

# Driving growth: EV Country Attractiveness Index findings

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*Cornwall Insight has 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 electric vehicles (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 publishing the [previous iteration](#) of the EVCA Index in June 2023, the EV market has continued to grow across Europe with battery electric vehicle (BEVs) sales increasing by 60.6% across the 27 European Union (EU 27) nations in July 2023, compared to July 2022. As the Alternative Fuels Infrastructure Regulation (AFIR) which, among other things, sets minimum power requirements for EV charging stations, continues to be rolled out across the EU, with charging also taking increasing priority in the UK, EV charging stations are cropping up across the continent at impressive rates.

Amidst all of this, Europe finds itself at a critical juncture in the EV transition as international competition has continued to rise and has intensified the threat of supply chains moving out of the continent. Principally, this wave of competition has come from the United States and China as their respective national governments have invested heavily to offer generous EV subsidies while facilitating further access to critical minerals and supporting domestic EV manufacturing. In both instances, the EU has labelled this support as ‘distortive’ to the EU market, citing concerns of a ‘race to the bottom’. Responding, the EU implemented the Green Deal Industrial Plan (GDIP) in February 2023 to boost its own domestic supply chains in light of the United States’ Inflation Reduction Act (IRA) and has recently, on 13 September 2023, launched an investigation into Chinese EV subsidies.

While the UK has not issued a formal policy response to either the IRA, GDIP, or Chinese EV manufacturers, the potential introduction of a Zero Emission Vehicle (ZEV) mandate could see the UK’s domestic EV production expand, if implemented, in 2024. As per current proposals – which have not yet made their way

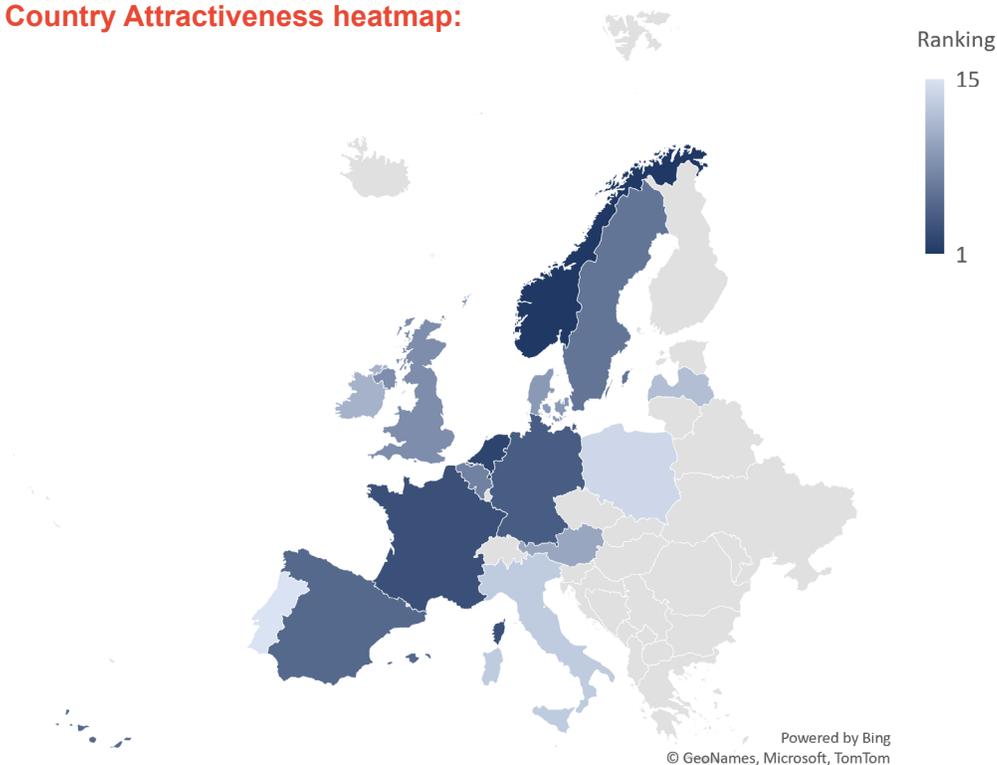
to Parliament – the potential ZEV mandate would require that at least 22% of all new car sales (and 10% of new van sales) made by vehicle manufacturers are zero emissions in 2024. Every subsequent year these ratios would then increase until all new cars and vans are zero emissions by 2035. The jury is still out among automakers and industry bodies as to whether this would help or hinder the UK's EV market, but either way, it is an important development to monitor.

