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Delivering Electric Vehicle Infrastructure in the Tourism Sector

Round table discussion report

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Executive summary

A round table discussion took place on 6th February 2024 to:

- consider the challenges and pressures facing the tourism industry regarding installing EV charging
- understand the support the tourism sector needs to begin to rollout EV charging at their destinations

There were 40 attendees representing 32 different organisations. This was a useful sample of the tourism industry, with a mixture of representatives attending.

The round table sought insights about the current level of provision and demand for electric vehicle (EV) charge points.

Some of the key challenges for the industry that were discussed are:

- Cost and difficulty of grid upgrades
- Mobile connectivity in rural areas
- Lack of knowledge and understanding of the technology in the sector
- The tourism sector is struggling financially and so installing EV charging is not a priority currently

As a follow up to the roundtable session, Energy Saving Trust will prepare some additional case studies featuring examples of EV charging installation in the tourist industry that can be shared with stakeholders.

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1. Introduction

The UK's tourism industry is a key stakeholder in the roll out of destination EV charging. Many tourist destinations are accessed by car, have long dwell times or overnight stays, and therefore are perfect for installing EV charging. The industry should also be considering providing charging facilities for their staff, volunteers, suppliers/ delivery drivers, and perhaps local residents overnight where possible. We held a roundtable to:

- understand the needs of the tourism sector
- understand the current barriers to installing EV infrastructure
- share some existing case study examples
- identify how Local Authorities and District Network Operators (DNOs) can support tourism stakeholders
- inform central government policy

1.1. Organisations represented

The roundtable had 40 attendees representing 32 organisations, including tourist destinations, tourist boards, local authorities and other public sector bodies. The full list of organisations represented were:

TOURISM ORGANISATIONS	Lancashire Council
Cumbria Tourism	NE Lincolnshire Council
J Dixon & son Ltd	Newcastle-upon-Tyne Council
Greener Edge	North Yorkshire County Council
Inigo Jones & Co Ltd	South Tyneside council
Kerridge End Holiday Cottages	Sunderland council
Nant Gwrtheyrn	
National Trust	**ENERGY ORGANISATIONS**
Pant Gwyn Farm	Electricity North West Limited
Preseli Holidays	Scottish and Southern Energy Networks
	Energy Assets
NATIONAL PARK AUTHORITIES	
Northumberland National Park	**OTHER ORGANISATIONS**
Peak District National Park	Berkshire LEP
	Greater South East Net Zero Hub
LOCAL AUTHORITIES	Transport East
Blackpool Council	
Cornwall council	**GOVERNMENT DEPARTMENTS**
Devon Council	Defra
Dorset council	Department for Transport
Durham County Council	Office for Zero Emission Vehicles
East Riding Council	

1.2. Audience polls

As part of the session we asked the attendees a number of survey questions to better understand, regarding installing EV charging infrastructure, the following:

- where they are at currently
- what kind of demand for EV charging they have from various users
- what the main barriers are to installing EV charging facilities at their site

The first question was to understand how many sites have already installed chargepoints or are planning to install them (Figure 1). Ten attendees responded and 6 had installed chargepoints already and 2 plan to in the future.

