What's next in EVs?

LeasePlan's 2021 EV Readiness Index

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Electric mobility: from Why to How

The largest single shift impacting the entire fleet and mobility industry is the move from internal combustion engines (ICEs) to zero emission electric vehicles (EVs). The Why for this global transition has long since been answered: public concern over climate change, regulatory pressure, corporate social responsibility and, increasingly, falling EV prices, have all made going electric the common sense choice in 2021.

What remains to be answered for many, however, are the How and the When. This is where things get complicated, especially from an international fleet management perspective: the framework and circumstances that facilitate electrification differ significantly from country to country.

That's why LeasePlan has developed the EV Readiness Index. It provides a clear overview, across 22 key European countries, of three key factors for electrification: the size of the EV market, the maturity of the charging infrastructure and the cost of operating EVs.

There's more. This latest edition of the EV Readiness Index also includes an overview of absolutely everything you need know about electric mobility in 2021, including the hottest EVs coming onto the market this year. Here, we offer a complete picture of this rapidly expanding market, including the expansion into price points beyond what people ever imagined for EVs. – EV prices now start at €17k (plus VAT, before incentives), and that doesn't even take into account the fact that not everybody needs a 100 kWh battery.

This report also offers an overview of the major EU-compliant EVs models being made in China, adding to the vitality and diversity of the electric mobility market. Finally, we look at how charging can be made easy – a crucial argument to convince drivers and fleets to go electric.

New EVs: from scarcity to selection

2021 will see new battery-electric models booming across each and every market segment. Rightsizing the battery is paramount: too small a battery could compromise its customer appeal, but a larger number of cells increases the sale price and artificially boosts the purchasing threshold. To tackle this issue, some Original Equipment Manufacturers (OEMs) offer different battery sizes for the same model – a trend we expect to see surging in popularity going forward.

Dacia Spring

Dacia is set to launch the cheapest EV on the European market. The China-built Spring is the first electric urban crossover in the A segment and has the potential to become a true success on the affordable EV scene.

- **Battery size:** 27 kWh
- **Range:** +/- 225 km
- **AC charging (0-100% SoC time):** 6.6 kW (5 hrs)
- **DC charging (10-80% SoC time):** 30 kW (1 hr)
- **Competitors:** as of yet – none!

Citroën ë-C4

With the ë-C4, Citroën brings an original interpretation of the coupé-crossover to the compact segment, with a more attractive price point than its competitors as a key trump card.

- **Battery size:** 50 kWh
- **Range:** +/- 350 km
- **AC charging (0-100% SoC time):** 11 kW (5 hrs)
- **DC charging (10-80% SoC time):** 100 kW (30 mins)
- **Competitors:** : Opel Mokka-e, Hyundai Kona, Kia e-Niro

VW ID3 Pure*

The Golf of the 21st century will be available as an entry-level model this year. VW has promised a sub-€30k price in Germany (including VAT), which could make this a big hit with consumers and fleet managers alike.

- **Battery size:** 48 kWh
- **Range:** +/- 330 km
- **AC charging (0-100% SoC time):** 7.2 kW (7 hrs 30 mins)
- **DC charging (10-80% SoC time):** 50 kW (44 mins)
- **Competitors:** : Nissan Leaf 40 kWh

* The specifications of models marked with an asterisk have not been confirmed and are merely indicative.

Mercedes-Benz EQA

This GLA-based EQA is the EQC's baby-brother. It comes with a medium-sized battery at launch, but long-range models are to follow later. It fills a gap that Audi and BMW will leave untouched for at least another year.

- **Battery size:** 66.5 kWh
- **Range:** +/- 426 km
- **AC charging (0-100% SoC time):** 11 kW (5 hrs 45 mins)
- **DC charging (10-80% SoC time):** 100 kW (30 mins)
- **Competitors:** Lexus UX300e, Volvo XC40 P8 Recharge

Nissan Ariya*

Leveraging over a decade of EV experience, Nissan unleashes a mid-sized crossover that is aimed at the premium competition rather than the mainstream rivals. There will be various battery sizes to choose from, making it a truly customizable choice.

- **Battery size:** 65 – 90 kWh
- **Range:** +/- 360 – 500 km
- **AC charging (0-100% SoC time):** 7.4 – 22 kW (4 hrs 45 mins – 10 hrs)
- **DC charging (10-80% SoC time):** 130 kW (30 – 40 mins)
- **Competitors:** Skoda Enyaq iV, VW ID.4

* The specifications of models marked with an asterisk have not been confirmed and are merely indicative.

BMW i4*

This electric 4 Series GranCoupé takes a giant leap forward into the digital era and features state-of-the-art e-power technology. It seems the Tesla Model 3 and Polestar 2 will be given a run for their money.

- **Battery size:** 82 kWh
- **Range:** +/- 500 km
- **AC charging (0-100% SoC time):** 11 kW (8 hrs 45 mins)
- **DC charging (10-80% SoC time):** 150 kW (30 mins)
- **Competitors:** Tesla Model 3, Polestar 2

* The specifications of models marked with an asterisk have not been confirmed and are merely indicative.

Audi Q4 e-tron*

Whereas the e-tron takes on competitors like the Jaguar I-Pace and Mercedes-Benz EQC, the Q4 e-tron is ready to face the BMW iX3 and Ford Mustang Mach-E. Coupé lovers can opt for the Sportback version.

- **Battery size:** 80 kWh
- **Range:** +/- 450 km
- **AC charging (0-100% SoC time):** 11 kW (9 hrs)
- **DC charging (10-80% SoC time):** 125 kW (33 mins)
- **Competitors:** BMW iX3, Ford Mustang Mach-E0

* The specifications of models marked with an asterisk have not been confirmed and are merely indicative.

New EVs made in China, ready for Europe

Last year, 1.3 million EVs were built and sold in China, and according to S&P Global Platts, that number is expected to grow to 1.8 million in 2021 and exponentially going forward. The time has come for the largest local OEMs to start exporting their Europe-compliant models – and they are sure to impress.