Additionally, UK Prime Minister Rishi Sunak announced on 20 September 2023 that the UK will no longer enforce a ban on internal combustion engine (ICE) vehicles by 2030, one of a series of measures aimed at protecting consumers from the costs of the net zero transition. Now, consumers in the UK will be able to buy new ICE vehicles until 2035. This decision, while still in alignment with many European nations, is ultimately less ambitious and could see the UK's EV transition lose some urgency in the coming years, as well as potentially impacting demand for EVs.

Also important is the EU's scheduled imposition of a 10% import levy on non-EU made EVs (60% of an EV's battery materials and 45% of its overall parts must be sourced in the EU) crossing the English Channel from the UK. Currently, this looks to be implemented in early 2024, but opposition within the UK and EU could see the levy renegotiated as at present it is felt that both markets would suffer from increased Chinese competition. Due to their dominance in global EV battery manufacturing, some automakers and industry bodies have raised concerns that Chinese components would still be able to outcompete and undercut those produced in the EU where battery manufacturing and supply chains are not yet stable enough to cater to these more restrictive rules.

Once again, the index has seen a shake-up in rankings and scores as new countries have emerged as growth leaders while others have solidified their positions. This is highlighted in Figures 1 and 2 – with 1 (darker shading) being the highest and 15 (lighter shading) the lowest in Figure 1 – 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	Absolute change	Relative change
Norway	6.81	1	0	0
Netherlands	6.25	2	0	0
France	5.62	3	0	0
Germany	5.58	4	0	0
Spain	5.53	5	0	0
Sweden	5.4	6	N/A	N/A
Belgium	5.39	7	0	+1
UK	5.26	8	-2	-1
Denmark	5.20	9	-1	0
Austria	5.13	10	0	+1
Ireland	4.67	11	-2	-1
Latvia	3.90	12	N/A	N/A
Italy	3.52	13	-2	0
Poland	3.48	14	-2	0
Portugal	3.28	15	-2	0

*\*Absolute change refers to the overall change in ranking while relative change tracks the change in ranking since the previous iteration of the index, without the inclusion of Sweden and Latvia.*

### **New to the fold**

As the EVCA Index develops, it is important that the ranked countries are representative of the most dynamic and established markets across Europe. As such, this third iteration of the EVCA Index welcomes the inclusion of both Latvia and Sweden.

Despite not being one of the most developed EV markets in Europe, Latvia provides an interesting case study as it has performed well on many of the index’s growth metrics. With a total fleet of almost 4,000 BEVs as of July 2023 – comprising only 0.5% of all personal cars – Latvia’s fleet is small, but it is also one of the fastest growing, with BEV sales rising by 161% over the past four quarters. Alongside this, 10% of all personal vehicles sold in Latvia over the past four quarters were BEVs. However, charge-point infrastructure is not keeping pace with this growth and national policy targets remain less ambitious than elsewhere in Europe, leaving the Latvian market to develop without significant government support.

Sweden, on the other hand, boasts the second-densest concentration of BEVs in Europe, representing 4.8% of all passenger cars. Sweden’s BEV fleet only falls behind that of Norway (16%). As the Swedish government claim that EVs have now achieved price parity with internal combustion engine (ICE) vehicles, it is perhaps unsurprising that BEVs are a popular choice among consumers in Sweden, having achieved a 37% market share over the past four quarters. While charge-point infrastructure is also well-developed in Sweden, with the country even looking to develop on-road

charging solutions (via overhead wires or conductive rails), there is a pressing need to provide better charging access to those living in apartment buildings. Policy support for EVs is also strong in Sweden, however, the abrupt closure of BEV subsidies at the end of 2022 has caused a slight slow-down in BEV sales.