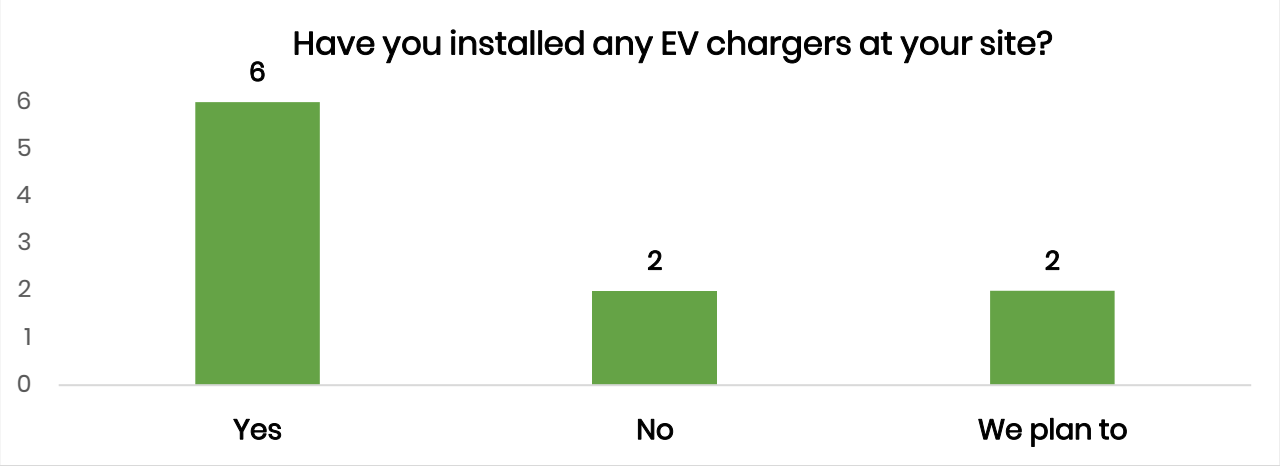


Figure 1

The second question was to understand whether the local authorities that attended the session have been working with their local tourist destinations on installing EV charging (Figure 2). Nine attendees responded to the question with 3 saying yes they are working with local tourist destinations and 4 saying they would like to.

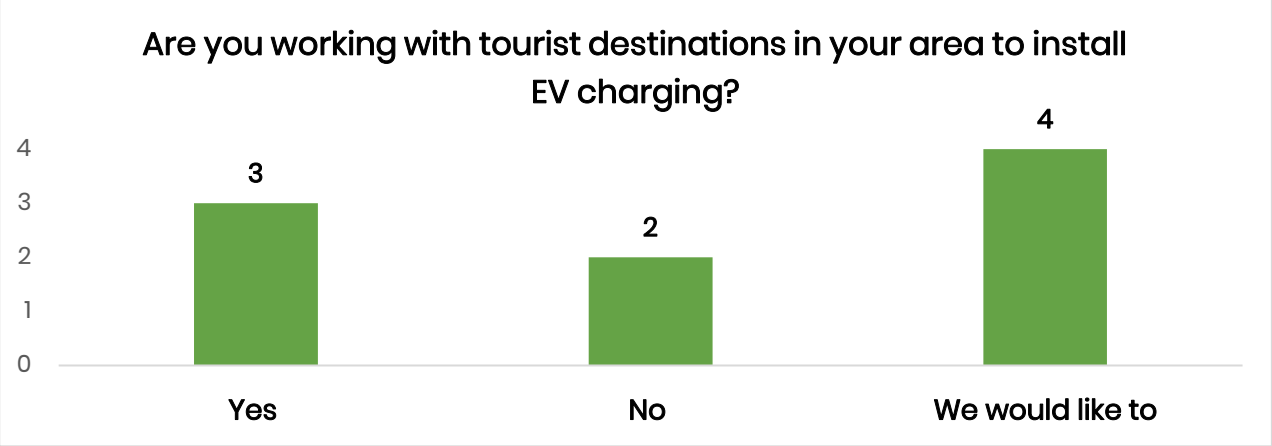


Figure 2

The third question was to understand who the EV chargers will be predominantly used by when installed (figure 3). Nine attendees responded and all said they would be installed for visitors, 8 said for staff and 6 for local residents.

