

Ending the ICE age: EV Country Attractiveness Index findings



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Over the past decade electric vehicles (EVs) have become increasingly popular across many of the world's major economies, with both the eco-conscious and average consumer adding to the rise in sales. This phenomenon has not just appeared from thin air, however, as international climate agreements, national net zero plans, EV incentives and ICE (internal combustion engine) vehicle disincentives have all given rise to investment and factored into any significant change in uptake. Cornwall Insight have partnered with law firm Shoosmiths to create the Electric Vehicle Country Attractiveness (EVCA) Index, a ranking which charts the relative attractiveness of major European nations for investment in EVs – with a particular focus on passenger cars – and EV charging infrastructure. We have identified a variety of metrics covering a range of factors (from purchase subsidies to national EV charging targets) upon which nations can be ranked accurately on their attractiveness to investors. Highlighted on the map and table below are the rankings – with 1 being the highest and 13 the lowest – followed by a discussion of current EV markets.

Figure 1 – EV Country Attractiveness heatmap:

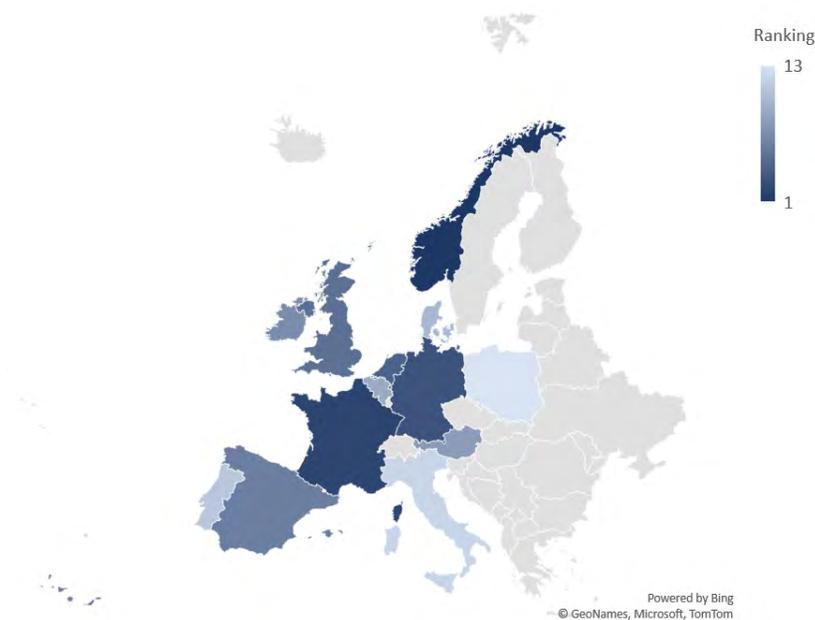


Figure 2 – EV Country Attractiveness index scores and rankings:

Country	Score	Ranking
Norway	7.3	1
France	6.7	2
Germany	6.5	3
Netherlands	6.2	4
United Kingdom	6.18	5
Spain	6.17	6
Ireland	6.0	7
Belgium	5.9	8
Austria	5.4	9
Denmark	5.2	10
Italy	4.3	11
Portugal	4.24	12
Poland	4.23	13