### Explaining the shift

While the top ranked countries remain the same as last time, this iteration has seen the gaps closing among the upper echelons of the EVCA Index. Further reflecting the closely competitive nature of the European EV market, some of the other ranked nations have seen their positions and scores change.

Norway has retained its spot atop the index as, with an ~83% market share, its BEV market remains unrivalled by other European nations. However, its public charging network would benefit from further build-out. The Netherlands has cemented its second-place position in the EVCA Index, with a strong penetration of BEVs in the personal vehicle market, high density of public charge-point infrastructure, and continued strong growth in both areas.

One of the most ambitious countries on the index, France has retained its third-place position as, through extensive subsidy and incentive schemes, it has continued to grow both its BEV and charging markets at stable rates. France has also turned some heads in recent months as President Emmanuel Macron has endorsed a gradual shift from current EV subsidies to a 'social leasing' system which would allow lower income consumers to enter the EV market and incentivises

European manufacturers to focus on entry level vehicles. Making progress towards its similarly ambitious targets, Germany remains in fourth place as, over the past four quarters, it has managed to sustain growth in BEV sales and has continued to convincingly lead the pack for overall BEV sales in Europe, expanding its total fleet by ~525,000 vehicles.

While Spain has continued to close the gap on Germany and France, it remains in fifth place for this iteration of the index. Increasingly favourable macroeconomic conditions and a continued acceleration of EV charging infrastructure have contributed to Spain's success, but the low market share and modest growth rate of BEV sales are holding the country back. With some of the most generous BEV subsidies and incentives in Europe, including an up to 15% income tax rebate (up to €20,000) for new EV owners from July-December 2023, it is surprising to see that BEVs are not a more popular choice among Spanish consumers.



While Belgium has risen above the UK on the index, the introduction of Sweden has seen the country maintain its seventh-place position. Once again, Belgium boasts one of the strongest and fastest growing BEV and charging markets in Europe, with particularly staggering growth since March 2023.

As a result of reducing ICE phase-out ambitions, and due to the success of Belgium and the introduction of Sweden, the UK has fallen from sixth to eighth place on the EVCA Index. Despite this, the UK remains in a strong position as only slim margins separate it from the upper echelons of the index, with the third and eighth ranked countries split by only ~0.4 points. Ultimately, for the UK to move up the index, there should be an increased focus on developing charging infrastructure and providing further incentives to accelerate deployment.