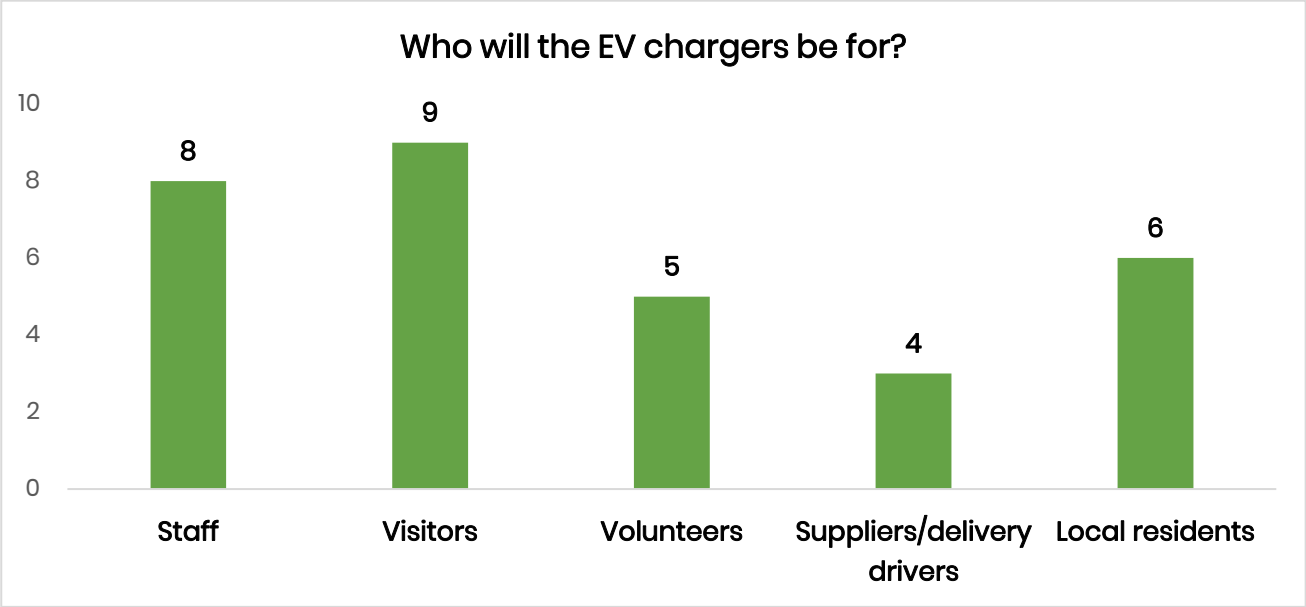


Figure 3

The fourth question was to understand if tourist destinations were getting requests for EV charging from visitors. Eight attendees responded with 5 saying that they have not had requests for charging and the remaining saying yes (figure 4).