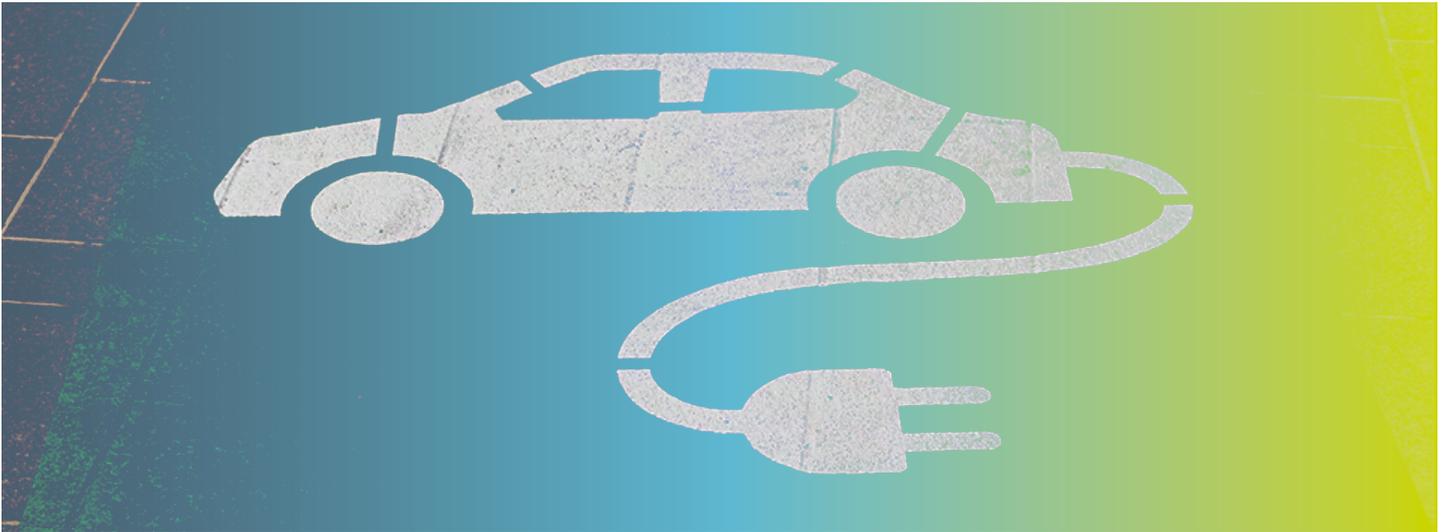
At a glance, the results are perhaps unsurprising with first-mover Norway convincingly leading the pack, whilst Poland, who has been more reticent to adopt EVs, lags behind in last place. However, upon closer inspection, a more colourful picture emerges as even the top-ranking nations fail to impress in some vital areas, whilst those nearer the bottom show promise for the future. Thus, it is a nation’s consistency in deploying attractive EV policies and incentives that earns it a higher spot in the index.

Melting the ICE

Amongst the nations included in the EVIA index, many have been ardent supporters of the e-mobility transition whilst others have been more hesitant, only seriously pursuing ICE alternatives in recent years. As such, some markets remain underdeveloped, with EVs only accounting for a small percentage of sales in the past year. However, with most European nations imposing a ban on the sale of new petrol and diesel passenger cars and light commercial vehicles (vans) by at least 2035 – with some choosing to do so sooner – many nations have seen an increase in EV uptake in 2022 compared to 2021, suggesting a more established market in the future.

Looking to the market share of battery electric vehicles (BEVs) – otherwise known as ‘100%’ EVs – Norway reigns supreme as BEVs made up 79.3% of new passenger car registrations – a proxy for sales – over the course of 2022, a massive 56% greater than its closest competitor, the Netherlands, who had a market share of only 23.5%. Explaining this significant divide is not only Norway’s first-mover status in the EV space – having itself achieved a 20%





EV market share in 2016 – but also its ability to incentivise EV uptake. In doing so, it has employed the use of subsidies, tax cuts, increased benefits such as free parking and access to bus lanes, and the development of a large-scale charging network. Broadly, it would seem that despite lagging behind, other nations are learning from this as market share figures across the index largely range from 10-20% with only Poland, Italy, and Spain in the low single digits. However, whilst undoubtedly important, market share alone cannot paint the full picture as year-on-year growth of BEVs is also essential in charting the direction of the market. It is here that some new entrants emerge as Ireland boast the highest growth of 81.3% from 2021-2022 with Belgium placing second at 66% and Poland coming in third at 58.2%. In comparison to most, these figures are impressive as typical growth ranges from 20-35%, with only Austria (2.4%) and Italy, who had a decline of 26.9%, deviating from the norm. Thus, the general trend across the indexed nations is a positive one, with most seeing significant year-on-year growth of BEVs as they approach ICE phase-out dates. In all cases, perhaps the most significant driver of growth in the EV market is the wealth or, conversely, dearth of policies to incentivise the switch from ICE vehicle to EV. Subsidies, tax breaks, company car schemes, and investment funds for charging infrastructure are all extremely important in this regard and are resultingly major drivers of capital from both consumers and investors alike.