MG Motor ZS EV

The ZS EV is a compact cross-over that comes fully equipped, especially in the safety department. The car made an excellent impression in the EuroNCAP tests, receiving five stars for its crash-resistance and crash-avoidance performance. MG Motor is the most popular Chinese brand in Europe today.

- **Battery size:** 44,5 kWh
- **Range:** 263 km
- **AC charging (0-100% SoC time):** 6.6 kW (7 hrs 45 mins
- **DC charging (10-80% SoC time):** 76 kW (35 mins)
- **Manufacturer:** SAIC
- **Distribution in Europe:** SAIC Motor Europe, private importers
- **Competitors:** Hyundai Kona, Kia e-Niro, Opel Mokka-e, Peugeot e-2008

Aiways U5

Introduced to the European public at the Geneva Motor Show in 2019, the first U5s are now being delivered on the continent. It is a highly digitalised mid-sized cross-over with a trendy, minimalistic design. Instead of a classic importer and dealer network, Aiways relies on different automotive and non-automotive retailers.

- **Battery size:** 3 kWh
- **Range:** +/- 410 km
- **AC charging (0-100% SoC time):** 6.6 kW (11 hrs 15 mins)
- **DC charging (10-80% SoC time):** 90 kW (40 mins)
- **Manufacturer:** Aiways Automobiles Company Ltd
- **Distribution in Europe:** Skoda Enyaq iV, VW ID4, Nissan Ariya
- **Competitors:** Skoda Enyaq iV, VW ID4, Nissan Ariya

Seres 3

Seres, like Tesla, is headquartered in Silicon Valley (US), but its funding is China-based. The first Seres available in Western Europe will be the Chinese-built 3. Interestingly, it uses cobalt-free lithium iron phosphate batteries (LiFePO4) that charge faster, while also being more stable and having a longer service life.

- **Battery size:** 54 kWh
- **Range:** 329 km
- **AC charging (0-100% SoC time):** 6.6 kW (9 hrs 30 mins)
- **DC charging (10-80% SoC time):** 100 kW (38 mins)
- **Manufacturer:** Chongqing Sokon Industry Group
- **Distribution in Europe:** various private importers
- **Competitors:** Hyundai Kona, Kia e-Niro, Opel Mokka-e, Peugeot e-2008

EV charging infrastructure: the final frontier

Today, charging is for many the final frontier preventing easy EV adoption. Here are the three charging sources you need to get right in order to make your EV experience as seamless as possible.

1. Home charging

- A question often raised is whether home charging is a prerequisite to go full-electric. One could say that the answer is no, so long as there are charging possibilities at the office and/or public chargers close to the home of the employee.
- However, public charging is more expensive than topping up the battery at home. Providing a wallbox at home allows companies to better control the total cost of ownership (TCO), while reimbursing the cost of electricity directly to the employee. Indeed, these solutions exist and are highly recommendable.

2. Charging at the office

- Charging at the office contributes significantly to a feasible electric life. Fortunately, it is not necessary to provide a charger for every EV. The solution resides in intelligent charge management. The available power in the company's local grid is distributed to the chargers according to one's driving needs, prioritizing business-critical trips for instance.
- Determining what type of infrastructure you need starts with analysing your company fleet's charging needs, based on its composition, fleet renewal and vehicle use. This ensures maximum driver convenience and keeps costs at bay.

3. Charging at a public station

- Even though there is a plethora of charging point operators out there, most networks have roaming agreements allowing you to use a single badge, card or app to use the public charger of your choice. All charging sessions are aggregated in a single monthly invoice.
- It should be noted that there are important price differences. Choosing the right charging service provider is therefore crucial to keep charging costs under control. Also, DC fast-charging should be limited, as the price per kWh can be many times higher than the one you pay at a regular AC charger.

Introducing LeasePlan's 2021 EV Readiness Index

Are you ready for electrification? The answer to that question is co-determined by a range of outside factors and will influence whether – and how – you go EV. And those factors vary for each country.

The annual Index weighs key factors of EV preparedness across 22 key European countries and ranks them accordingly (see graph). In so doing, it provides clear and structured background information for the most pressing issue in international fleet management today.

The three key factors determining the EV Readiness Index are:

- Maturity of the EV market itself;
- Maturity of EV charging infrastructure; and
- Total cost of ownership (TCO) of an EV.

This year, the Index zooms in on decisive TCO ingredients such as government incentives, energy prices and the rental cost of EVs.

The key countries examined by the Index are:

- Europe's Big Five markets (Germany, France, UK, Italy, Spain);
- the Benelux trio (Benelux, the Netherlands, Luxembourg);
- the four Nordics (Sweden, Norway, Denmark, Finland);
- five key East European markets (Poland, Romania, Hungary, Czech Republic, Slovakia); and
- five further important markets (Austria, Ireland, Switzerland, Greece, Portugal).

The Index provides much more than an overall country ranking; detailed data for each of the key factors provide actionable insights into each market's EV readiness. This helps international fleet and mobility managers make the right decisions when it comes to electrifying their fleets.

EV Readiness Index 2021

#	Country	Score
1	Norway	42
2	Netherlands	38
3	United Kingdom	33
4	Luxembourg	31
5	Sweden	29
5	Austria	29
7	Germany	28
8	Belgium	27
8	Finland	27
10	France	26
10	Ireland	26
10	Portugal	26
13	Denmark	23
13	Switzerland	23
15	Italy	21
16	Hungary	20
17	Greece	16
18	Spain	15
18	Poland	15
20	Romania	13
20	Slovakia	13
21	Czech Republic	12

2020

1	Netherlands
2	Norway
3	United Kingdom
4	Ireland
5	Sweden
5	Austria
7	Luxembourg
8	Finland
8	Germany
10	Belgium
10	Portugal
10	Denmark
13	France
13	Hungary
15	Switzerland
16	Spain
17	Italy
18	Czech Republic
18	Greece
20	Romania
20	Poland
21	Slovakia

Making sense of readiness, charging and cost

Out of the wealth of data per country, a picture emerges of the state of electrification across Europe as a whole. Here are some key findings.