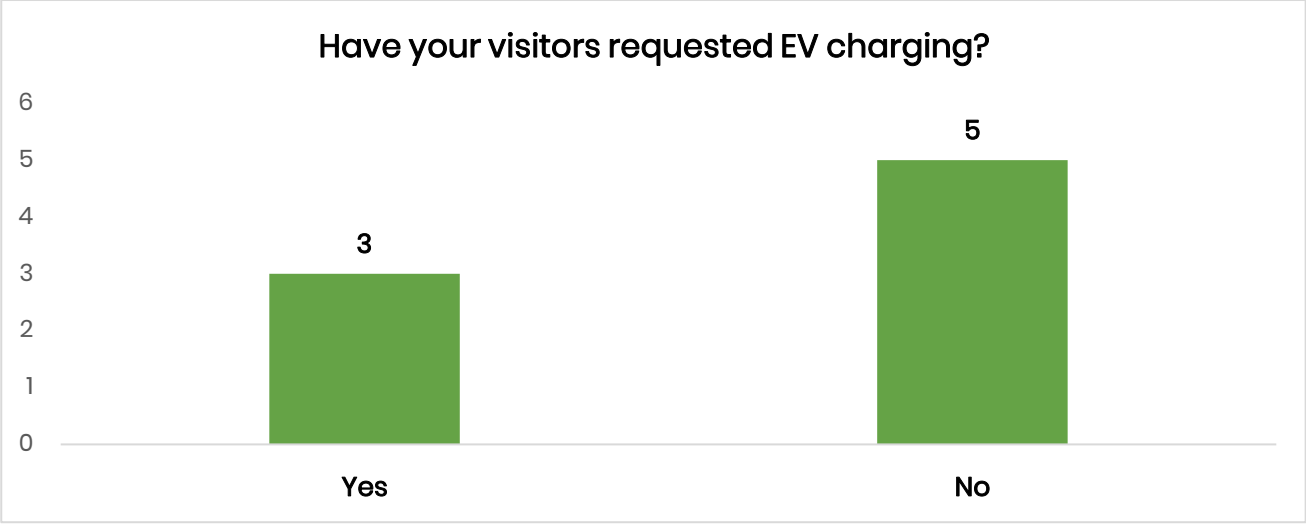


Figure 4

The fifth question was to establish if any staff or volunteers had requested EV charging. Nine attendees responded and all of them have had requests from staff or volunteers (Figure 5). In contrast, when asked in question six whether they have had any requests from suppliers or delivery drivers all eight respondents said no (Figure 6).