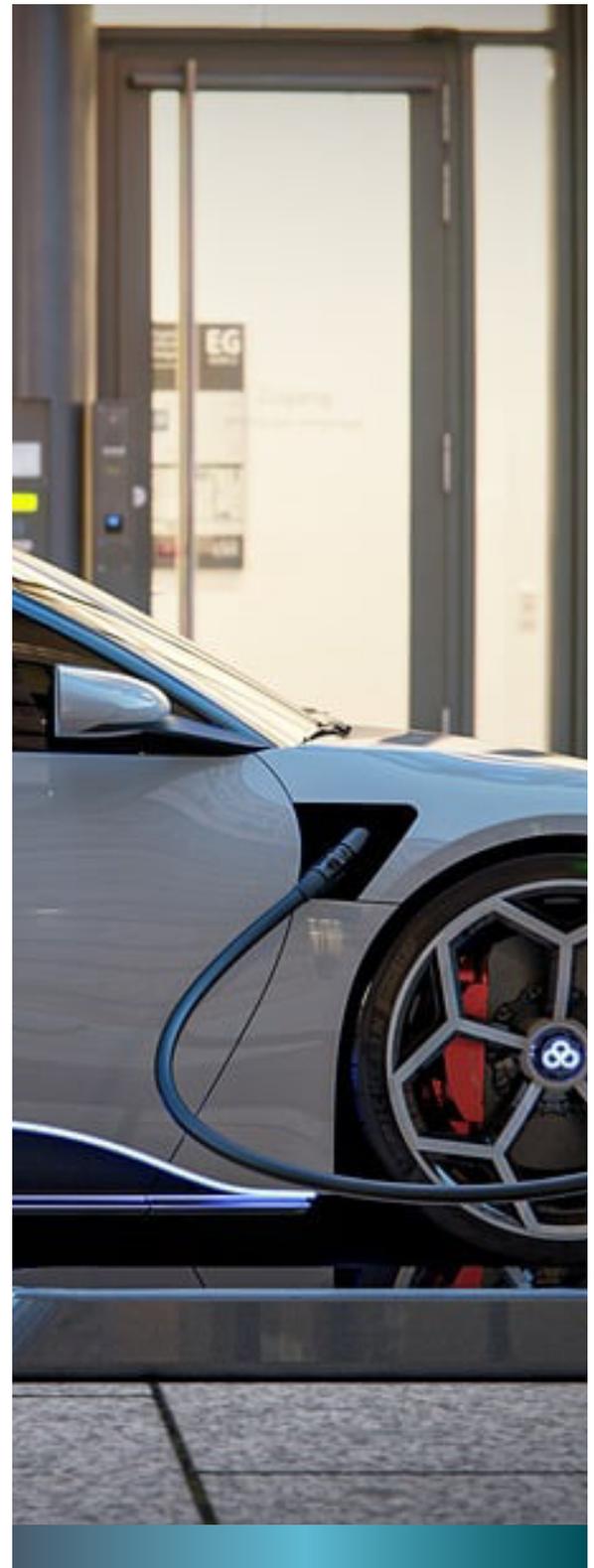
Despite moving from eighth to ninth on the index, Denmark has seen continued success as both BEV and charge-point markets have continued to grow over the past 12 months. Meanwhile, Austria has held its tenth-place position and has experienced a positive trend with both BEV sales and charge-point installations rising to similar levels as its European neighbours.

While Ireland continues to demonstrate its commitment to furthering the EV transition, the current disparity between BEVs and charging infrastructure has seen it drop from ninth to eleventh place on the EVCA Index. This is not for lack of trying as Ireland has continued to deploy charge-points at an increasing, and impressive, rate following the introduction of its National EV Charging Infrastructure Strategy in early 2023 and could therefore see its index ranking improve in the future.

At the bottom of the table, Italy, Poland, and Portugal have all fallen two positions owing to the introductions of Sweden and Latvia. While BEV sales have risen across all three jurisdictions, market share remains low in both Poland and Portugal and the pace of installing new EV charging infrastructure has slowed in Italy and Portugal.

### **A focus on charging**

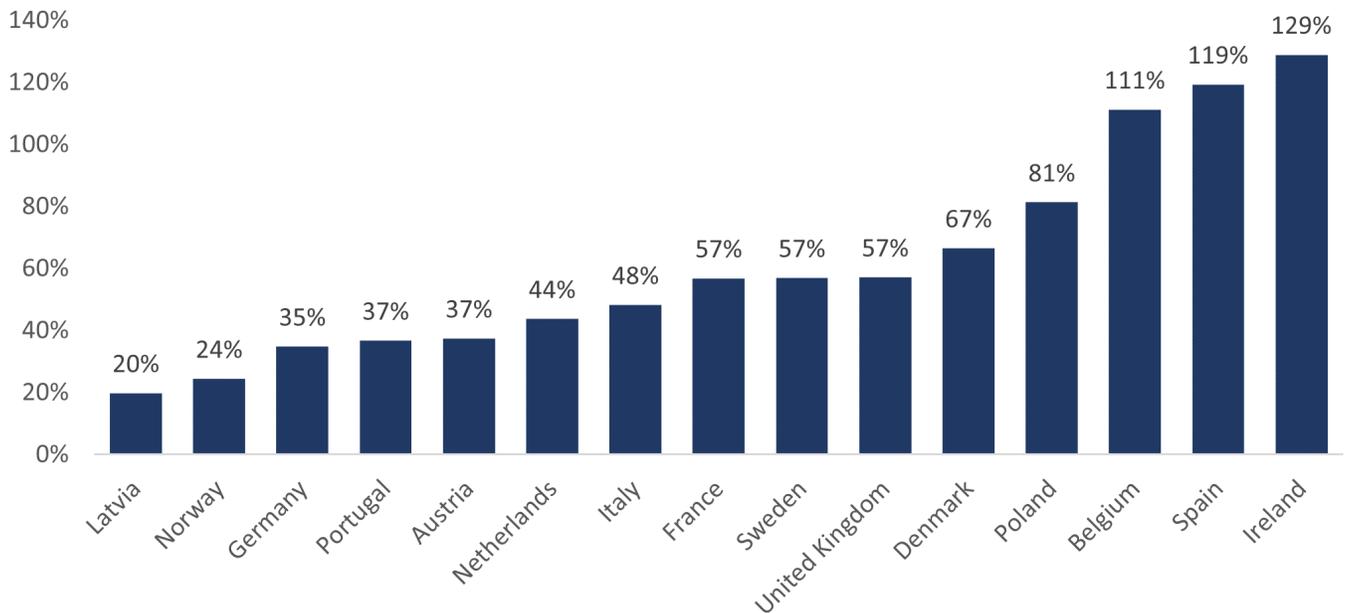
Across Europe, the AFIR has been setting minimum power requirements for member states based on their current fleet of EVs. For each light-duty BEV member states must provide 1.3kW of power through publicly