Country: EV-ready, but not everywhere

- Norway, the Netherlands and the UK have the highest overall score on the Index, in that order; meaning they're the most prepared to handle the transition to EVs. The same three countries occupied the top spots last year.
- Electrification is proceeding unevenly across Europe. Romania, Slovakia and the Czech Republic have the lowest scores, indicating the regional disparity between Western and Eastern Europe.
- LeasePlan is at the forefront of the energy transition: in 2020, the company saw its EV registrations double. Last year, EVs made up 15.9% of LeasePlan's newly ordered lease vehicles.

Infrastructure: the weakest link

- Charging was the weakest-performing of the three factors, with low scores even in the top-ranked countries overall. LeasePlan's recent Mobility Insights Report into EVs and sustainability shows a lack of charging infrastructure is a major obstacle to EV adoption.
- It's a concern that is being heeded: in 2020 alone, there was a 43% increase in public charging stations across Europe, totalling almost 260,000.
- Most public charging stations: Netherlands (>61,000), France (<45,000) and Germany (>43,000). Highest density: Netherlands (3.53 plugs per 1,000 inhabitants), Norway (3.40) and Luxembourg (1.54).

Price: towards parity, and beyond

- Government incentives provide a crucial nudge to electrification. And in 2020, more countries put their money where their mouth is. Most of the new incentives took the form of purchase subsidies.
- A major plus of EVs is that they're cheaper to operate. On average, 1 km on electricity costs 53% of 1 km on fuel, but here too, there is a lot of variation across Europe.
- As for taxes, EV drivers pay on average 63% of what ICE drivers fork over to the state. The advantage is distributed unevenly. In six countries – Austria, Greece, Hungary, Ireland, Poland and the UK – EV drivers pay no driver tax at all.
- In 11 countries, renting an EV is cheaper than renting an equivalent ICE vehicle. That's market-based evidence that across much of Europe, EVs have already reached TCO parity with ICEs – and more.

EV Readiness Leaders: Norway and Netherlands

Norway and the Netherlands are the top performers across Europe when it comes to EV readiness. What are they doing right?

Norway

Norway gets the highest marks in EV market maturity, thanks in large part to:

- Its highest score in terms of EV registrations: more than double the figure for the second-highest scoring country (Sweden).
- Its whopping EV market share (71.83% in 2020). Again, more than double for the runner-up, which is again Sweden (30.81%).

Norway's EV success is the result of its government's active and sustained support for electrification. There is no VAT on Battery Electric Vehicles (BEV) purchases, no registration fee for all EVs, and a reduced road tax for BEVs, to name but a few measures.

That's not to say there isn't room for improvement. EVs make up 40.56% of Norway's funded fleet, but Sweden wins out with 57%. Also in terms of BEV share of the total EV market – full-electrics are rated higher than hybrids – and penetration of the charging infrastructure in Norway is near but not at the top.

Netherlands

The Netherlands gets the highest marks in EV market maturity, thanks in large part to:

- No other country has more EV charging plugs per 1,000 inhabitants (3.53 in 2020), although Norway comes close (3.40). Luxembourg (1.54) is the only other country with an index higher than 1.
- In the Netherlands, there are 1.6 charge stations per EV registered in 2020, also more than anywhere else.

The number of fast chargers relative to the highway length of the Dutch total (61 per 100km) is not the highest, but considering the country has the largest number of public chargers overall (more than 61,500 in 2020), that's still very impressive.

However, when it comes to EV registrations per se, the Netherlands does not rise to the top (just 2.25 per 1,000 inhabitants in 2020, less than Denmark or Belgium).

EV Readiness Improvers: Germany and France

In the middle bracket are countries like Germany and France: leaders in absolute EV numbers, but followers when it comes to speed and share of electrification.

Germany

Size matters. EV registrations in Germany are only slightly better than in the Netherlands (2.46 per 1,000 inhabitants), but that translates to more than 204,000 EVs registered in 2020 – more than any other country, and almost double the figure for France.

- When it comes to government incentives, Germany is solidly in the middle, its purchase subsidies and company tax benefits are rated 'excellent', but with registration tax benefits and VAT benefits non-existent.
- Germany has the smallest price advantage for powering an EV: electricity for 1 km costs 78% of the equivalent fuel for an ICE.

Other countries with a high energy price index are Ireland (65%) and Spain (62%), while the lowest figures are achieved in Norway (28%) and the Netherlands (39%).

On the upside: Germany has the second-lowest rental index (81%), after Norway (74%), indicating the price differential between renting an EV and an ICE.

France

As a big country with a relatively low electrification, France has large figures and relatively low percentages.

- France had the second-highest number of EV registrations (more than 110,000 in 2020), with just 1.65 EV registrations per 1,000 inhabitants.
- Also after Germany, it had the highest number of BEV sales (almost 71,000 in 2020), but representing a significantly higher share of overall EV sales (64% vs. 48%).

The relative success of BEV sales in France reflects targeted purchase subsidies and registration tax benefits, which are higher than for plug-in hybrid vehicle (PHEV).

France's relatively high charging point penetration (0.67 per 1,000 inhabitants in 2020) masks the fact that, with just under 45,000 public charging points in 2020, the country was second only to the Netherlands (around 61,500 charging points in 2020).

However, the tiny share of fast-chargers (6.9%) puts France at the very low end of the scale, resoundingly beaten by Germany (15.6%), the UK (26.7%) and even Italy (7.8%).

EV Readiness Stragglers: Italy and Poland

On average, EV readiness is lowest in southern and eastern Europe. Typical examples are Italy and Poland, both of which could be doing better.

Italy

With EV registrations at exactly 1 per 1,000 inhabitants in 2020, Italy is doing more than 10 times worse than the best performer (Norway), but also more than 10 times better than the worst, Romania (0.07).

- Similarly, the penetration of EV charging infrastructure is bad (0.22 per 1,000 inhabitants in 2020), but not the worst.
- TCO-wise, purchase subsidies and ownership tax benefits are both rated 'excellent', but there are no registration tax or company tax benefits.

If EVs are to take off in Italy, one of the areas to improve would be taxation. In 2020, BEV drivers paid 93% of the tax they would if they drove a similar ICE vehicle. In some countries, the rate is zero (see p. 8). To be fair, in others, it's actually higher (as much as 129% in Denmark).