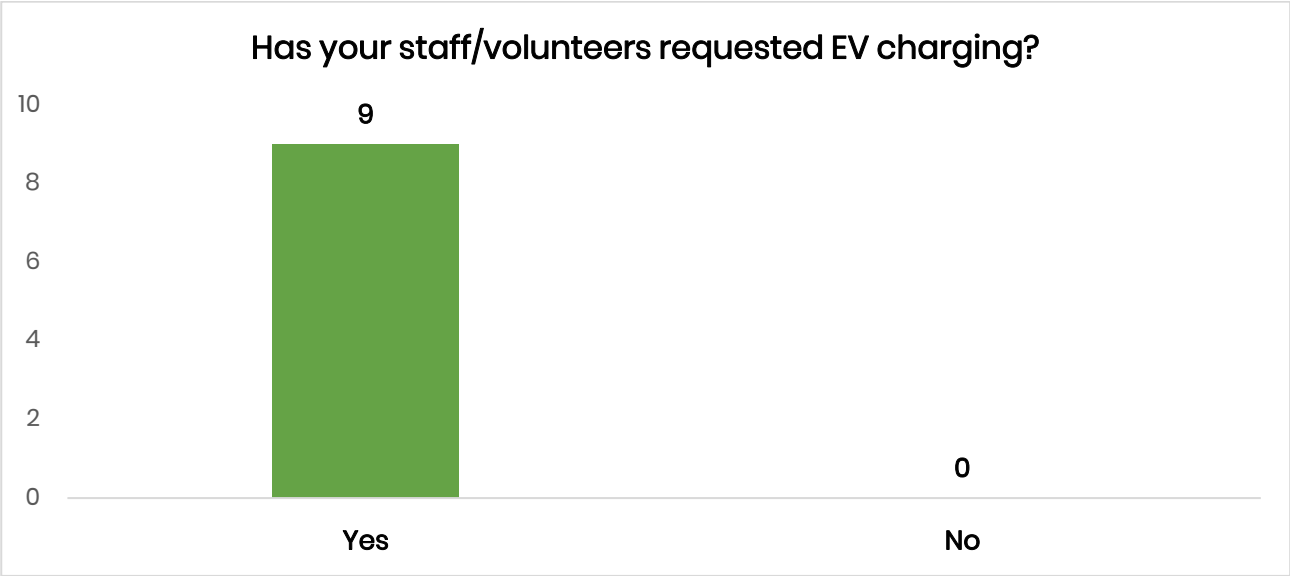


Figure 5

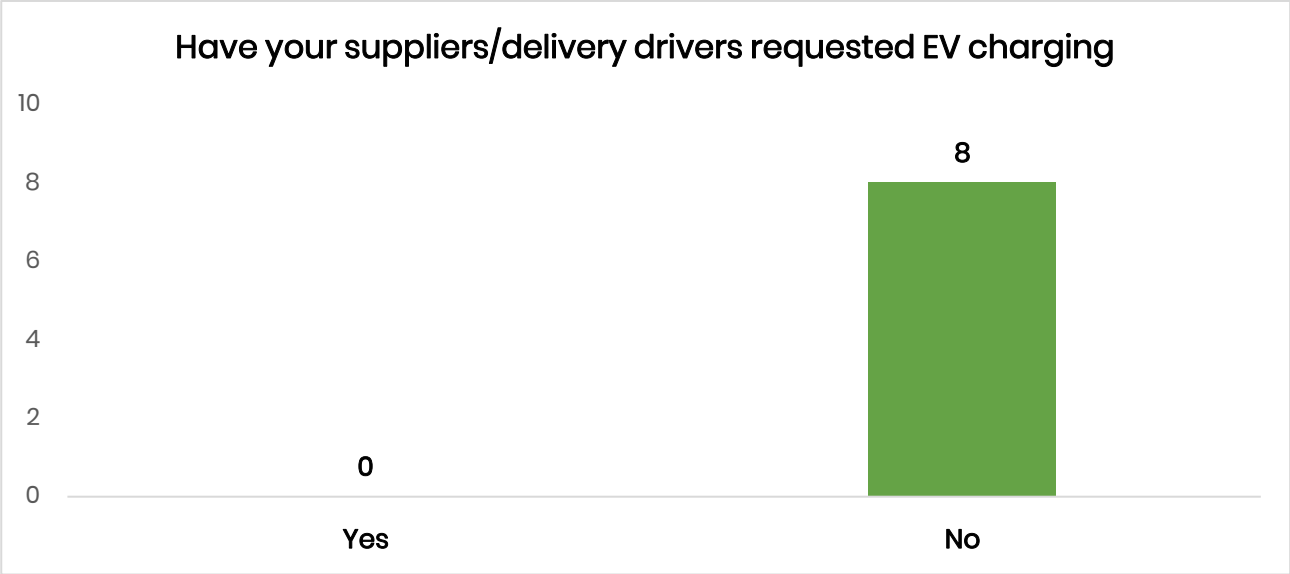


Figure 6

But when asked in question seven whether they have had requests from local residents, 7 of the 10 respondents have had requests. Although some of these responses may have been from local authorities rather than tourism destinations (Figure 7).