Incentivising uptake

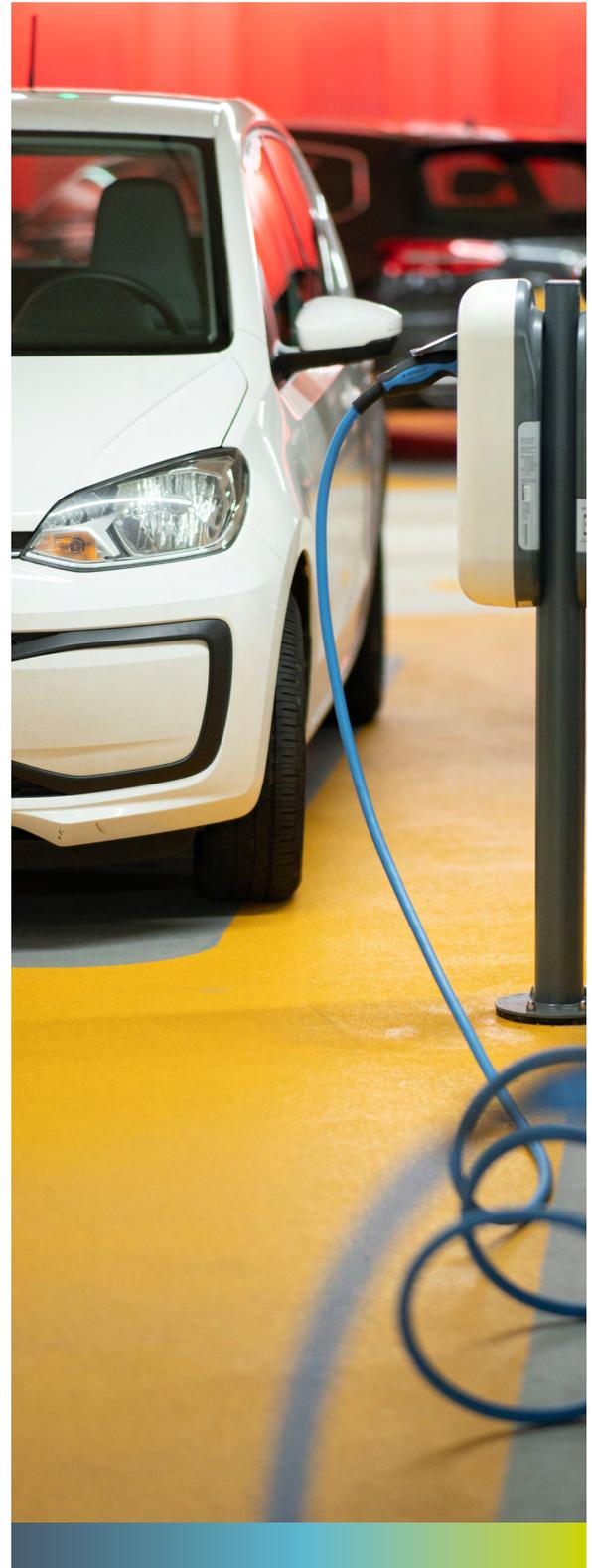
With a stronger presence of EVs on the road, the need to develop an expansive charging network has been of increasing importance in recent years. This can be seen clearly across the indexed nations as all but two – Denmark and Portugal – have allocated funding pots for privately and publicly accessible EV charging. Boasting perhaps the strongest investment scheme, Germany offers up to 60% of funding for the installation and construction of EV charging points, with up to €20k for high demand ‘fast charging’ – and related mains connections – and up to €100k for ‘medium voltage connections.’ Whilst this scheme has closed to new applications as of January 2022, projects will be funded to 2025, helping Germany to reach their ambitious target of 1 million publicly accessible charging points by 2030. Not all nations look as likely, given current investment incentives, to reach their ambitious targets however. Portugal, despite successes in other areas, appear hesitant to invest public capital into the development of a nationwide EV charging network, leaving investors with high upfront costs and no ability to secure government funding or tax deductions. So, whilst the Portuguese EV market may be able to grow through purchase subsidies, the government’s lack of focus on charging may cause stagnation in the near future.

