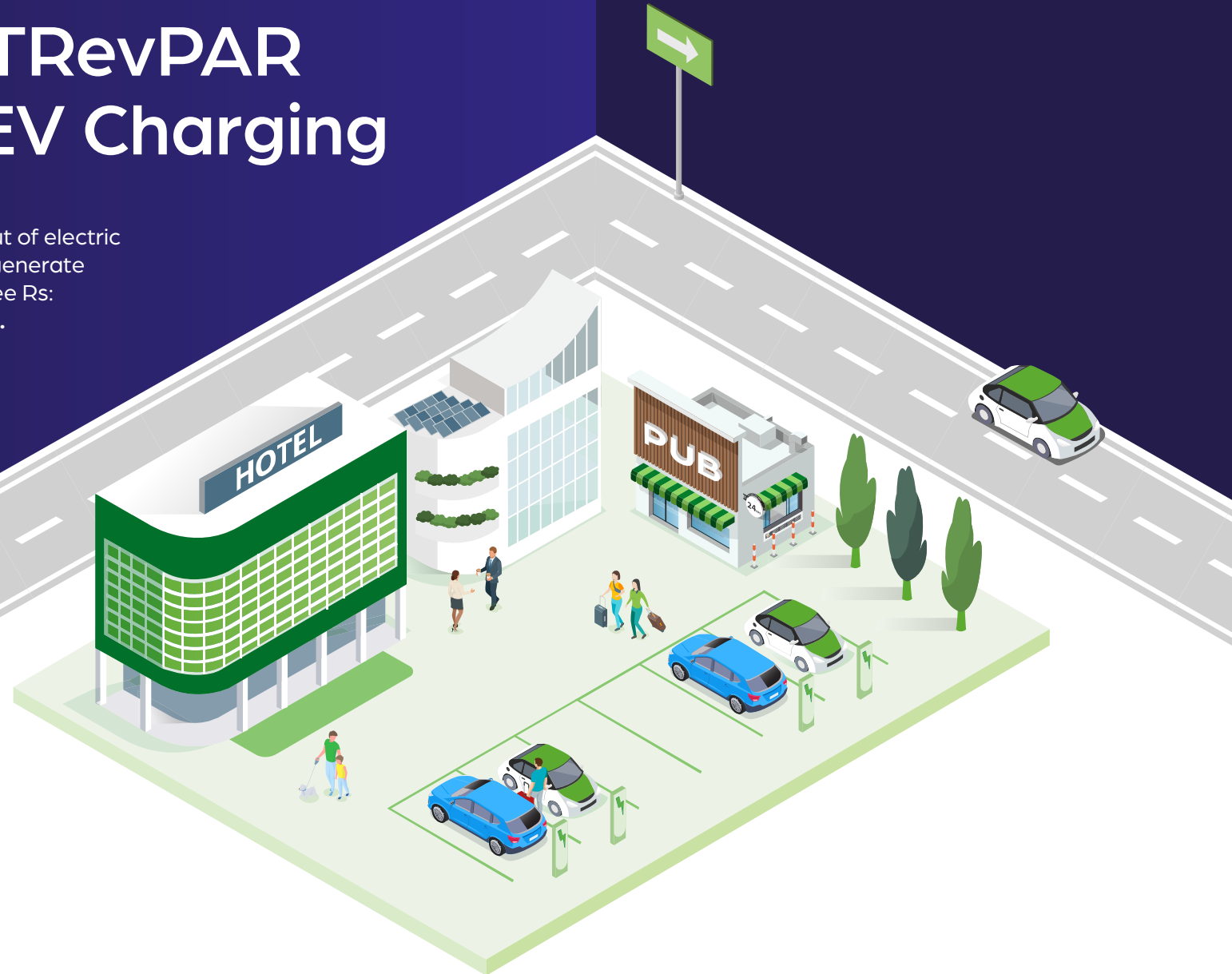


It's time hotels 'plug in and power up':

Maximising TRevPAR with onsite EV Charging

A guide for hotels on the effective rollout of electric vehicle (EV) charging infrastructure to generate revenue, and the importance of the three Rs:
Right location. Right time. Right speed.





Mark Winn
Head of EV Strategy
SMS plc

Foreword from Mark Winn, Head of EV Strategy at SMS plc:

Why should hotels care about EV Charging?

Electric vehicles (EVs) are the future of motoring. There are today more than 1.3 million fully electric or plug-in hybrid cars on UK roads, with one being sold every 60 seconds according to latest figures. By 2030, up to 11 million of them are expected to be driven around Britain.

However, despite an almost ubiquitous love of their EV (94 percent), 67 percent of the UK's current EV drivers wish they had known more about public EV charging availability before they purchased their new low-carbon car.

In fact, 68 percent of EV drivers say it is stressful to always have to think about public charging availability when taking a long journey, and 88 percent believe public EV charging needs to improve if UK drivers are to be encouraged to transition to electric.