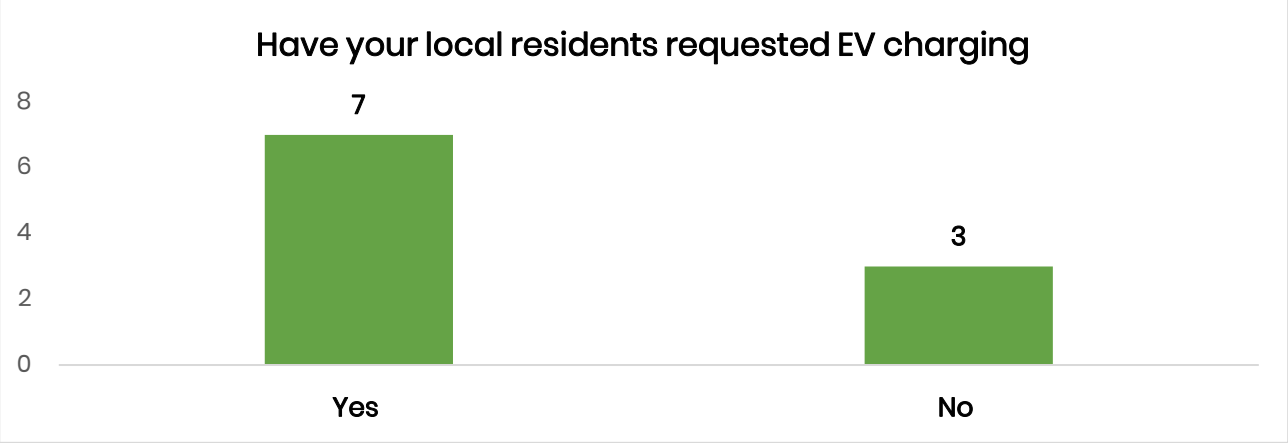
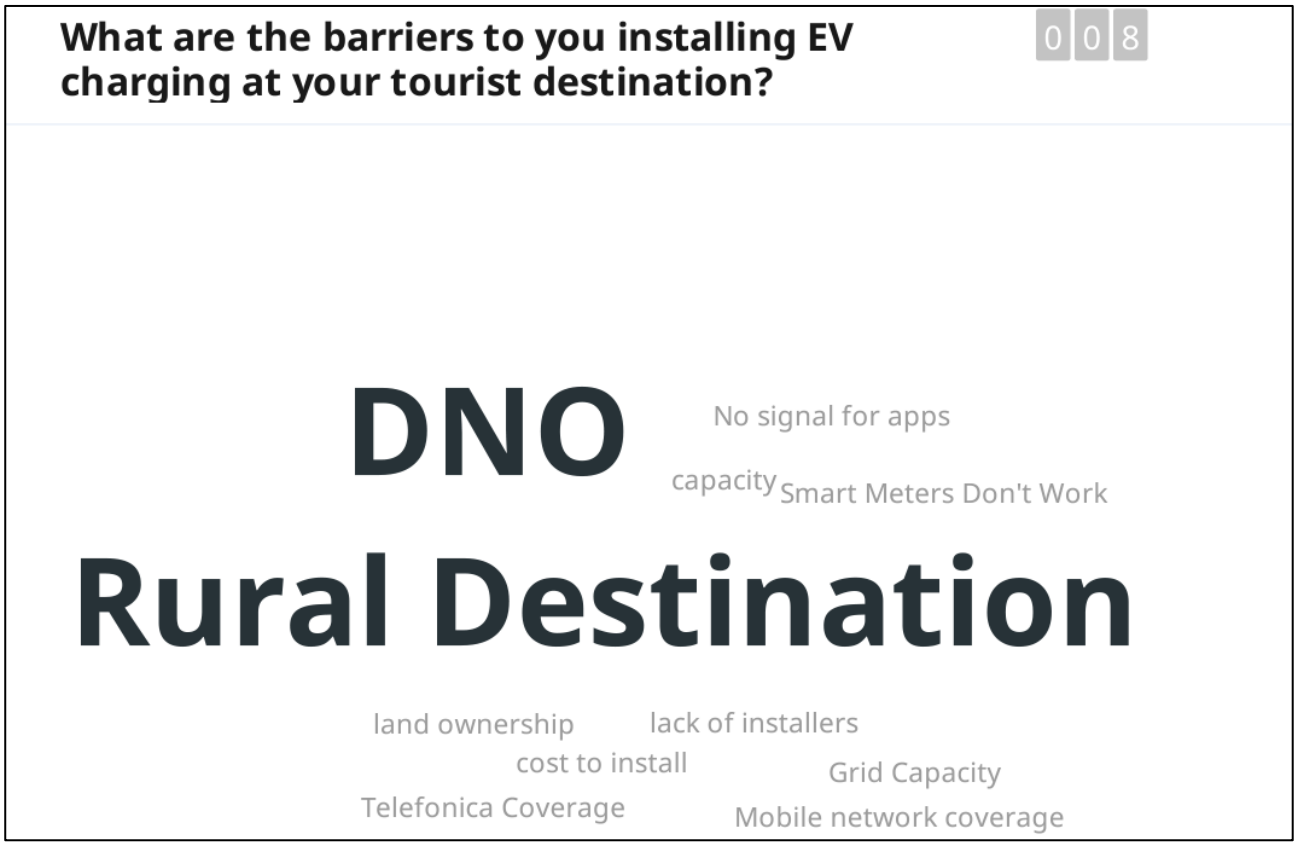


Figure 7

The final question was to understand what the barriers are to installing EV charging at their sites. This generated a word cloud, with DNOs and rural destinations being the most predominant responses. Other responses included land ownership, lack of installers, cost to install, and no mobile network coverage.