A definite plus in Italy is the energy price index: charging an EV costs just 53% of fuelling an ICE vehicle for an equivalent distance.

Poland

Electrification in Poland is still in its infancy, both in absolute and relative numbers.

- In 2020, there were just 0.12 EV registrations per 1,000 inhabitants. Only Greece (0.08) and Romania (0.08) managed a lower figure. This translated into just 4,500 EVs.
- Poland is still caught in the chicken-and-egg phase of electrification. There are few EVs because there are few public charging points (791 in all), which in turn stops people buying EVs.

Things won't change until Poland pivots towards a more activist government policy towards electrification. As it is, there are very few incentives, benefits and subsidies to promote EV penetration.

Yet there is a clear cost-based case to be made for electrification: even in Poland, the energy price index is 56%, meaning it's almost half the cost to operate an EV as it is an ICE vehicle. With the right incentives and infrastructure, Poland could become a showcase for the electrification of mobility in Eastern Europe.

Appendix A

Appendix

LeasePlan EV country Readiness Index 2021

#	Country	Total score	1. E-vehicle maturity	1. Charging maturity	3. Total cost of ownership	Position last year
1	Norway	**42**	17	9	16	1
2	Netherlands	**38**	15	9	14	1
3	United Kingdom	**33**	11	5	17	→ 3
4	Luxembourg	**31**	12	5	14	↓ 7
5	Sweden	**29**	14	4	11	→ 5
5	Austria	**29**	9	6	14	↑ 6
7	Germany	**28**	12	4	12	↑ 8
8	Belgium	**27**	11	5	11	↑ 10
8	Finland	**27**	11	5	11	→ 8
10	France	**26**	9	5	12	↑ 12
10	Ireland	**26**	12	3	11	↓ 4
10	Portugal	**26**	10	3	11	→ 10
13	Denmark	**23**	11	4	8	↓ 12
13	Switzerland	**23**	10	5	8	↑ 15
15	Italy	**21**	8	4	9	↑ 17
16	Hungary	**20**	6	3	11	↓ 12
17	Greece	**16**	3	1	12	↑ 19
18	Spain	**15**	6	3	6	↓ 16
18	Poland	**15**	2	2	11	↑ 21
20	Romania	**13**	3	3	7	→ 20
20	Slovakia	**13**	4	4	5	↑ 21
21	Czech Republic	**12**	4	3	5	↓ 18

Most EV ready — Least EV ready

Factor 1: E-vehicle maturity scores

One of the key factors in EV maturity is the actual uptake of EV registrations in a country. This factor includes the following elements:

- **EV uptake relative to the population**
- **The EV market share for general market (incl. consumer market)**
- **The EV order share from LeasePlan customers**

The Nordics and western Europe region shows the highest maturity in uptake of EV registrations.

Factor 1: EV market maturity

	EV per population			EV marketshare					
Country	EV registration	EV reg. per capita	Score	APV + Petrol + Diesel	EV marketshare	Score	BEV sales	% of BEV	Score
Austria	13,378	1.50	3	150,524	8.16%	2	8,949	67%	1
Belgium	26,480	2.29	4	294,330	8.25%	2	9,311	35%	1
Czech Republic	2,909	0.27	1	117,495	2.42%	1	1,732	60%	1
Denmark	18,464	3.17	4	173,636	9.61%	2	7,560	41%	1
Finland	12,215	2.21	4	47,716	20.38%	4	2,618	21%	0
France	110,874	1.65	3	946,061	10.49%	3	70,587	64%	1
Germany	204,492	2.46	4	1,631,286	11.14%	3	98,610	48%	1
Greece	882	0.08	1	51,198	1.69%	0	292	33%	0
Hungary	3,511	0.36	1	66,579	5.01%	2	1,772	50%	1
Ireland	5,953	1.20	3	67,924	8.06%	2	3,613	61%	1
Italy	59,946	1.00	2	1,110,289	5.12%	2	32,538	54%	1
Luxembourg	2,990	4.78	4	28,406	9.52%	2	1,481	50%	1
Netherlands	39,240	2.25	4	177,413	18.11%	3	28,852	74%	2
Norway	67,532	12.58	5	26,478	71.83%	5	48,175	71%	2
Poland	4,567	0.12	1	251,491	1.78%	0	2,173	48%	1
Portugal	12,148	1.18	3	86,245	12.35%	3	5,266	43%	1
Romania	1,398	0.07	1	74,596	1.84%	0	1,398	100%	2
Slovakia	1,108	0.20	1	49,906	2.17%	1	578	52%	1
Spain	21,175	0.45	1	487,850	4.16%	2	9,917	47%	1
Sweden	56,559	5.48	5	127,011	30.81%	4	16,295	29%	0
Switzerland	19,229	2.23	4	146,616	11.59%	3	11,200	58%	1
United Kingdom	108,888	1.62	3	1,198,055	8.33%	2	66,611	61%	1
		(x1000)							

Definition

EV: BEV + FCEV + PHEV
Market share: Entire car market; including B2C sales
BEV: Full electric vehicle

Factor 2: Charging maturity score

Overall, the charging infrastructure is creating a bottleneck holding back the EV transition. The EV Readiness Index emphasises this with the lowest scores in all categories. The factors consist of:

- **Public charge points relative to the population**
- **Public charge points relative to the EV registrations**
- **Availability (DC) fast chargers relative to the size of available highways**

Markets such as Germany, Sweden and UK are at the top of the EV Readiness Index, however they include low score for charging development.

Spotlight: Public charging infrastructure

1. Public charging relative to population

Total number of public chargers / population (x1000)

2. Fast charging relative to highway availability

of fast chargers locations per 100 km highway

3. Public charging network comparison in top 12 markets

The comparison of public available chargers, both normal speed (AC) and fast charging (DC), shows the large differences in maturity between the countries.

This relates to the EV registrations (with more EVs on the road there is more demand for public infrastructure) and to wider infrastructure topics (e.g. How dense are cities built? How many kilometres of highway? How many drivers own a private driveway?)