accessible charging stations, while for each light-duty plug-in hybrid vehicle (PHEV) they must provide 0.8kW. Currently, almost all EU member states have achieved over 100% of their AFIR targets (with the exception of Ireland at 99% and Malta at 15%), with many producing power outputs significantly greater than their targets. While this may suggest that AFIR requirements are not strict enough, it is also an indication of the strong progress made towards the rollout of public EV charging in the EU. However, this metric alone is perhaps not sufficient to measure the overall success of a country’s public EV charging network, particularly as it cannot measure charge-point density. For instance, while (at 193%) Sweden has a lower attainment of AFIR targets than Germany (at 215%) it has a denser charging network with a more favourable ratio of BEVs to publicly accessible charge-points (8.4:1) than Germany (12.8:1).

The Netherlands has continued to score the highest on public charge-point indicators across the index, although it has experienced minor declines in some areas. While the Netherlands boasts an impressive ratio of one publicly accessible charge-point to every ~2.8 BEVs – compared to the index average of ~9.5 – its achievement of AFIR power requirement targets has fallen from 424% to 364%. This appears to be of little concern, however, as EV charge-point installations (Figure 3) have continued to grow at faster rates (44%) than BEV sales (33%) over the past four quarters, while the Netherlands continues to possess by far the densest charging network in Europe with almost one charge-point per kilometre of road.

**Figure 3 – Publicly accessible charge-point growth, Q322 – Q223**



Source: European Alternative Fuels Observatory

Belgium has also maintained much of its positive momentum for developing the country’s charging network and has remained in second place with regard to charge-point indicators. Despite BEV sales growth narrowly outstripping that of charge-points, Belgium has the second highest concentration of BEVs to charging infrastructure on the index at four BEVs for every publicly accessible charge-point. Albeit slightly tapering off, from 119% to 111%, Belgium is continuing to build out charging



infrastructure at staggering growth rates and has seen its achievement of AFIR targets rise from 233% to 280% since the previous iteration of the index.

While Spain has also continued to prove successful in its rollout of EV charging infrastructure, it has experienced some decline since the previous iteration of the index. Still in third place for its ratio of BEVs to publicly accessible charge-points at ~4.7:1 (an improvement from 4.8:1 previously) growth has declined from 131% to 119%, while AFIR attainment has fallen from 380% to 275%. Like in the Netherlands, this should not necessarily be met with concern as charge-point deployment is growing at a much faster rate than BEV sales (40%), with generous incentives in place to encourage further growth.