2. Roundtable discussion

There were several themes that emerged from the two discussion groups relating to the barriers that the tourism industry is facing when installing EV charging.

Cost and difficulty of grid upgrades

Representatives described how the process of working with DNOs took a long time and the cost of upgrades required was often prohibitive and meant the project was therefore not viable.

This was a particular issue in rural areas and some of the projects not covered by the new Access SCR [1] rules. Some representatives also felt that rural tourism destinations are a low priority by DNOs for any power grid capacity upgrades.

It was felt that the grid capacity was a major problem in many areas. The interim solution being used is to push demand into off-peak periods.

Representatives from the DNOs outlined that when power grid reinforcements are done they are sized to cover all known forecasted future demand levels. DNO representatives also explained that any upgrades are tightly regulated by Ofgem.

Connectivity in rural areas

The lack of mobile network coverage particularly in rural areas was also discussed, particularly in the context of smarter chargers that could make use of off peak charging, although much of the functionality for these chargepoints uses a broadband connection rather than the mobile network.

Issues with mobile network coverage could also be an issue for customers if accessing and paying for chargers with an app.

Lack of knowledge on how to install EV charging

In some situations it was felt that the sector needs more knowledge and experience in installing EV chargepoints. There have been circumstances where what has been installed may not be well suited to the location or the customers.

[1] https://www.ofgem.gov.uk/publications/access-and-forward-looking-charges-significant-code-review-decision-and-direction

In the case of some of the tourism businesses in Cumbria that applied for grant funding, there was also a lack of knowledge as to what other considerations are required when installing EV charging e.g. marking bays and signage.

The tourism sector is struggling financially

One theme that the Cumbria Tourism case study highlighted was that businesses are struggling and that EV charging is not a priority for them at the moment. For example customer demand for one holiday accomodation provider went down by 40% this year compared to last year.

Other costs picked up through the case study were that insurance, particularly for fire, and accessibility considerations were additional cost burdens on businesses when installing EV charging.

Visitor education

Education of visitors to tourist destinations is important. New EV drivers need to understand that they have got to plan their journeys and their charging in advance when visiting a new destination. A potential solution to this is tourist destinations promoting EV route planning tools such as Zapmap on their websites.

Grant funding

When the attendees were asked whether they were aware of the government grant funding for small accomodation businesses 82% of respondents said that they were aware. This grant is still available this financial year 2024/25, further details are available at https://www.find-government-grants.service.gov.uk/grants/workplace-charging-scheme-2#summary

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3. Case studies

Isle of Wight and Scottish and Southern Energy Networks

The project aimed to understand how the EV charging demand from tourists might increase at popular destinations on the Isle of Wight and how that will impact on the local electricity distribution network in 2030.

Some of the challenges on the Isle of Wight are that tourism is highly seasonal, so there is likely to be high demand in the summer. Many visitors arrive by car and increasingly will arrive in an EV. Many tourist attractions and resorts are in rural areas and the existing electricity network is unlikely to have capacity to accommodate tourist EV charging.

Two sites were considered as part of the project and alternatives to network upgrades were analysed.

1. **The Woodland resort, an eco-tourism resort with plans for 10 EV chargers offering mostly overnight charging**
2. **The Needles, a landmark tourist destination with visitors making day trips or short visits**

Some of the options considered to manage the electricity demand include:

Smart charging – shifting demand

At The Woodland resort overnight charging demand could be shifted to later in the evening where there is less demand. This could help reduce the demand by 55%.

Smart charging – dynamic charging rates (ie the amount of charge may vary)

This could be deployed at The Needles, managing the energy provided by chargers when the network is near capacity.