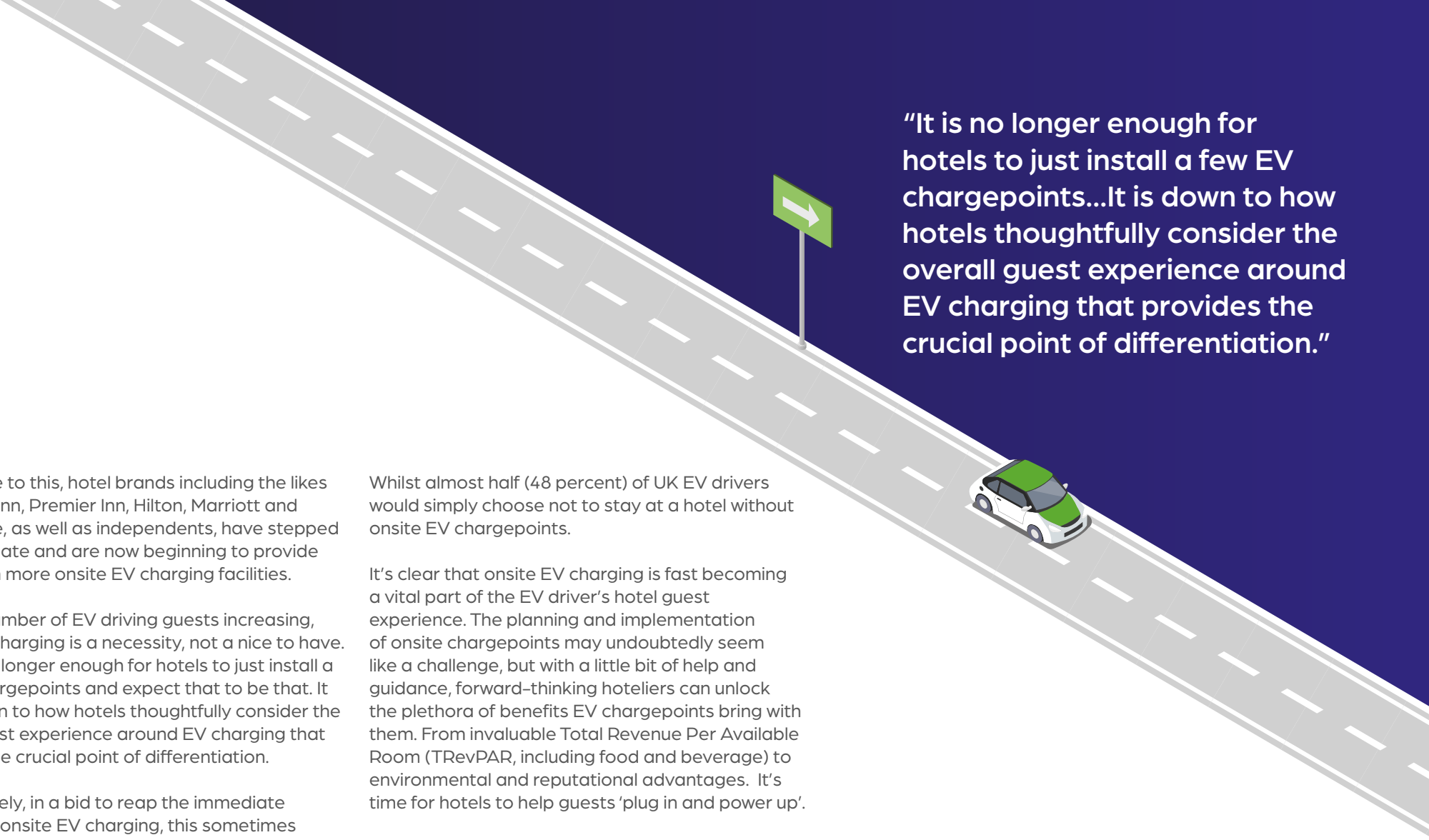
Our research carried out for this white paper highlights that almost a third (29 percent) of UK EV drivers had used hotel EV chargepoints during an overnight stay for leisure. The same figure (29 percent) for business travellers.

According to Zapmap there are approximately 48,450 public EV chargepoints in the UK, across just over 26,062 locations. Yet, as of July 2023, less than [7 percent](#) of the UK's chargepoints (around 3,100) were installed at hotels or similar accommodation across just 1,640 locations in all. Simply more must be done to accelerate their deployment.

Hotels have a vital part to play in ensuring that public EV charging is fit for purpose. Guests who've embraced this electric revolution are no longer simply pulling into a petrol station on their way to, or while they are staying at, a hotel. With an EV they have to be able to power up their vehicle on arrival and throughout the duration of their stay.

EV charging has historically been seen as a competitive advantage for UK hotels. The numerous benefits onsite EV chargepoints can offer hotels is well documented and known – from attracting and retaining guests to offering new streams of revenue.

And let's not forget the essential role that EV charging infrastructure plays in a hotel's roadmap for decarbonisation.



"It is no longer enough for hotels to just install a few EV chargepoints...It is down to how hotels thoughtfully consider the overall guest experience around EV charging that provides the crucial point of differentiation."