### **Making progress**

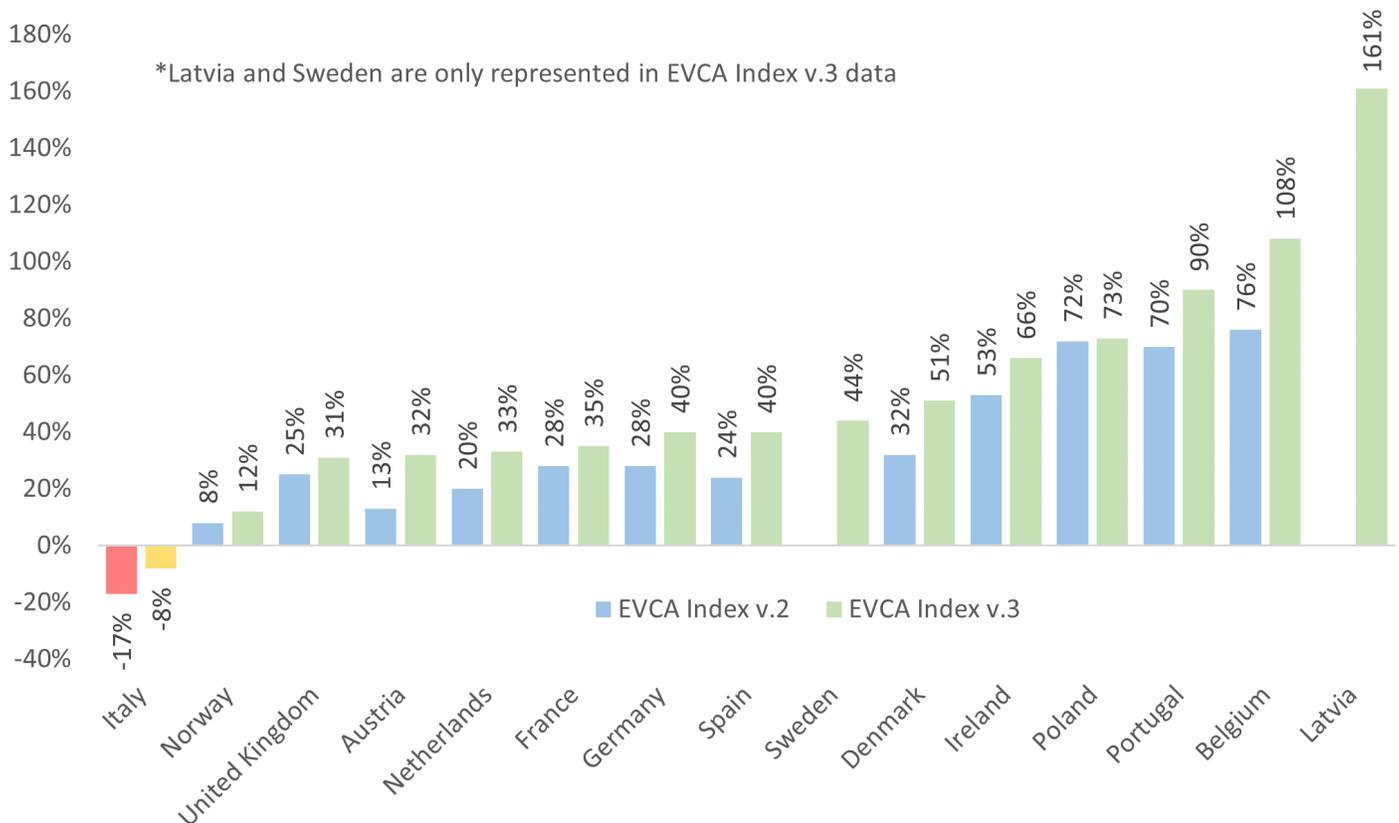
As highlighted in the previous iteration, Norway is among the lowest-ranked countries for public EV charging on the index. As Norway continues to prioritise the installation of private charging infrastructure, its ratio of BEVs to public charge-points has remained largely unchanged at ~25:1, while public charge-point growth has remained stable at 24%. However, strong support for the installation of charging infrastructure at workplaces and housing associations, and a competitive grant scheme (up to €1.3mn) for the installation of public fast chargers all seek to advance Norway's EV charging network. Meanwhile, a 'charging right' for those living in condominiums and apartments allows for the free installation of a charge-point where one is not otherwise available.