The comparison highlights the need for a faster development of public charging infrastructure in Europe, especially since ramping-up infrastructure takes time with grid and legislative challenges.

Factor 2: Charging infrastructure maturity

	Chargepoints / population					Chargepoints / EV		Fast chargers		
Country	#Total public charge locations 2021	# normal speed public charge locations 2021	# of fast charge locations 2021	# charging plugs per inhabits (x1000) 2021	scoring charging points per population	# of stations per EV registered 2021	scoring charge station per EV	% of fast chargers locations 2021	# of fast chargers locations per 100 km highway	Scoring # Fast chargers per km highway
Austria	8065	6885	1180	0.91	2	0.603	3	14.6%	67.70	1
Belgium	8246	7815	431	0.71	2	0.311	2	5.2%	24.45	1
Czech Republic	1000	499	501	0.09	0	0.344	2	50.1%	40.02	1
Denmark	2948	2425	523	0.51	2	0.160	1	17.7%	39.35	1
Finland	3289	2934	355	0.60	2	0.269	2	10.8%	38.34	1
France	44892	41797	3095	0.67	2	0.405	2	6.9%	26.52	1
Germany	43776	36942	6834	0.53	2	0.214	1	15.6%	52.01	1
Greece	199	118	81	0.02	0	0.226	1	40.7%	3.86	0
Hungary	981	722	259	0.10	0	0.279	2	26.4%	13.07	1
Ireland	1033	812	221	0.21	1	0.174	1	21.4%	24.13	1
Italy	13176	12150	1026	0.22	1	0.220	2	7.8%	14.78	1
Luxembourg	965	954	11	1.54	3	0.323	2	1.1%	6.67	0
Netherlands	61534	59850	1684	3.53	4	1.568	4	2.7%	61.10	1
Norway	18273	13547	4726	3.40	4	0.271	2	25.9%	788.98	3
Poland	791	462	329	0.02	0	0.173	1	41.6%	20.10	1
Portugal	2109	1727	382	0.20	1	0.174	1	18.1%	12.46	1
Romania	434	273	161	0.02	0	0.310	2	37.1%	19.56	1
Slovakia	626	379	247	0.11	0	0.565	3	39.5%	51.24	1
Spain	7738	6045	1693	0.16	0	0.365	2	21.9%	10.86	1
Sweden	9511	7840	1671	0.92	2	0.168	1	17.6%	78.38	1
Switzerland	7304	6275	1029	0.85	2	0.380	2	14.1%	70.38	1
United Kingdom	31320	22965	8355	0.47	1	0.288	2	26.7%	217.69	2
		(x1000)								

Definition

Standard speed: AC charging between 3.6 kw and 22 kw
Fast speed: DC charging above 22 kw

Factor 3: Total cost of ownership scores

EV uptake is largely driven by the affordability of driving an EV within the market. Our Index compares the following items on the total cost of ownership for EV:

- **Government incentives**
- **Driver taxation**
- **Energy prices**
- **Monthly rental of lease vehicle**

The Index shows that many countries provide strong government incentives. A lower driver taxation and lower rental for EVs shows that total cost of ownership (TCO) parity is achieved in many European countries compared to fuel prices.

Factor 3: Total cost of ownership

Country*	Government incentives							
	Purchase Subsidies	Registration Tax Benefits	Ownership Tax Benefits	Company Tax Benefits	VAT Benefits	Other Financial Benefits	Local Incentives	Infrastructure Incentives
Austria	Excellent	Excellent	Excellent	Excellent	Good	None	Medium	Good
Belgium	None	Excellent	Excellent	Excellent	None	Good	None	Good
Czech Republic	None	None	None	Good	None	None	Good	Medium
Denmark	None	Excellent	None	Good	None	None	None	None
Finland	Good	Good	Good	None	None	Excellent	Medium	Medium
France	Excellent	Good	Good	Excellent	None	Good	Medium	Good
Germany	Excellent	None	Excellent	Excellent	None	None	Medium	Good
Greece	Excellent	Good	None	Excellent	Good	Good	Good	Good
Hungary	Good	Excellent	Good	Excellent	None	None	Good	None
Ireland	Medium	Excellent	Excellent	None	None	None	None	None
Italy	Excellent	None	Excellent	None	None	None	None	Good
Luxembourg	Excellent	None	Good	Good	None	None	None	None
Netherlands	Good	Excellent	Excellent	Good	None	Good	None	Excellent
Norway	None	Excellent	Good	Good	Excellent	Excellent	Good	Good
Poland	Medium	None	None	None	None	None	Good	Medium
Portugal	Good	Good	Excellent	Good	Good	Good	Good	None
Romania	Excellent	None	Good	None	None	None	None	None
Slovakia	None	Good	None	None	None	Good	Medium	Excellent
Spain	Excellent	Good	Good	None	None	None	Good	Good
Sweden	Excellent	None	Good	Excellent	None	None	Medium	Good
Switzerland	Excellent	Good	None	None	None	Medium	None	Good
United Kingdom	Excellent	Excellent	Excellent	Excellent	Good	Good	Good	Good