In response to this, hotel brands including the likes of Holiday Inn, Premier Inn, Hilton, Marriott and Travelodge, as well as independents, have stepped up to the plate and are now beginning to provide guests with more onsite EV charging facilities.

With the number of EV driving guests increasing, onsite EV charging is a necessity, not a nice to have. But, it is no longer enough for hotels to just install a few EV chargepoints and expect that to be that. It is now down to how hotels thoughtfully consider the overall guest experience around EV charging that provides the crucial point of differentiation.

Unfortunately, in a bid to reap the immediate benefits of onsite EV charging, this sometimes gets forgotten. When EV driving guests arrive at their destination, long wait times and the lack of availability is causing further frustration among EV-driving hotel guests. These past encounters of EV charging are leading to a poor guest experience. Unsurprisingly therefore, over two-thirds (67 percent) of respondents say that EV charging facilities are now influencing their choice of hotel.

Whilst almost half (48 percent) of UK EV drivers would simply choose not to stay at a hotel without onsite EV chargepoints.

It's clear that onsite EV charging is fast becoming a vital part of the EV driver's hotel guest experience. The planning and implementation of onsite chargepoints may undoubtedly seem like a challenge, but with a little bit of help and guidance, forward-thinking hoteliers can unlock the plethora of benefits EV chargepoints bring with them. From invaluable Total Revenue Per Available Room (TRevPAR, including food and beverage) to environmental and reputational advantages. It's time for hotels to help guests 'plug in and power up'.

M. Winn

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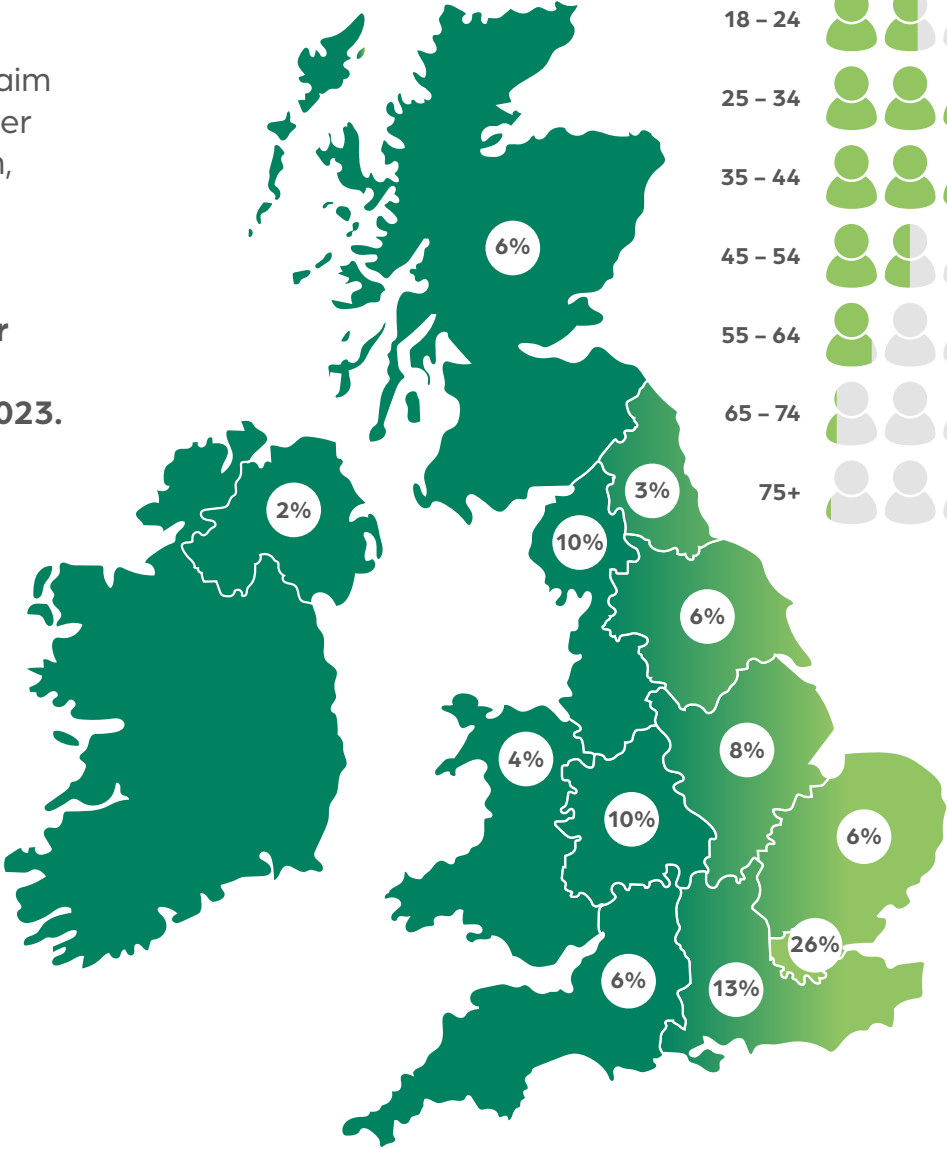
Research Methodology

A comprehensive study of UK EV drivers was conducted by Insight Avenue on behalf of SMS plc. The aim was to explore the current customer experience of using, and relying on, public EV charging in the UK.

