

POINT OF VIEW

Energy organizations are taking charge

Electric vehicle charging solutions are helping energy organizations launch a new energy era

Charged up for future gains

The rapid adoption of electric vehicles (EVs) has clearly demonstrated that investing in green solutions can pay dividends, as well as helping to combat carbon emissions. Where there are EVs there is demand for EV charging stations (EVCS), and this is giving energy organizations a new strategic focus for investment. In fact, across the US, Europe, and China, the profit pool for the EV charging sector is likely to grow to between €8 billion and €13.5 billion by 2030.¹ As the transition from traditional to renewable fuel sources advances, energy organizations are well positioned to become leaders in the EVCS market. This opportunity will provide access to new business initiatives, new strategic partnerships, and will help attract and retain customers.

Current Context

Benefits

Energy organizations have a unique opportunity to reposition their brands as sustainability powerhouses. The market for EVs and EVCSs continues to grow. Europe alone will need 3.4 million new charging stations by 2030.² Putting their weight behind EVCSs will enable energy organizations to overhaul their traditional image and provide a world-leading EV ecosystem that would generate new jobs, reduce air pollution, and accelerate progress towards climate goals.

Government support

Across the globe, governments have recognised the strategic importance of EVs, and EV charging stations are now a top priority. In the US, the Biden administration has announced a plan to create 500,000 EV charging stations by 2030.⁴ Across the Atlantic, the UK government wants a tenfold increase in the number of charging points for a total 300,000 installations by 2030. The European Union, global frontrunners in adoption of EVs, have voted to ban new gasoline car sales after 2035.⁵

By 2040,
2/3 of
all cars
globally will
be electric.³

Opportunities and challenges

Understanding the Energy Customer of the Future: New opportunities, new challenges

EV owners are quickly adapting to the new style of driving and in particular the charging experience. For EVCS owners, this opens a wealth of opportunities. EVCSs will enable energy organizations to establish new relevance with a younger generation and associate themselves with the Net Zero aspirational goals of their new customers.

From road rage to road anxiety

EVs replace the stress associated with a car running out of petrol with worries about a car's electric charge limiting its range. Range anxiety and charging anxiety are real. The thought of running out of charge in an inhospitable environment or not having the time or convenience to sufficiently charge their car, are unpleasant prospects for EV drivers. Reliable, safe, and available EVCS locations are already in high demand, and energy organizations have the capability to relieve consumers of their anxieties and build positive outcomes for everyone.

More than
50%
of consumers
concern about EVs
involved batteries,
charging, and driving
range.⁶



Omnipresent customer engagement

Owners of the new EVCSs will have a unique opportunity to offer differentiated products and services that transform the driving experience. It's not too farfetched to imagine a new charging lifestyle accompanied by delightful retail or hospitality experiences that take place in the security of an EVCS while a customer's car is charging.

Today's ubiquitous internet connectivity can give energy organizations an unparalleled level of customer engagement through mobile apps. EVCS-branded apps will help customers map out their future charging activities, for example, planning a trip that includes visiting their favourite EVCS, taking advantage of discounts and offers for charging during off-hours, or locating premium EVCSs that deliver the fastest charge. This constant connectivity will provide a wealth of insight into customer buying behaviour and brand loyalty, allowing the EVCS experience to be tailored to maximize revenues

and customer enjoyment. Removing the anxiety of EV ownership and changing the painful into painless will deliver powerful brand benefits, and enable the rehabilitation of an energy organization's marque around a sense of safety and trust.

Measuring dwell time

Segmenting EV charge time is another tactic EVCS owners can employ to help differentiate customer requirements. Dwell time, the amount of time a customer will be happy spending at the EVCS while their car charges, will vary significantly and will provide a useful metric to describe different EVCS experiences. A quick charge infrastructure will be critical along motorways, where optimizing a journey's elapse time will be a key factor. However, given the revenue opportunities that forecourts and other retail locations could bring to margins, offering slower charge options to market segments with different dwell time demands also makes sense. By focusing on what the customer wants and leveraging technologies such as 5G and the cloud, EVCS owners can keep the customer connected and most importantly, satisfied.