***See appendix B** For the details per country

Factor 3: Total cost of ownership

	Driver taxation		Energy prices						Monthly rental comparison		
Country	Driver taxation index 2021 (BEV vs ICE, lower is better)	Scoring driver taxation	Fuel price (liter of petrol in EUR)	Average fuel price per 100 km	Energy prices (average kWh in EUR)	Average electricity price per 100km	Energy price Index (lower is better)	Scoring energy prices	Rental index (lower is better)	Rental index incl. fuel/electricity (lower is better)	Scoring TCO 2021
Austria	0%	5	€1.09	€5.45	€0.19	€3.38	62%	1	101%	95%	4
Belgium	70%	2	€1.32	€6.60	€0.24	€4.36	66%	1	100%	94%	5
Czech Republic	112%	0	€1.06	€5.30	€0.17	€3.08	58%	2	138%	124%	1
Denmark	129%	0	€1.49	€7.45	€0.24	€4.25	57%	2	108%	98%	4
Finland	76%	2	€1.50	€7.50	€0.17	€3.03	40%	3	118%	109%	3
France	78%	2	€1.45	€7.25	€0.18	€3.30	46%	2	102%	88%	4
Germany	50%	4	€1.33	€6.65	€0.29	€5.22	78%	0	81%	81%	5
Greece	0%	5	€1.46	€7.30	€0.17	€3.03	41%	3	141%	113%	0
Hungary	0%	5	€1.04	€5.20	€0.13	€2.28	44%	3	180%	148%	0
Ireland	0%	5	€1.28	€6.40	€0.23	€4.15	65%	1	114%	104%	3
Italy	93%	1	€1.45	€7.25	€0.21	€3.85	53%	2	102%	91%	4
Luxembourg	46%	5	€1.16	€5.80	€0.18	€3.28	56%	2	94%	87%	5
Netherlands	59%	4	€1.58	€7.90	€0.17	€3.06	39%	3	115%	98%	3
Norway	55%	4	€1.57	€7.85	€0.12	€2.18	28%	3	82%	74%	5
Poland	0%	5	€1.00	€5.00	€0.16	€2.81	56%	2	116%	106%	3
Portugal	127%	0	€1.45	€7.25	€0.17	€3.02	42%	3	103%	91%	4
Romania	115%	0	€0.98	€4.90	€0.15	€2.78	57%	2	120%	106%	3
Slovakia	114%	0	€1.21	€6.05	€0.18	€3.16	52%	2	139%	121%	1
Spain	108%	0	€1.20	€6.00	€0.21	€3.74	62%	1	126%	113%	2
Sweden	66%	3	€1.44	€7.20	€0.19	€3.34	46%	2	117%	101%	3
Switzerland	94%	1	€1.29	€6.45	€0.20	€3.58	56%	2	116%	106%	3
United Kingdom	0%	5	€1.31	€6.55	€0.20	€3.55	54%	2	92%	85%	5

(x1000)

Based on average consumption of 5 liter/100 km
Based on average consumption of 18 kwh/100 km
Not included in index for PT, since uncommon market practice

Generic datapoints

Country	Country code	Population 2020	Highway infrastructure
Austria	AT	8,901,064	1,743
Belgium	BE	11,549,888	1,763
Czech Republic	CZ	10,693,939	1,252
Denmark	DK	5,822,763	1,329
Finland	FI	5,525,292	926
France	FR	67,098,824	11,671
Germany	DE	83,166,711	13,141
Greece	GR	10,709,739	2,098
Hungary	HU	9,769,526	1,982
Ireland	IE	4,963,839	916
Italy	IT	60,244,639	6,943
Luxembourg	LU	626,108	165
Netherlands	NL	17,407,585	2,756
Norway	NO	5,367,580	599
Poland	PL	37,958,138	1,637
Portugal	PT	10,295,909	3,065
Romania	RO	19,317,984	823
Slovakia	SK	5,457,873	482
Spain	ES	47,329,981	15,585
Sweden	SE	10,327,589	2,132
Switzerland	CH	8,606,033	1,462
United Kingdom	UK	67,025,542	3,838

Definitions used

LeasePlan orders

LeasePlan EV orders
The countries are compared based on EV order intake for plugin-hybrid and full-electric

LeasePlan full electric orders
The countries are compared based on full electric (BEV) order intake as a % from the total EV intake to emphasize the importance of full-electric zero emission vehicles.

Driver taxation

We calculated the monthly rental of a group of BEVs and compared this with comparable ICE vehicles. We included these standard vehicles, although the vehicle choice could differ per country based on popularity in that country.

We calculated the net taxation costs for a company car driver of an EV compared with a diesel vehicle. This is calculated based on the comparison of the following vehicles:

- BMW 320 diesel
- Tesla model 3 standard range

In case the local taxation calculation required a driver profile, the following assumptions were used:

> Employee drives 70% business, 30% private
> The commuting (home-work) distance is 25 km one way
> The gross annual salary of the employee is €60,000 or local equivalent

The reported number is the percentage of driver taxation of the Tesla when taking the BMW as base.

Monthly rental

We calculated the monthly rental of a group of BEVs and compared this with comparable ICE vehicles. We included these standard vehicles, although the vehicle choice could differ per country based on popularity in that country.

ICE cars

> Renault Clio / Hyundai Kona diesel
> Ford Focus / Volkswagen Golf
> Audi A4 / BMW 3 series

BEV cars

> Renault Zoe / Hyundai Kona BEV
> Volkswagen ID3 / Nissan Leaf
> Tesla model 3 / Polestar 2

The monthly rental is based on a 48 months contract with 25,000 annual miles and the following services:

> Funding
> Repair and Maintenance and Tires
> Insurance

The monthly rental excludes the fuel/electricity costs.

Energy prices

We compared the electricity prices compared to the fuel prices.

For the electricity prices we used a mix of public, home and workplace chargers based on the following charging behavior:

> 60% Home charging
> 30% Workplace charging
> 10% Public charging

The kwh tariffs we compared are based on:

> Home charging: Households 2500 kWh < 5000 kWh / including all taxes.
> Workplace: non-household / 500 MWh < 200 MWh band / excluding VAT & other recoverable taxes and levies

Scoring scale explanation

KPI	Score						Comments
	0	1	2	3	4	5	
1. E-vehicle maturity							
1.1 EV per population	0	>0 and <0.5	>0.5 and <1	>1 and <2	>2 and <5	>2 and <5	Progressive scale based on average car ownership in a country
1.2 EV market share	<2%	>2% and <4%	>4% and <10%	>10% and <20 %	> 20% and <50%	>50%	Progressive scale to emphasize the almost exponential growth of EV
1.3 BEV market share	<35%	>35% and <70%	>70%				Scale to emphasize the need to move to full electric vehicles
2. Charging infrastructure maturity							
2.1 Charging stations per population	<0.2	>0.2 and <0.5	>0.5 and <1	>1 and <2	>2 and <5	>5	Progressive scale to score the importance of a well developed public charging network
2.2 Charging stations per EV registration	<0.1	>0.1 and <0.25	>0.25 and <0.5	>0.5 and <1	>1 and <2	>2	Progressive scale to score an existing network for new EVs
2.3 Fast chargers per km highway	<0.1	>0.1 and <1<0.5	>1 and <5	>5			Progressive scale to show the growth path for many countries
3. Total Costs of ownership							
3.1 Government Incentives	None	Medium	Good	Excellent			Linear indication. Incentives are scored within a country and across countries within the same category
3.2 Driver taxation	>100%	90% – 100%	75% – 90%	60% – 75%	50% – 60%	>50%	Linear indication which scores a benefit for EV drivers as effective policy
3.3 Energy prices	>75%	>60% and <75%	>45% and <60%	<45%			Linear indication which scores a benefit for EV drivers as effective policy
3.4 EV monthly rental comparison	>140%	>130 and <140%	120% – 130%	110% – 120%	100% – 110%	<100%	Linear indication which scores a lower monthly rental for EV compared to ICE as preferred