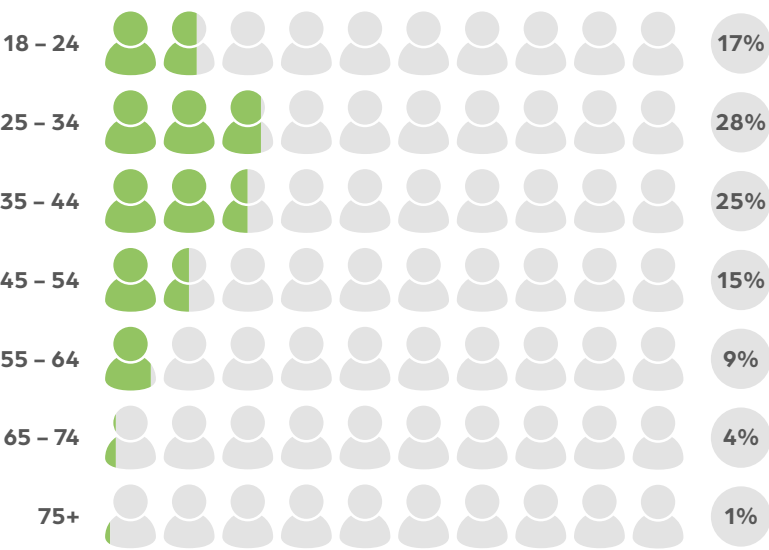
Over 1,000 consumers in the UK that either drive their own or their company's EV or Plug-in-Hybrid completed an interview in April 2023.

Region

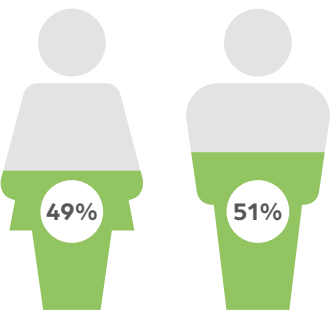
26%	London
13%	South East
10%	North West
10%	West Midlands
8%	East Midlands
6%	Scotland
6%	Yorkshire & the Humber
6%	East Anglia
6%	South West
4%	Wales
3%	North East
2%	Northern Ireland



Age



Gender



SECTION 1

The Current State of EV Charging in UK hotels

To get an understanding beyond the industry data, we need to have clarity on the revenue opportunities available to hotels and what UK EV drivers have to say about their hotel EV charging experience



The revenue opportunity connected to onsite EV charging

The revenue generated from onsite EV charging is not something that hotels of all sizes can afford to dismiss.

ATTRACT

The first opportunity that onsite chargepoints delivers is attracting guests.

It may not sound like rocket science, but quite simply EV drivers need somewhere to charge their vehicle. Guests typically want, and therefore seek, somewhere safe that they can park and charge their vehicle overnight. Ideally, this should be at the hotel itself.

[EV ChargeSafe](#) is an organisation on a mission to make it easier for drivers to find reliable and safe charging points. It is a good reference point for UK EV drivers.



RETURN

If the EV charging options guests are offered, and the experience they receive, is both convenient and seamless, they will be encouraged to return – either to the specific hotel or another within the group. Thus increasing brand loyalty and helping to generate additional revenue.



OPTIMISE

It doesn't end there, onsite EV chargepoints reduce the need for guests to look elsewhere for suitable charging options.

If you are a hotel that offers day dining – a cafe, restaurant, etc. – or have additional facilities such as a Spa, Health & Beauty centre or watersports, you may want to encourage guests to stay onsite a bit longer, and whilst doing so you may see those guests make additional purchases. EV charging is becoming an essential tool in helping hotels to increase the total revenue per available room (TRevPAR).



Added into this mix are the guests who are here for the day or using the hotel as a stop off point.

As the marketing matures, EV adoption will increase and along with this charging habits develop. At this time, it is estimated that half of user demand for EV charging will come from existing food and beverage guests i.e., those staying overnight. However, the other 50 percent will come from additional site guests, providing the opportunity for hotels to increase core food and beverage revenues.

The numbers speak for themselves

Let's make two simple assumptions that, on average, there are:



**1.6 guests
per EV**

For each guest

£10



**is spent on
food and beverage**



Bearing this in mind, the potential annual revenues for a hotel group with

66 sites

could be forecasted as potentially an additional

£1.4m

in the first year, and could increase to

£4.6m

by year 5



The hotel landscape in the UK consists of



**9,784
Hotels**

**148
Hotel chains**

and there are approximately

**66 Hotels
per hotel group**



4 Chargers

Any hotel group or independent that has not planned, or kick-started their implementation of, onsite EV charging infrastructure should act now. However, there is one additional – and critical – part of the EV charging infrastructure that hotels cannot afford to ignore. The guest experience.

