potential actions to address barriers that are presented in Table 4 represent existing services and new solutions that a DNO has the most direct control over, typically related to technical solutions and flexibility services. These have been split by domestic, public and workplace charging use cases. Segments can be broadly mapped to these three charging uses cases, with Segment B mainly domestic charging, Segment C mainly public charging and Segments D, E, F and G mainly workplace charging.

Problem/Driver	Potential DNO action
Domestic	
Domestic network connection costs may be high for SMEs, which can be a deterrent	• Promote existing and explore new flexibility and smart charging services. • Provide guidance on how to upgrade a domestic connection to three phase connections may help to facilitate the take-up of larger EVs
Local authority legislative barriers, and administrative	• Support local partners to promote maps of charge points and information for requesting on-street points in locations where domestic parking is on-street.

burden for SMEs, to installing on-street domestic charge points	• Work with local partners to identify optimum locations for on-street
Public	
Uncertainty both short term and long term around availability of public charge points	• Continue to raise awareness through network capacity mapping and open data. • Further develop and expand existing network data resources, e.g., Distributed Generation (DG) Mapping Tool • Continue to support local partners with resources advising where there is available capacity on the network to install charge points and the most cost-effective ways to install • Share research insight on where infrastructure may best serve SMEs.
Lack of public rural charging, and perceived limited availability of higher-powered public charging	
Network constraints at public charging hubs (high density of rapid charge points)	
Workplace	
Cost of workplace charging infrastructure – lack of awareness of cost saving options, installation costs, and higher costs for higher powered chargers	• Promote existing and explore new flexibility and smart charging services. • Provide guidance on building management solutions (i.e., co-schedule HVAC control and EV charging) and battery storage systems, which can help manage total site electricity demand
Limited information specific to individual SMEs - highly variable depending on location and SME fleet operation	• Integrate charging demand of SMEs from White Van Plan into existing UKPN network capacity map. • Work with representative organisations to identify SMEs with fleets well suited to technical solutions / flexibility services. • Provide information via a UKPN hub
Limited space at workplace locations and depots for larger fleets, which will require more charge points and greater power capacity	• Explore further feasibility of connecting larger depots using results from UKPN projects (e.g., Optimise Prime), supporting SMEs, particularly those with larger fleets to identify specific needs of transitioning and how these can fulfilled. • Explore how smart network flexibility solutions like Active Response could be used to reduce reinforcement costs for charger deployments in depot / fleet locations. • Share information / guidance on battery storage systems, flexibility services and smart charging options.
General perception of insufficient network capacity - charging infrastructure for site-based / rural locations believed to be particularly problematic	
High power requirements of specialist vehicle fleets for daily operations	

Table 4 Existing DNO services and new solutions to address EV uptake barriers

Building on the potential DNO actions outlined above, a series of 10 overarching recommendations were developed in collaboration with UKPN. These are seen as steps that UKPN can already take to assist SME customers.

