

Charging forward: EV Country Attractiveness Index findings

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Cornwall Insight have partnered with law firm Shoosmiths to create the Electric Vehicle Country Attractiveness (EVCA) Index, a quarterly 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 on their attractiveness.

Since the **previous iteration** of the EVCA Index, published in March 2023, there have been some changes to the EV landscape. New countries have emerged as leaders in battery electric vehicle (BEV) growth while others have continued to develop their charging networks and maintain economic strength at a time when energy prices and inflation both remain elevated across much of Europe.

As well as providing an update to existing metrics, the index has also been expanded to include new areas of the EV market. Owing to their status as vital components in the EV transition, further charge-point indicators have been added to the index and will be discussed in depth later.

Reflecting these changes and data additions, the index has seen a shake-up in rankings. This is highlighted on the map and table below – with 1 (darker shading) being the highest and 13 (lighter shading) the lowest – and is followed by a discussion of the latest developments in the ranked EV markets.

Figure 1 – EV Country Attractiveness heatmap:

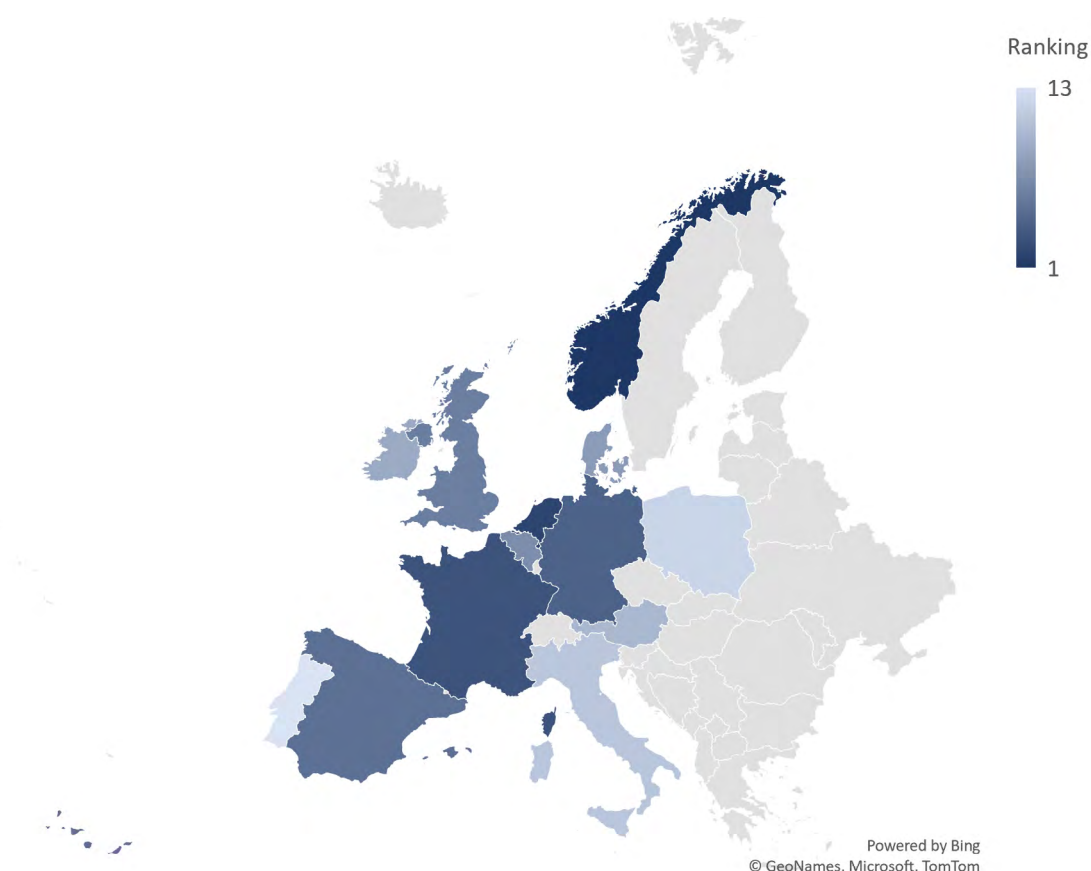


Figure 2 – EV Country Attractiveness index scores and rankings:

Country	Score	Ranking	Change
Norway	7.0	1	0
Netherlands	6.6	2	+2
France	6.53	3	-1
Germany	6.50	4	-1
Spain	6.49	5	+1
United Kingdom	6.2	6	-1
Belgium	6.1	7	+1
Denmark	5.8	8	+2
Ireland	5.7	9	-2
Austria	5.6	10	-1
Italy	4.5	11	0
Poland	4.4	12	+1
Portugal	4.2	13	-1

Explaining the shift

While Norway retains its spot atop the index, as its BEV market remains by-far the most developed, many of the other ranked nations have seen a shift in their positions, though scores remain close.