A positive EV charging experience for overnight and day guests can help to generate positive reviews on a hotel's website and affiliate sites. Added to this is the old-fashioned concept of word-of-mouth marketing i.e., recommendations to friends and family, or colleagues. Both can prove invaluable in attracting first-time guests. And the process of returning guests and recommendations goes on.



Ensuring an enhanced guest EV charging experience

Hotels must ensure their EV charging experience matches guest needs.

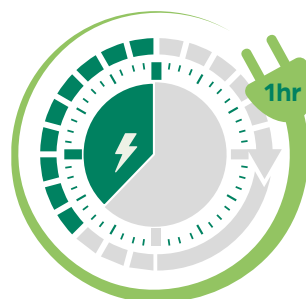
It's critical that hotels don't expect guests to change their behaviour to fit in with unsuitable facilities. This can help to eradicate the 'charge anxiety' many consumers experience around the accessibility and availability of the right charging points.

As a result of historically long wait times and lack of availability:

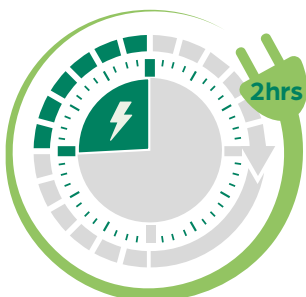


83%
of respondents

may expect, and be prepared, to wait to access an EV chargepoint at a hotel.



38%
would consider
a wait of up to
1hr



26%
would consider
a wait of up to
2hrs



77%
are willing to pay for an
EV concierge service at
a hotel in order to limit
the inconvenience
caused by waiting.

However, there will always be guests who arrive at a hotel and will be unhappy at having to wait to access an EV charger. Day or passing guests may just drive on and look elsewhere, but overnight guests could see it as an inconvenience. Especially if they are settled in their room, and then have to move their vehicle a few hours later. These guests are also more likely to leave site seeking an alternative location for their charging needs, and perhaps worryingly for hotels, seek a location that provides a more convenient food and beverage service.

Hotels should always consider the wider revenue opportunity presented by EV drivers. The simple truth is that [food and beverage sales](#) can account for up to:



30%
of a hotel's
TRevPAR.

It's therefore essential that hotels provide a service that can actively encourage drivers to stay onsite to charge their vehicles, rather than leave site to charge and then purchase sustenance elsewhere. By failing to have enough, or the right EV chargers in place hotels are missing out on revenue from guests who would have potentially stayed on site to eat, drink and use other facilities.

It doesn't end there. Hotel guests have certain expectations when it comes to payment.

A central part of ensuring a premium experience for hotel guests, once onsite EV chargepoints are installed, is to make access, and payment as simple, and transparent as possible.

43% of UK EV drivers

said their preferred option for paying for EV charging at a hotel is at the end of their stay, or as an additional charge and part of their final bill.



31% would expect EV charging to be free

or included in the room rate.



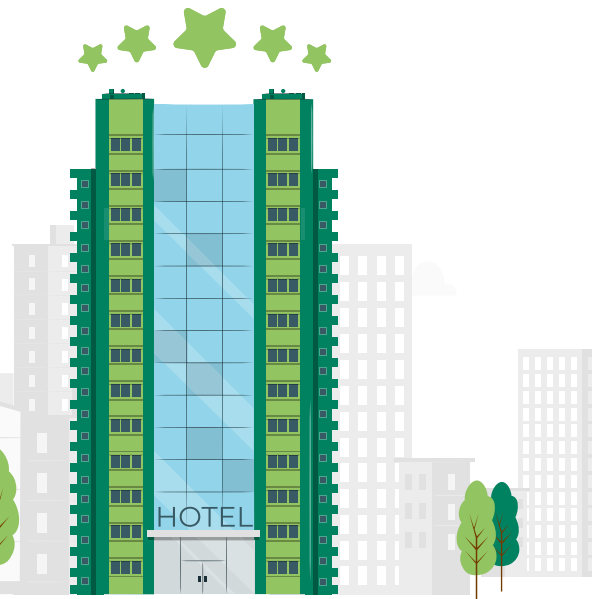
24% would choose to pay

immediately via a hotel website or app



8% preferred the option

of a third party website or app.



24% of drivers

would look to redeem points from hotel rewards programmes to settle their charging bill.

Being upfront about the payment options and costs with guests is vital to ensure a seamless experience. This is as simple as displaying all details and options on the hotel website (and affiliate sites), as well as making sure the information is available in the hotel reception, with the concierge, and in the hotel room.

SECTION 2

It's time to give hotel EV charging a major reboot

To be able to effectively deploy hotel EV charging facilities, there needs to be an understanding that not all chargepoints are created equal.



Implementing the most effective EV charging infrastructure can be a minefield for hotels

Not all EV chargepoints are created equal; the type required varies depending on where it's being installed and who is using it. Hotels must avoid the trap of focusing solely on the revenues offered by chargepoint operators (CPOs) whose facilities invariably aren't designed with the guest experience in mind.

For example, chargepoints at hotels that do not offer the guest an ability to book or reserve ahead can lead to a poor experience, thanks to limited availability leading to longer wait times. This ultimately means EV driving guests will look elsewhere for their charging needs.