Local power generation

Solar would be the best solution for this as the highest demand matches the days with the highest amount of sunshine. Although this could not be relied on alone and the Island has challenges accommodating extra generation, so this could be difficult to implement.

Energy storage

Modelling shows that The Woodlands resort could be served by a 1MWh battery, and The Needles by a 3MWh battery. The barriers to this solution could be high costs, there are alternative ownership models e.g., lease options that could help with this.

Combined generation and storage

At The Woodland resort a combination of solar and battery storage could be used to provide charging overnight and some of the needs during the day, but it is likely this would not be sufficient.

At The Needles the solar generation supplemented with battery storage would correlate well with tourist EV charging demand.

Novel EV charging solutions

These solutions would manage the demand for charging at the same time and spread the demand throughout the day/evening. Solutions could include

- Valet parking and charging, in which EV motorists would hand their car over to a valet who would drive the car away, park it, charge it up, keep it safe, and return the car to its owner when requested. Such services are not common in the UK but are widely available in the USA.
- Booking systems to reserve in advance a timed period of charging at a selected charging destination.

Conclusions

These solutions need to be considered as part of understanding the individual locations e.g., the type of site, visiting patterns, duration of stay, available space and budget.

Smart charging and the novel EV charging solutions are lively to be the most cost-effective solutions for these two sites.

Cumbria Tourism and Electricity North West Limited

Barriers to EV charging in a rural destination

17% of first-time visitors to the area come in an EV. Cumbria needs a 45% increase in chargers per year to support the predicted demand by 2030.

Cumbria Tourism partnered with Electricity North West Limited (ENWL) to upgrade the connection and provide a charging unit for 30 sites across the county.

They also planned to upgrade the connection for an additional 100 sites.

Criteria for the funding was that the site should have exterior wall for the charging unit and a short cable run to connect to the power grid.

Nearly 200 expressions of interest were received but very few made it through to installation or upgrade. The reasons for this included:

- Lack of understanding of the different elements required to install a charge point.
- Businesses did not factor in the additional costs of a finished product e.g. marking up bays.
- As energy prices increased businesses were reluctant to provide free charging but there was an additional cost associated with upgrading the chargers to take payments.
- Businesses also began to struggle with other pressures and providing EV charging became a low priority

ENWL were keen to offer businesses a Customer Limitation Scheme (CLS) which could provide load management and offer the business a reduced or zero cost scheme to facilitate the installation of an EV charger.

CLS helps with connections, automatically manages how demand interfaces with supply and avoids supply failure through excessive demand.

Overnight charging is rarely a problem, and some sites do not need any supply upgrade at all.

The National Trust

The National Trust gave an overview of their national programme installing primarily 7-22kW AC charging, with some properties also identified for DC rapid chargers.

Having analysed anonymized visitor data for their car parks, the Trust identified that AC chargers will suit most visitors and sites. Installing EV charging meets their strategic ambitions for Everyone Welcome and Climate Action as Europe's largest conservation charity.

The Trust are installing EV chargers in a phased approach, starting with typically 3-6 chargers at chosen locations, from which utilization data will be analysed to inform future provision.

The National Trust have chosen a turnkey solution from a chargepoint operator and are ensuring the chargers are easy to use, provide a strong customer experience, and minimise required management by the operational staff and volunteers.

4. Next steps

The attendees were asked what actions they will take away from the session. The responses included

- To follow up with new contacts made
- To undertake some further research into booking/valet options for EV charging

As a result of the roundtable discussion, Energy Saving Trust plans to undertake the following actions:

- Create partnerships between local authority officers and local visitor economy partnership representatives to ensure the tourism sector is considered when developing EV infrastructure networks.
- Develop further case studies from the tourism sector.
- Engage more with DNOs to improve working relations and understand the scope for expanding EV charging infrastructure across the regions served.
- Promote the resources and funding available for the tourism industry to assist with the rollout of EV charging.