Sources used

Element / KPI	Data source used
1. E-vehicle maturity	
1.1 % EV per population	Eurostat, ACEA
www.globalpetrolprices.com/gasoline_prices/	
1.2 % EV marketshare	Eurostat, ACEA
1.2.1 % EV market share	Eurostat, ACEA
1.2.2 % BEV market share	
www.acea.be/statistics/tag/category/electric-and-alternative-vehicle-registrations . (Q1-Q3 results)	
1.3 % LeasePlan EV orders	LeasePlan order bank
1.3.1 % EV order share	
1.3.2 % BEV order share	
2. Charging infrastructure maturity	
2.1 Charging stations per population	Eurostat, EAFO
www.eafo.eu/alternative-fuels/electricity/charging-infra-stats	
2.2 Charging stations per EV registration	ACEA, EAFO
appsso.eurostat.ec.europa.eu/nui/show.do?dataset=road_if_motorwa&lang=en	
2.3 Fast chargers per km highway	Eurostat, EAFO
3. Total costs of ownership	
3.1 Government incentives	EAFO with LeasePlan validation
3.2 Driver taxation	LeasePlan consultancy services
www.globalpetrolprices.com/gasoline_prices/	
3.3 Energy prices	Global fuel prices, Eurostat
appsso.eurostat.ec.europa.eu/nui/show.do?dataset=nrg_pc_204&lang=en	
3.4 EV lease price comparison	LeasePlan consultancy services

Appendix B

Country by country breakdown

Austria

Government Incentives

Purchase Subsidies

- The subsidy up to €5,000 applies to full electric vehicles and fuel cell vehicles. The subsidy of plug-in hybrids and range extenders amount to €2,500
- Requirements: The catalogue price of the standard model (excl. equipment) vehicle should not exceed €60,000 & the electric range of the vehicle must be at least 50 km
- Plug-in hybrid models with diesel engines are exempt from subsidy.
- There are 3 funding sources (federal government, vehicle manufacturers, federal states in Austria, which varies).
- The subsidy is available until end of 2020. For 2021 the subsidy might be lower (€4,000 for EVs and €2,000 for PHEVs), but there is no decision by the government so far.

Registration Tax Benefits

- There is no tax (NoVa – registrations tax) for zero emission vehicles, due to the formula. The NoVA is calculated based on the CO_2, since EV have a CO_2 emission of zero, no NoVA is charged.

Ownership Tax Benefits

- Electric vehicles are exempt from motor-related insurance tax (motorbezogene Versicherungssteuer – which is linked to engine size of the vehicle) , this does not apply to range extenders and hybrid cars. In these type of vehicles the calculation is based on the ICE part.

Company Tax Benefits

VAT Benefits

- VAT deductibility of EVs at a purchase value of up to €40,000
- Partially VAT deductible at a purchase value of up to €80,000
- For a purchase value of €80,000 and above there is no VAT deductibility

Other Financial Benefits

Local Incentives

- Free Parking: In several cities, electric vehicles are exempt from parking fees. (Vienna excepted). On certain determined highways, the speed limit does not apply for electric vehicles in accordance with the Federal Emission Control Act. License plate in green letters is required on defined roads (max. speed limit still applies, e.g. signed highways with a limit of 80 km/h -> the maximum limit of 130 km/h for EVs)

Infrastructure Incentives

- Currently there is no legal possibility for the issue of public charging stations which are blocked by conventional vehicles, (towing etc.)
- Charging providers are working together with partners and policy-makers on a general parking ban regulation and trying to apply this.
- Installation of public charging stations is subsidised. The subsidy depends on the type of the charging stations, (€300 up to €15,000 for DC charging stations). Condition: accessible to the public / for €15,000 subsidy – combined with purchase of electric LCV or electric bus

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Belgium

Government Incentives

Purchase Subsidies

- Canceled since 2020

Registration Tax Benefits

- Flanders: electric vehicles registered in the name of a private person or company are exempt from registration tax.
- Wallonie and Brussels: electric vehicles pay the lowest rate of registration tax.
- Leasing companies registered in Flanders are now also exempt from registration tax for EV (since 01/07/2020)
- Leasing companies registered in the Brussels or Walloon region, the minimum registration tax is applied.

Ownership Tax Benefits

- Flanders: electric vehicles registered in the name of a private person or company are exempt from road tax.
- Wallonie and Brussels: electric vehicles pay the lowest rate of road tax.
- Leasing companies registered in Flanders are now also exempt from road tax for EVs (since 01/07/2020)
- Leasing companies registered in the Brussels or Walloon region, the minimum road tax is applied.

Company Tax Benefits

- Expenses related to the use of zero-emission vehicles are 100% deductible from corporate tax

VAT Benefits

Other Financial Benefits

- Electricity cost for a full electric vehicle is 100% deductible from corporate tax

Local Incentives

Infrastructure Incentives

- Cost for charging infrastructure (purchase and installation of charging points) are 100% deductible from corporate tax. Both for workplace charging and home charging provided by the employer. No extra Benefit In Kind for the employee.

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Czech Republic

Government Incentives

Purchase Subsidies

> Incentives for 2021 not yet defined. It is unknown if they will be available. Working group preparing the incentives ceased their activity in Spring 2020. LPCZ communicates with Ministry of Industry and Trade through ČLFA (Leasing association).