Of course, whilst EVs are of growing popularity across most of the indexed nations, subsidies are often needed to convince consumers – whether individuals or corporates – to make the switch. Whilst at one point Norway would have once again topped the pile for EV incentives, its success has created a market where extensive and generous incentives are no longer needed to encourage uptake. In recent years, Norway has removed the subsidies previously available for the purchase of an EV, resorting instead to reduced taxation, reduced toll and ferry fees, and some additional – though sometimes counterproductive – ‘benefits’ as BEVs are allowed to drive in bus and taxi lanes. The idea here being that as BEV uptake has increased through the use of incentives, it – alongside legally-binding targets to ban new registrations of ICE vehicles by 2025 – has encouraged organic growth which is not dependent on incentivisation, thus allowing funding to decrease and incentives to be eroded. Meanwhile, in many of the other nations surveyed in the index, the opposite holds true as more incentives are needed to convince and allow consumers to make the switch to EVs.

Amongst the highest scorers on the consumer side, Austria offer a variety of attractive incentives for 2023 as both private individuals and corporates can benefit from purchase subsidies on BEVs – whilst the latter can also receive funding for electric buses and HGVs, for instance – alongside tax deductions and exemptions, and funding for EV charging points. Amongst these incentives, it would appear that purchase subsidies are the most commonly employed as eleven out of the thirteen indexed nations – with the exception of Belgium and Norway – offer them to private consumers and corporates. Taking a different approach to incentives, Belgium – whilst differing by region – mostly offer tax breaks alongside the opportunity to enter into a corporate ‘Mobility Budget’ scheme which allows employees to allocate €3k-€16k of their salary to e-mobility (purchasing an EV, using public transport etc), free from taxation. Given Belgium’s 66% growth in BEV uptake from 2021-2022, it would seem that this system can also work, if implemented correctly.

Future prospects

With ambitious targets for both EVs and EV charging station development being set across many of the indexed nations, it remains to be seen which ones will come to fruition and which ones will need to be rethought. This will be monitored as the index progresses, charting changes to policies, targets, subsidies, and investment incentives, highlighting the dynamism in the EV space and updating rankings accordingly. Finally, it is important to note that whilst it is currently the first-mover nations – with the most developed, attractive and



investor-friendly EV markets – who find themselves amongst the upper echelons of the index, there is potential for some nations currently in the nascent stages of EV policy and market development to emerge as innovators and future leaders in the EV space.

Indicators:

A range of indicators, subject to differing weightings, have been utilised in the production of this index. They are listed as follows without regard to importance or weighted value:

- Committed government funding
- National EV sales targets
- National EV charge-point implementation targets
- Support for ICE vehicle rollback or ban
- Available investment subsidies, funds, and tax benefits for EVs and EV charge-points
- Available purchase subsidies, funds, and tax benefits for EVs and EV charge-points
- Ability to conduct business
- Rate of inflation
- Market share of BEVs
- Year-on-year growth of BEV sales
- Wholesale cost of electricity scaled to GDP



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About Cornwall Insight

Cornwall Insight is the pre-eminent provider of research, analysis, consulting and training to businesses and stakeholders engaged in the Australian, Great British, and Irish energy markets. To support our customers, we leverage a powerful combination of analytical capability, a detailed appreciation of regulation codes and policy frameworks, and a practical understanding of how markets function.

Understanding that the e-mobility and low carbon landscape is fast-paced and often complicated, our services help you navigate this rapidly changing area. Our products, forums, training and consultancy services distil the latest news and developments in the sector, allowing you to assess the opportunities and challenges quickly.