Instead, hotels should consider the wider revenue opportunity – such as food and beverage sales – presented by EV drivers.

The rule of thumb is to plan the implementation with three R's in mind – right location, right time and right speed. This will deliver the best balance, and number, of EV chargepoints with speeds that match the time guests are spending onsite.



Right Location



Where to charge

Easy access to charging is vital. An EV should be charged at a convenient spot when the driver would naturally take a break in a journey. Or when they reach their destination, such as a hotel.

Added to this is the consideration that using fast charging potentially prolongs the health and life of the EV battery – something that an EV-driving hotel guest may be well aware of.

Right Time



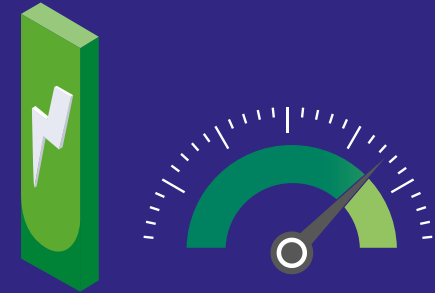
When to charge

Understanding the best time to charge a vehicle is a behavioural change that is needed in the transition to EV.

Charging a vehicle should not be intrusive when charging away from home – whether enroute or at your destination. This is one of the reasons why 'powering up' can, and should, be done when the vehicle is stationary and/or parked. According to the [RAC Foundation](#) most cars actually spend over 90 percent of their life not moving.

This shouldn't be limited to situations when a vehicle is used for general life i.e., returning home at the end of the day, or when going to a shopping centre, supermarket or cinema. Drivers are fully aware – thanks to UK government awareness campaigns – that a rest or comfort break is vital when driving long distances.

Right Speed



How quickly to charge

Ensuring that the right speed of chargepoints chosen to be installed is important. And it doesn't need to be one type only, to address the needs of the EV drivers it could be a mixture of types.

There are typically three types of charging suitable for a hotel location: fast, rapid, ultra-rapid.

For onsite hotel EV chargepoint infrastructure, there are three types of speeds, sitting under two categories, that should be considered.

Alternative current (AC) for slower charging:



- **AC Fast Charging (7kW–22kW)** is ideal for those looking to charge their EV overnight or when the vehicle is stationary for a long time.



Direct current (DC) for faster charging:



- **DC Rapid Charging (30kW –100kW)** is suitable when time is limited. It can typically charge an EV in 60–90 minutes. This is perfect for short stay visitors. For example, day, spa or food and beverage guests who need a power-up.

They are fast enough to attract drivers to site, but slow enough to prevent pit stop behaviour ensuring that those drivers who select to charge at these sites are doing so based on intention to use the facilities.



- **DC Ultra Rapid Charging (currently 100kW – 350kW)** can charge a car in less than 30 minutes. It is suitable for instances when a critical top up is needed, or time is of the essence.

However, it can encourage pit stop behaviour and may not be the most attractive charging option to offer your visitors. Drivers may park, charge and wait in their vehicle without contributing revenue to the site, whilst those that would may choose to go elsewhere.

The partnership approach: Better together

The EV charging market offers an attractive opportunity for hotels to maximise the value of their site(s).