Despite an increasing focus on charging infrastructure in both countries, the UK and Ireland have continued to score unfavourably on charge-point indicators, with both displaying a ratio of BEVs to publicly accessible charge-points above the index average at 11.3:1 and 19.7:1, respectively. However, charge-point installations have continued to grow across both countries, with a 57% growth in the UK (albeit a decrease from 70% in the previous iteration of the index) and an impressive 129% in Ireland (up from a previous 124%). If this can be sustained over time, it is possible that both countries could see their respective ratios of BEVs to charge-points improve in the not-too-distant future. The UK could see a further boost over the coming months as funding allocations for the Local EV Infrastructure grant were announced in early September 2023, awarding local authorities across England increased budgets to expand their EV charging networks. At the same time, however, the Rapid Charging Fund grant is continuing to face delays, potentially limiting the expansion of rapid charging on the UK's motorway network.

## BEV growth across the index

BEVs have continued to be a popular choice among most of the countries ranked on the EVCA Index as we progress through 2023. With the exception of Italy, every country on the index has continued to demonstrate year-on-year growth over the past four quarters (Figure 4). However, compared to the previous iteration of the index, Italy has begun to show some signs of recovery.

Figure 4 – BEV sales growth, Q322 – Q223



Source: The European Automobile Manufacturers Association (ACEA)

With favourable tax incentives, purchase subsidies, and other benefits such as free parking, Latvia is beginning to develop an attractive market for BEVs. Funded by €10mn – of which ~€5mn still remains – from 2022 to 2023, Latvian drivers making the switch to BEVs can receive up to €5,500 towards purchase while being exempt from registration and vehicle operation tax. This, alongside ~€200mn of State Aid funding to ‘promote the use of alternative fuel vehicles and fuelling stations’ has seen Latvia boast a 161% increase in BEV sales over the past four quarters. However, with half of the available budget remaining and with no purchase subsidies on offer for corporate fleets or EV charging stations, it remains to be seen if Latvia has the appetite to maintain such impressive growth.

As the popularity of Belgium’s ‘Mobility Budget’ scheme continues to rise, the country has increased growth by ~32 percentage points, rising from 76% to 108% since the previous iteration of the index.

Also continuing their positive trends, both Portugal and Poland are close behind, experiencing growth of 90% and 73%, an increase of ~18 and 1 percentage points, respectively. While this represents an extremely positive development for both countries, the lack of policy support for EV charging could limit this growth in the future.

While overall BEV sales growth for the last 12 months remains negative in Italy, due to four negative quarters during 2022, there are some positive developments on the horizon. So far in 2023, Italy has achieved two successive quarters (Q123 & Q223) where sales have shown a year-on-year growth. Hopefully, with the generous subsidies on offer in Italy, allowing up to €5,000 for purchase of a BEV and up to €1,500 towards the installation of at-home charging infrastructure, this trend will be able to continue.

### 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 in new registrations/sales
- Share of BEVs in the passenger car stock
- Four-quarterly growth of BEV sales
- BEVs per publicly accessible charge-point
- Charge-points per kilometre of motorway
- 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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# 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.

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. Led by Chris Pritchett and Calum Stacey, its specialists on all aspects of EV infrastructure financing, deployment and operation and bring a market-leading understanding of the commercial considerations of EV charging, whichever role their clients play in the value chain. Chris joined in May 2023, and brings with him an extensive background in work for CPOs and their partners, as well as landowners, suppliers and local authorities.

As well as planning and real estate work, delivered efficiently and via the latest portfolio management platforms, they are experts in the numerous commercial relationships that underpin this sector, from software and CRM, data aggregation, supply chain management, procurement processes with public sector clients and, of course, all the various commercial frameworks between operators, landowners, customers and manufacturers. As well as advising extensively throughout the UK and Ireland, their team have worked on contracts across Europe and the US, leveraging their deep market knowledge to provide timely, efficient and insightful support.

Some of their recent instructions include:

- Top 5 market share CPO - advising a significant charge point operator in the UK on its continued network expansion.
- EVC - advising on its recent £165million financing.
- 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.
- 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.



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