Powering up Fleets

Lower EV total cost of ownership, reduced maintenance expenses, and government incentives are helping drive fleet electrification. McKinsey projects that commercial and passenger fleets in the United States could include as many as eight million EVs by 2030.⁷ Capturing fleet EVCS business will be a key priority for energy organizations, helping them scale revenue. BP and Shell are already positioning themselves as leaders in the field and have committed to offering large organizations the ability to charge using their infrastructures.



How to Win The Path to Success

Building a sustainable future

EV adoption was slow to take-off, with many consumers doubting the long-term viability of electric cars. However, the significance of EV's environmental benefits, savings from lower fuel and maintenance costs, and commitments from large automobile manufacturers to produce more EVs have proven electric vehicles are not a fad. Additionally, for energy organizations battling strict emissions targets, EVs and EV charging stations are a welcome step that will help the organizations meet net zero goals. Energy organizations are now in a unique position to pivot towards EVs and EVCSs and transform their brand in the minds of consumers. Sleek and eco-friendly EVs and EV chargers will attract a new audience and firmly position the organization as a sustainability champion, putting them on the right side of history.

Get there faster, together

The ecosystem of EVs and EVCSs is expanding and includes automakers, utility and distribution companies, equipment manufacturers, software firms, charge-point operators, retailers, and infrastructure funds. It is imperative that energy organizations take the lead in establishing strategic relationships with these market players. Startups and joint ventures are already carving out a space in the market. Ioniq, a joint venture of global automakers BMW, Ford, Hyundai, Mercedes-Benz, and Volkswagen, is already developing a fast-charging station network along Europe's major highways,⁸ proof that investment is flowing into the rapidly expanding EVCS sector.

If you build it, they will come

A move into the EVCS infrastructure market will undoubtedly require significant investment from energy organizations. McKinsey estimates the build-out of an EV charging infrastructure in Europe may cost upwards of €240 billion by 2030.⁹ With the EV market continuing to mature, energy organizations may consider the investment a risky proposition. However, the potential ROI is high. Several energy market incumbents are already staking their claim to the space: BP has stated it will invest £1 billion over the next ten years in UK infrastructure,¹⁰ and Shell has set an equally ambitious goal having committed to ensuring that 90% of all UK drivers will be within a 10-minute drive of a Shell rapid charging station.¹¹ In addition to maintaining a competitive stance, an EVCS green infrastructure investment will likely give energy organizations more flexibility in influencing future regulations and help them stay in compliance of existing statutes

Optimizing operations and safety

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EVCS operations place increased importance on optimizing the digital elements of the infrastructure, especially those EVCSs offering a differentiated customer experience. **Visibility, availability, reliability, and security** of all aspects of the infrastructure will be important to the profitability of EVCSs and the safety of EVCS customers.

EVs are fast becoming computers on wheels, with complex technologies powering assisted driving features, such as lane departure warning and collision avoidance, and state-of-the-art 5G and Wi-Fi connectivity. Plugging an EV into an EV charger provides a potential pathway to a vast amount of data, both personally identifying information (PII) about the driver and passengers and telemetry information used by the car's microcontrollers. Securing EVCS data access is critical to the safe



operation of the car and to the privacy of the driver. Unfortunately, this data will be a magnet for cyber thieves and other bad actors.

Threat actors have shown keen interest in infiltrating national critical infrastructure, such as energy distribution facilities. The direct interface to the power grid maintained by each EVCS will undoubtedly attract the attention of hackers and must be protected, virtually through cybersecurity technologies and physically by incorporating ruggedized design components that prevent tampering and vandalism.

Guarding the EVCS infrastructure against cyber threats will also ensure the safety of EV drivers, mitigate attacks with potential impact on the grid stability, and secure the brand and reputation of EVCS owners. Cybersecurity must not be an afterthought.

Leading the way into the new energy era

The development of the EV ecosystem is one of the largest industrial transformations in a generation. As fossil fuel use in transportation fades into the past, so too will fuel stations and their traditional role in society. Yet this shift paves the way for a new, dynamic, and highly profitable EVCS market. Energy organizations are in a unique position to reap the rewards of early investment in this market.

The success of EVs and the demand for EV charging stations give energy organizations the opportunity to build a close and enduring relationship with their customers. Strategic partnerships with companies capable of protecting their data and brand from cyber threats will position energy organizations to lead the way into this new era.

[Find more insights from Fortinet here](#)

References

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