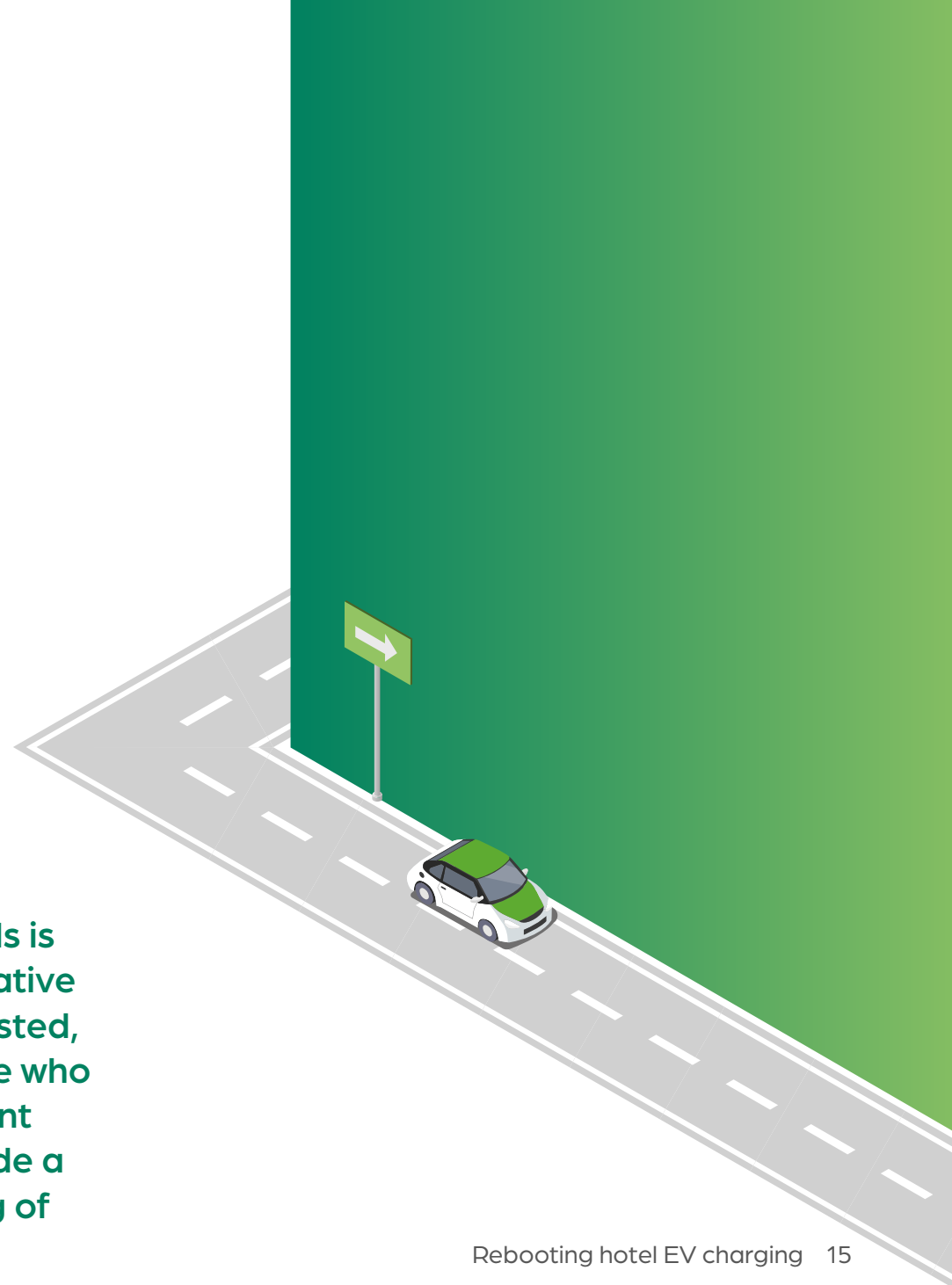
It would be fair to say that the longevity, financial robustness and reliability of many EV Chargepoint operators (CPOs) has yet to be proven. This will be tested further in a rapidly expanding market place, with particular threats arising from turbulent national and global economic circumstances i.e. the recent rapid rise in interest rates in the UK.

In addition, there's the potential risk of too many CPOs in the market. As they race to expand their networks, there could be issues with overbuild, poor maintenance, and in some cases a lack of adequate planning resulting in the wrong chargers being installed in the wrong location.

This has most recently been seen in the telecoms sector with the rollout of full fibre networks, leading to neglect of certain localities (due to ROI opportunities) and thus a forced consolidation of the market.

The effective rollout of hotel EV charging infrastructure is all about a collaborative approach with a trusted, reliable partner. One who has the most relevant experience, alongside a deep understanding of the marketplace.

The effective deployment of EV charging in UK hotels is all about a collaborative approach with a trusted, reliable partner. One who has the most relevant experience, alongside a deep understanding of the marketplace.



Finding the right partner comes down to research, energy, and a bit of chemistry

The starting point for finding the right partner is to have clarity on the experience, both in terms of heritage and technical capabilities, that the CPO brings to the table. Added to this is understanding how the CPO works and the type of partnership approach that is on offer.

Heritage and experience, beyond just EV.

With the exponential, and continuous, increase in technical innovation, the industry is experiencing the entry of a host of new startups. It is therefore not necessary for the CPO to have been involved within the industry over a long period of time. However, it is critical that any long-term partner has an in-depth understanding of the energy and infrastructure industry.

What to look for in an EV chargepoint partner. Experience and proven track record in:

- ✓ Delivery of large energy infrastructure projects
- ✓ Power network engineering
- ✓ Management of installation programmes
- ✓ Control and operation of CPO technology
- ✓ Energy trading
- ✓ Supply and maintenance
- ✓ Access to funding
- ✓ Understanding of the UK's national power infrastructure and grid
- ✓ Load balancing and demand flexibility expertise

One that offers an end-to-end service.

Ultimately, any business looking to provide charging solutions in the hotel space, or looking to mobilise those charging solutions, should aim for a long-term relationship with a strong counterparty. One who will provide an end-to-end solution from the design and the delivery, to the ongoing maintenance and upgrading.

The perfect partner will take care of everything from planning and grid connection through to project completion. This ensures that sites are future-proofed by integrating in-demand, fit-for-purpose EV infrastructure that serves the growing charging needs of hotel guests.

And an 'Open Access' approach.

Much of the UK's public EV infrastructure has historically been developed by private or closed network operators. This fractured approach has resulted in a market that requires EV drivers to have a variety of memberships, accounts, and RFID cards to access all publicly available chargers, resulting in below par customer experience.

There is a better way via Open Charge Point Protocol (OCPP). This is an open-source communication standard for EV charging hardware and chargepoint software companies. Essentially, any EV chargepoint that is OCPP-compliant can be configured to run any other OCPP-compliant software.