Reflecting continued growth in BEV penetration and its robust and highly developed public charging market, the Netherlands has seen a significant rise in its ranked position, moving from fourth to second. Consequently, despite strong growth for both BEVs and public charge-points, both France and Germany have moved down one position on the index.

Spain has also risen up the index, moving from sixth to fifth, as it has been successful in offsetting economic headwinds, incentivising BEV uptake, and deploying increasing numbers of public charge-points. While continuing to perform strongly, the UK has fallen one position on the index due to a relative lack of development in public charging infrastructure alongside a drop in BEV sales growth.

Now leading the index for BEV growth and performing well on public charging indicators, Belgium has moved from eighth to seventh on the index. Similarly to Spain, Denmark has seen success by tackling inflation, lowering the cost of electricity, and deploying public charge-points at pace, moving from tenth to eighth as a result. Ireland's drop from seventh to ninth reflects its underdeveloped – but growing – public charge-point market alongside losses to BEV growth amid continued economic difficulties. Despite having well-developed and complimentary BEV and public charge point markets, Austria continues to demonstrate fairly low growth across both markets, seeing it fall from ninth to tenth.

The bottom of the table remains largely similar with Poland and Portugal exchanging positions. While both nations continue to hold back in some areas of EV policy, Poland has successfully risen from thirteenth to twelfth due to major increases in growth for both its BEV and public charging markets.



Focus on charging

In this second iteration of the EVCA Index, we have increased the focus on the growth and maturity of charge-points across the ranked nations with the inclusion of the following metrics:

- BEVs per publicly accessible charge-point
- Four-quarterly growth of publicly accessible charge-points
- Achievement of Alternative Fuels Infrastructure Regulation (AFIR) fleet-based charge-point targets

These metrics complement existing indicators looking at high-level charge-point targets by giving a more dynamic, on-the-ground, view of progress towards key infrastructure development across the ranked nations.

It must be acknowledged, however, that public charge-point indicators cannot give a complete view of charging infrastructure in any of the indexed nations as while they will be integral to the development of robust EV markets, the vast majority of charging (often around 80%) will be done at home and at the workplace. However, in lieu of available datasets displaying private charging infrastructure across the indexed countries, public charge-point indicators remain the best way to measure the development of EV charging.

Charging forward

The introduction of more granular public charge-point metrics has strengthened the index as BEV deployment can be better measured in accordance with the roll-out of wider charging infrastructure.

Leading the way

Reflecting its position as Europe's most developed EV charging market, the Netherlands has scored highly on charge-point indicators. The Netherlands has one publicly accessible charge-point for every ~2.7 BEVs – compared to the index average of ~10 – and, consequently, it has exceeded its AFIR power requirement targets by 424%. The Netherlands has long developed its public charging network by fostering synergies between government, charge point operators, and institutions. By offering

generous investment deductions to businesses and allowing EV users to apply for free installation of public charge-points where there are none near their home or place of work, the Netherlands has been able to build up a network rivalling all others across Europe.

Following closely behind the Netherlands, Belgium has ~3.7 BEVs for every publicly accessible charge-point, and with charge-point growth on an upward trend (at ~117% over the past four quarters) this number appears set to improve further. This is also largely the result of favourable investment deductions and subsidies for the development of public charging infrastructure for businesses. Alongside this, businesses can deduct 75% of electricity costs incurred by EV charging and in some cities and municipalities, Belgian businesses and citizens can apply for the free installation of a public charge-point where the closest one is more than 250m from their home or workplace. Charging incentives do not end there, however, as unlike in the Netherlands, Belgians can also apply for private charge-point subsidies of up to €1,500.

Also scoring high on charge-point indicators is Spain who, despite being a newer entrant to the EV scene, with BEVs only making up 0.4% percent of the total car fleet, is successfully developing a robust market for both vehicles and charging. With an additional €400mn allocated to the MOVES iii scheme – bringing the total budget to €1.2bn until year-end 2023 – Spain looks poised to accelerate the pace of its EV transition. Interestingly, however, while public charging infrastructure is rapidly growing to service the current BEV fleet, with 131% growth resulting in ~4.8 vehicles per charge-point and 380% achievement of AFIR targets, the market share of BEVs remains low at only 3.8%. This is especially interesting as Spain is among the countries offering the strongest incentives for BEVs, at a maximum value of €7,000.

Development on the horizon

While Norway maintains its lead across the index, it has scored poorly on charge-point indicators, with public charge-point growth at a modest ~24.5%, and ~25 BEVs for every publicly accessible charge-point currently. Although, this can be partly accounted for as ~31% of



public charge-points are 'fast' or 'ultra-fast' and private charge-points are relatively prevalent in Norway.

While the UK currently has ~11.2 BEVs per publicly accessible charge-point, this number appears set to improve throughout the year. With government support for the EV transition now focussing primarily on the further build-out of charging infrastructure, the UK has seen a 70% increase in public charge-points over the past four quarters and numbers have continued to rise throughout Q2 2023. Similarly, Ireland has been expanding its public charging network following the publication of its national charging strategy in early 2023, achieving growth of 124%. If this momentum can be sustained Ireland also looks poised to improve its ratio of BEVs to public charge-points, which is currently at ~18.7.