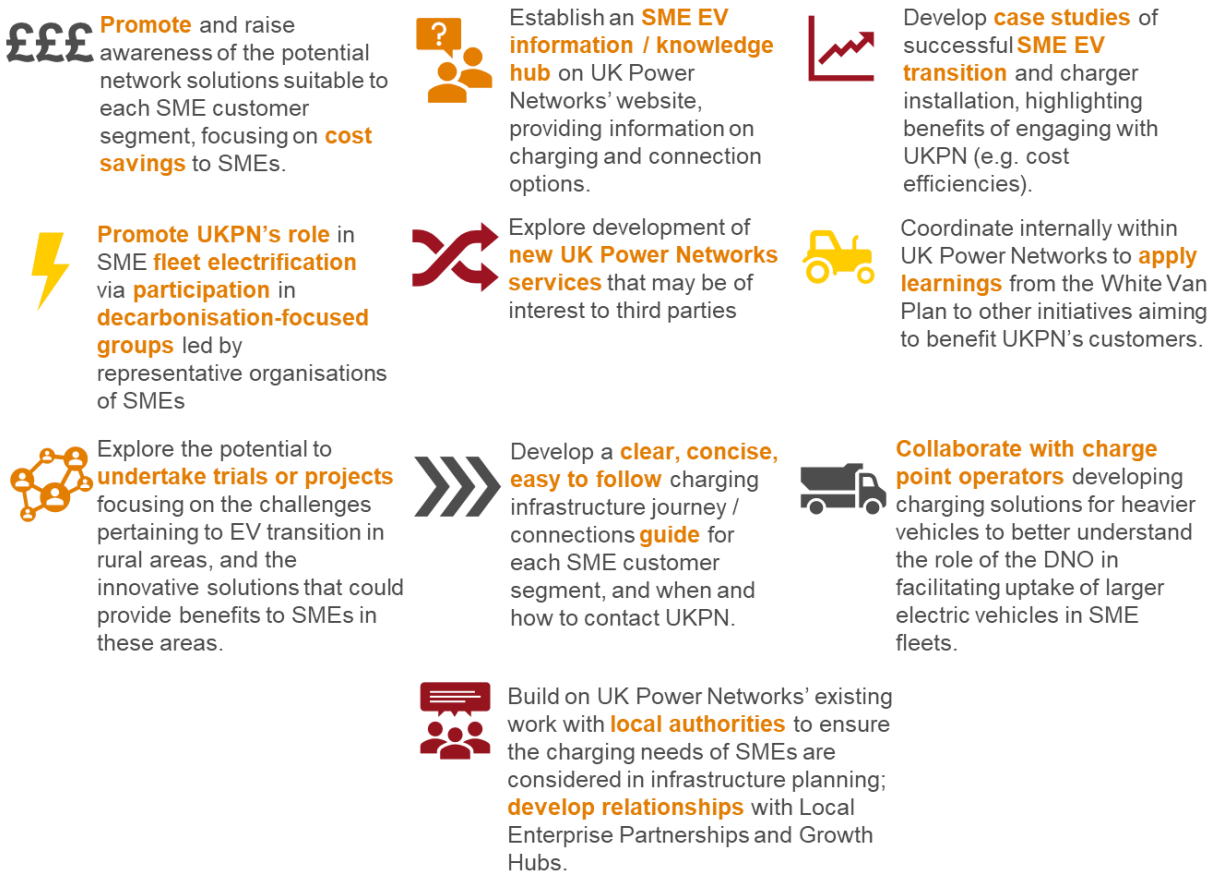

Figure 5 Ten recommendations for UKPN to assist SME customers

4.2 Insights for policy makers

Several barriers were identified that were classified as things a DNO should be aware but has little control or influence over. These have either market or regulatory themes that are most relevant to national and local policy makers:

- **Education**: Educational campaigns informing SMEs of the process of EV transition along with funding and support options available to them
- **Access to finance**: Availability of suitable financing, including grants and subsidies.
- **Second-hand market for EVs**: Promoting the development of a stable second-hand market.
- **Certainty of technology roadmap**. Working with the private sector to develop clear policy for technology roll-out, particularly for HGVs.
- **Install charging infrastructure**: Update regulation to provide more support for charge point installation at rented commercial properties.

Partnerships are also needed between local authorities and DNOs to share information to facilitate network improvements and expansion planning.

4.3 Key takeaways for SMEs

This research study has demonstrated that steps are being taken by stakeholders such as DNOs to support SMEs in their transition to EVs in the context of the UK Government's ban on new petrol and diesel cars and vans in 2030 and Net Zero target date of 2040. Key partnerships can be developed on a local scale, facilitated by local authorities and representative business associations to support knowledge transfer between SMEs, in terms of reliable information on EV related topics and policy or funding updates and sharing experiences of early adopters to the wider population of SMEs. As a direct result of the findings from the study, UK Power Networks has now created a new EV information hub dedicated to informing SMEs on their charging and connections options (https://www.ukpowernetworks.co.uk/electricity/business-electric-vehicle-hub).

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Authors

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Katie Millard is a senior consultant in the Sustainable Transport team at Ricardo and has eight years of experience, managing and contributing technically to research and consultancy projects in the area of sustainable transport and policy. Her work covers a wide range of topic areas, initially focused on urban interchanges, cycling infrastructure trials, environmental assessments and sustainability appraisals, later covering electric bikes, electric and autonomous vehicle trials and research, travel demand management and behaviour change, and low carbon fuels.

Harry Scammell is a Senior Consultant in the Sustainable Transport team with over four years of industry experience. Harry holds a MEng Engineering Mathematics degree from the University of Bristol, which provided a solid background in mathematical and data modelling, statistics, engineering and computation. Since joining Ricardo Harry has led economic and emissions model development for a variety of alternative fuel and C-ITS projects spanning multiple transport modes including road, rail and aviation transport.

Cameron Scott is the Project Lead for White Van Plan and Innovation Engineer at UK Power Networks. He has extensive experience in energy advisory, business development, digital transformation, and power system analysis, gained through consulting and industry experience. Cameron is a specialist in sustainability with a focus on Electric Vehicles, Heat Pumps, and digital infrastructure for utilities. He also has several publications on various topics, including energy markets, dynamic electricity cable rating systems, real-time fault level monitoring, and electric vehicle infrastructure planning.