By choosing OCPP from the outset, the EV chargepoints will not be constricted by fixed capabilities for the duration of their lifespan (which is often the case with hardware installed on closed charging networks). Instead, they will have the ability to be customised and improved with the latest software upgrades, bringing the latest e-mobility service features to your site.

For example: enabling a driver to pre-book a public EV chargepoint, join an e-queue with detailed wait times, or enabling them to pay for their charge automatically by simply plugging in their vehicle.

This will also be vital as the development of e-mobility solutions (enabled through innovations in chargepoint software, rather than hardware) continues to become more sophisticated. Choosing to partner with a chargepoint provider that is an OCPP advocate is advantageous. It can impact the long-term attractiveness, viability, and profitability of a hotel's facilities.



SECTION 3

Working with SMS

Partnering with hotels to design and deploy and manage EV charge point infrastructure across the UK



Building dependable hotel EV charging



Working with us

With more than 25 years in the UK energy industry leading the delivery of some of the country's most notable national utility infrastructure projects, such heritage and expertise sets us apart from the pack in an increasingly crowded EV Chargepoint Operator (CPO) marketplace.

Delivering essential public energy infrastructure is what we do, and what we do best. From our work with leading telecoms companies to design, install, and manage the electrical requirements that connect the UK's 4G and 5G networks, to the national smart meter rollout where we fit more than 40,000 devices in homes and businesses each and every month. Our scale, engineering expertise, and agile approach to technology and tailored solutions is why our customers are now choosing us to help navigate the logistical challenges and commercial opportunities of hotel EV chargepoints.

Reliable, established, secure

In a fast-growing but still-emerging UK EV charging market that is permeated with new startups and smaller, private equity backed businesses, there are few players who offer the security, stability, and reliability that SMS can as a long-term commercial partner.

We are a FTSE AIM 50 business publicly listed on the London Stock Exchange, and with a market capitalisation of over £1bn were recently named as one of only nine climate-tech "unicorns" in the UK. This financial robustness combined with our established market presence and expertise gives our customers peace of mind that SMS is a business you can trust and depend on to deliver.

Who we are

We're an integrated energy infrastructure group which installs, manages, and operates low-carbon technologies that together enable a smarter, greener, and more affordable energy system. Established in 1995, we additionally provide large power infrastructure, energy consultancy, energy data management, and net zero strategy services to private and public sector organisations. With our mission to lead the UK's energy transition, we are committed to reducing our own carbon emissions to net zero by 2030, as well as supporting the UK's wider 2050 climate goals through energy innovation and industry collaboration.

Our credentials

700

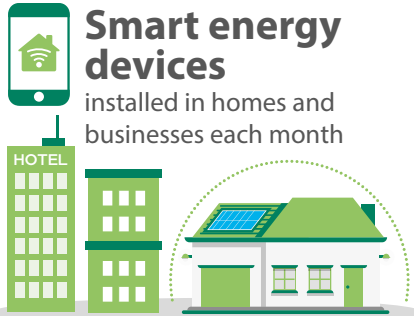
Electrical, dual-fuel and EV chargepoint engineers employed across the UK



40k

Smart energy devices

installed in homes and businesses each month



One of just nine

UK climate-tech "unicorns"

(Climate Tech Report 2022)



SMS

Leading the smart energy revolution



28

YEARS

Operating



50

Listed on the FTSE AIM 50 index

£1bn

market capitalisation



2030

Our goal to become
Carbon neutral
by the end of the decade



4 Million

IoT energy assets under management (energy meter/data assets, EV chargepoints, Grid-scale batteries)



150GWh

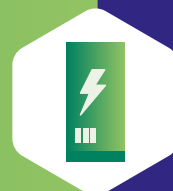
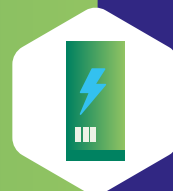
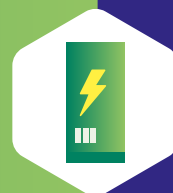
Energy purchasing portfolio managed for clients

60k

Commercial power connections delivered

Partnering with you

Whether a single site or portfolio of properties, we provide the most suitable infrastructure to maximise footfall and revenue from the chargepoints installed on site. We assess every proposed location and its parking area individually according to business model and situation, tailoring EV charging infrastructure to suit the needs of chargepoint end users. From our expert design and installation, through to ongoing maintenance and asset management, our long-term lease agreements guarantee additional, regular revenue streams long into the future.



Partnership options

We work with your business across a range of secure, reliable and long-term commercial partnership agreements, including:

Host

- Host SMS chargers on your site
- Guaranteed revenue stream
- Fully managed – zero investment required by you

Lease

- Generate long-term income
- Installation & maintenance provided
- We operate the CPO technology platform and manage revenue collection

Own

- We install the chargepoints, but you own them
- Maintenance support provided
- We operate the CPO technology platform and manage revenue collection

Want to know more

about how to roll out an
effective deployment of
Hotel EV Chargepoints?

[Find out more >](#)



Get in touch

Contact us today to book your bespoke
1:1 Hotel EV Charging consultation.

[Contact us >](#)