BEV growth across the index

For the most part, 2023 has heralded positive developments for BEV uptake across the index. High growth has been sustained in many countries and advanced substantially in others as BEVs are getting closer to achieving price parity with traditional internal combustion engine (ICE) vehicles. However, some countries have also experienced some significant reductions in the rate of growth.

The most significant increases to BEV sales have come from more nascent markets as Belgium, Poland, and Portugal have all proven successful in further incentivising BEV uptake over the past four quarters. At the other end of the scale – while still maintaining positive trends – Ireland, Norway and the UK have all experienced significant recent declines in BEV growth.

Owing partly to the newfound success of its 'Mobility Budget' scheme amid the mandatory electrification of its corporate fleets, Belgium now tops the index for BEV growth as over the past four quarters sales have risen from ~28,000 to ~49,000 vehicles, boasting growth of 76.5%. Close behind are both Poland and Portugal who experienced growth of 72% and 70%, respectively, as subsidies are increasingly making BEVs viable alternatives to ICE vehicles. In all three cases, these represent significant increases since the previous index, with growth 10% and 12% higher for Belgium and Poland, respectively, and a major 35% higher for Portugal. Notably, however, both Poland and Portugal continue to occupy the lowest echelons of the index as while they have succeeded in growing their BEV markets, many uncertainties remain on the policy landscape. Poland were recently chief lobbyists in an attempt to stop the EU-wide ban on the sale of new ICE vehicles beyond 2035, and Portugal's plans for the future of charging infrastructure are uncertain with investment subsidies remaining underdeveloped.

With growth falling from 81% to 52%, Ireland faced the greatest fall, although it has continued to show





strong positive growth over the past four quarters. This drop can be interpreted as part of an expected levelling-out of the BEV market as it exits its nascent stages. In the case of the UK, the 15% drop in growth over the past four quarters (from 40% to 25%) can be partly attributed to the change in eligibility for the Plug-in Grant – no longer open to passenger cars that are not wheelchair accessible or taxis – in June 2022 as, while sales have continued on a positive trend, they have been doing so at lower rates since the grant ended. In Norway, the introduction of new tax rates in January 2023 unsettled the entire car market and caused all sales to drop. BEV sales saw the most significant decline as a result of these tax rates because, while taxes simply increased for other models, VAT and weight taxes were introduced to certain BEVs for the first time. Resultingly, Norway's BEV growth fell from a steady 21.5% to a mere 7%. At the same time, however, this loss was somewhat offset by a major rise in sales during Q4 2022 as many Norwegians purchased new BEVs prior to the introduction of the new taxes in January 2023.

Future outlook

In the next iteration of the EVCA Index, we look to see growth continuing to flourish in both BEV and charging markets across the index. Among the current leaders, it is hoped that as subsidies wane, increased market penetration will allow BEVs to become more cost-competitive with ICE vehicles. It is also imperative that increased focus is given to EV charging, both public and private. For those nations at the bottom of the index, further policy clarity is needed to pave the way for charging infrastructure. While some positive developments have certainly occurred in the space, this has largely been due to the role of private capital and should be further supported by national government commitments.

Changes to the macroeconomic landscape of many ranked nations should herald some positive changes in the next iteration of the index. Despite the continued impacts of the energy crisis across much of Europe, many nations have successfully lowered inflation rates – Denmark has roughly halved inflation since the last iteration of the index – while others have seen electricity prices fall to more favourable levels – Norway now convincingly tops this indicator following a significant



decline in power prices. With these positive trends reflected across much of the index, more favourable macroeconomic conditions could result in increasingly dynamic and fruitful BEV and EV charging markets. Difficulties still remain, however, and the macroeconomic landscape could remain challenging for some ranked nations, with Poland for example having experienced an increase in inflation alongside electricity prices remaining high.

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
- Share of BEVs in the passenger car stock
- Four-quarterly growth of BEV sales
- BEVs per publicly accessible charge-point
- Four-quarterly growth of publicly accessible charge-points
- Achievement of Alternative Fuels Infrastructure Regulation (AFIR) fleet-based charge-point targets
- Wholesale cost of electricity scaled to GDP

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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.

Our **EV Insight Service** can help to provide these essential insights concisely and comprehensively. Through weekly newsletters, in-depth reporting and alerts, and a bi-monthly user forum, our 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.

Our expert-driven service of market intelligence and vital insight on how markets are developing will enable you to create the best approach for your business.

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About Shoosmiths

Shoosmiths is the law firm clients choose for excellent service, incisive thinking and above all for their ability to focus on what matters.

From offices across the UK and Brussels, the firm supports some of the world's most exciting and ambitious businesses; amazing clients making an impact. 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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