With the accelerating adoption of electric vehicles and the deployment of charging infrastructure, it is important to keep up with this changing landscape. Our experienced team of analysts and consultants can do just that, providing market insight and advice and support for projects. This includes:

- **Providing access to informative discussions** at in person and on-line forums, with attendees hearing from a panel of experts across the industry. These events provide networking opportunities to partner those experiencing challenges on their transport decarbonisation journey with those who have solutions.
- **Publishing our insights** on current and developing topics such as around pricing of charging on the public network, rates for different charging speeds over time and how it compares to petrol and diesel prices, helping customers understand the total cost of EV ownership and pulling out the most important developments in concise briefings and alerts.
- **Sharing our research** on local authority charging plans and exploring who they have engaged with to understand demand. The results help address barriers and prioritise how organisations can best support EV charging projects. It also signposts to helpful resources.
- **Providing access to key metrics** in one easy-to access place, allowing customers to see trends developing and pivot their actions accordingly
- **Unpicking policy developments** and spelling out what it means and its implications, as well as making people aware of things on the horizon that will impact the EV space
- **Helping companies understand** the market as well as where and what charging infrastructure might be needed through our bespoke consultancy service.

For more information please contact enquiries@cornwall-insight.com

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About Shoosmiths

Shoosmiths is a major law firm with a network of offices working together as one team. A key tenet of the firm's strategy is its focus on five sectors – Mobility, Energy & Infrastructure, Technology, Living, and Financial Services.

Electric vehicle (EV) charging infrastructure touches on all of these sectors and, as such, is an area of combined focus for the firm's sector groups.

Shoosmiths' national multi-disciplinary [e-Mobility & infrastructure team](#) has a proven track record supporting the EV sector. Their specialists advise companies involved throughout the sector from initial corporate fundraising and investment to project site selection (including real estate, commercial, planning and construction advice), to project operation and maintenance, to operational commercial offers for consumers and third-party access to charging infrastructure, to final divestment.

Some examples of the varied and numerous significant mandates that Shoosmiths has secured covering EV charging infrastructure, include:

- **Top 5 market share CPO** - advising a significant charge point operator in the UK on its continued network expansion.
- **A multi-national telecoms company** – advising on the implementation of its dedicated EV charging equipment business in the UK, including the creation of a suite of associated B2B and B2C template contracts.
- **A fibre utility company** – advising on its roll-out of a new EV charge point installation and operation business unit focused on residential car parks.
- **A large integrated vehicle financing platform provider** – advising on a master services agreement to provide access to public charging networks via a subscription service made available to users of its EV fleet.
- **Volkswagen Group** - advising on its tie up with Tesco for the development of the largest UK retail electric vehicle (EV) charging network, powered by Pod Point, comprising more than 2,400 free to use EV charging bays across 600 Tesco stores within the next three years.
- **A leading UK motorway service station operator** – advising on its agreement with Ionity to install high-powered ultra-fast charging stations across its service stations.
- **Nissan** – advising on its partnership with Uber, to promote the uptake of EVs across one of the largest driver fleets in the world.
- **LXi REIT plc** – advising in relation to various long lease sites for the creation of EV charging hubs, including in relation to Fastned superfast charging hubs.
- **Various investment houses** – advising in various aspects including on a bid to be the delivery partner for the UK Government's new Charging Infrastructure Investment Fund.

Clients can depend upon Shoosmiths' collaborative legal teams to bring together a mix of real sector insights, innovative styles of advice, and enviable technology to deliver exceptional service.



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Cornwall Insight's EV insight service



This service provides insight across key commercial, policy and regulatory developments in the EV market, looking across the value chain from EV uptake to infrastructure, supplier activity and fleet services. It includes:

- Weekly newsletter
- Alerts and briefings
- EV and charging infrastructure forum
- Monthly metrics pack

Key benefits:



Understand the key opportunities and challenges when transitioning to EVs



Keep on top of the market's policy and regulatory developments



Understand competitor activities to make informed decisions



Stay ahead of market changes and track industry challenges and successes

Who is it for?

Charge point operators
Service providers
DNOs
Fleet operators
Leasing companies
Energy suppliers

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