Registration Tax Benefits

Ownership Tax Benefits

Company Tax Benefits

> Exempt from the road tax (BEV, PHEV, CNG). The private use of a company car is treated as taxable income in the Czech Republic and measured at a flat monthly rate of 1% of the vehicle's gross purchase price (Same for EV and ICE).

VAT Benefits

Other Financial Benefits

Local Incentives

> Exempt from toll system for cars on highway, started in 2020; Free parking in city centres of big cities (Prague started in 2018 with this and other cities followed).

Infrastructure Incentives

> Public infrastructure incentives for energy companies and similar providers are running. No incentives for private/company infrastructure.

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Denmark

Government Incentives

Purchase Subsidies

Registration Tax Benefits

> New car taxes introduced benefiting zero emissions and low emission vehicles (< 50g CO_2/km). Value tax on all vehicles: 25% of first DKK 65.000, then 85% up to DKK 202.200 and 150% above DKK 202.200. Zero emissions then get a discount of 60% and low emissions get 55%. On top of that, zero emissions get a further DKK 170.000 discount on taxes, low emissions get DKK 50.000. Both discounts and cash benefits will be phased out over the coming years. This means zero emission vehicles are tax free up to DKK 500.000 (approx €67,000) while low emissions are benefited, making PHEV cheaper than the same model ICE version

Ownership Tax Benefits

Company Tax Benefits

> No tax on the Home charge box, for the driver. Tax incentive for company car drivers in 2020 (DKK 40.000 reduction in personal tax) is discontinued.

VAT Benefits

Other Financial Benefits

Local Incentives

Infrastructure Incentives

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Finland

Government Incentives

Purchase Subsidies

> 1) Existing direct purchase subsidy: €2,000 for a BEV < €50,000. Only available for private persons, not B2B and still valid this year. 2) New car scrapping incentive: for cars 10+ years you get a €2,000 purchase incentive for new PHEV (max 98g/km), BEV or Gas car.

Registration Tax Benefits

> The vehicle tax, which is paid at the time of purchase, is based on the CO_2 emissions of the vehicle. For BEVs it is the lowest (2,7 %).

Ownership Tax Benefits

> Ownership tax is the same as Registration Tax Benefits. There is an annual vehicle tax, based on basic tax plus driving power tax. Basic tax is based on CO_2 emissions of the car. Driving power tax is based on total mass of the car for all other fuels except petrol. For BEV it is 1.5 c per day starting at 100 kg; for diesel PEV 4.9 c; for petrol PHEV 0.5 c.

Company Tax Benefits

VAT Benefits

Other Financial Benefits

> 1) Benefit for drivers (Fringe benefit): The monthly tax values of BEV will be reduced by €290 (unlimited car benefit) or €170 (limited car benefit). No benefits for employer, only for employees. 2) There will no longer be a monetary value for charging a car at work with electricity paid by the employer 2021. When an employee uses electricity paid by the employer at the workplace or at a public charging point to charge a car in kind and pays for any other driving power costs for the car, the car benefit is considered a limited benefit.

Local Incentives

> 50 % discount for parking at Helsinki city (administered by city) for low CO_2 emission

Infrastructure Incentives

> Allowance to housing associations for the construction of charging infrastructure for electric cars

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

France

Government Incentives

Purchase Subsidies

> Bonus System for Long-Term Purchase or Lease Financing (> 2 years) for passenger cars & LCVs. For a CO_2 emissions with a rate of 0 to 20G
> This purchase incentive for EVs is €5,000 for cars under €45,000, a bonus of €3,000 for a price between €45,000 and €60,000, and those whose price is over €60,000 will not receive any bonus. Some PHEVs can also benefit from a new purchase bonus of €2,000 under the following conditions (CO_2 < 50G, minimum range in electric 50 km and purchase price < €50,000). The amounts will gradually decrease each year by €1,000. (Amounts had been revalued upwards during the Covid-19 period (in May)).* For private consumers, the amount is increased by €1,000 except for PHEV.

Registration Tax Benefits

> Fully electric vehicles and plug-in hybrids are partially or fully exempt from registration fees

Ownership Tax Benefits

> The accounting depreciation ceiling is raised for EVs, €30,000 against €18,300 for ICE (and for PHEV, €20,300 against €18,300)

Company Tax Benefits

> CO_2 tax only applicable to passenger cars. Based on CO_2 Tax, It takes into account two components. The first is based on CO_2 and the second is based on environmental impact (Fuel type, Nox emissions), EV & PHEV are exempt from this tax.

VAT Benefits

Other Financial Benefits

> Benefit in kind (BIK), new since November 2019, electricity costs paid by the employer are not taken into account in the calculation of the BIK
> A reduction of 50% is to be made on the BIK as a whole. The amount of this allowance is capped at €1,800 per year
> BIK calculation is based on acquisition price of the car => 9 % by year

Local Incentives

> Some regions offer additional bonuses to SMEs and private owners

Infrastructure Incentives

> The ADVENIR premium covers the costs of supply and installation of charging points up to 40%* for companies and public entities and 50% for residential collectives.

* A maximum grant amount has been set at €960 per charging point. For private installations, 30% tax credit on installation of charging infrastructure new specifications, the premiums will be decreasing according to a new schedule

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Germany

Government Incentives

Purchase Subsidies

- For pure electric cars with a list price under €40,000, the grant increases to €6,000, for hybrids to €4,500. For pure electric cars with a list price between €40,000 and €65,000, the grant decreases to €5,000, for hybrids to €3,750. List price applies on the base model). The promotion lasts for a maximum of 400,000 cars. The federal government promotes a total of 650,000 to 700,000 cars. The promotion has been extended and ends in 2025.
- In federal states and in emission-polluted cities and regions, additional subsidies are possible and can be combined with state subsidies.
- In 2021 addition promotion is planed for eLCVs.

Registration Tax Benefits

Ownership Tax Benefits

- Exemption for the first 10 years for motor vehicle tax.

Company Tax Benefits

- The benefit in kind is extended until 2030.
- For BEV and PHEVs procured in the period from 01/2020 to 12/2030, the monetary advantage should be reduced to 50% of the gross list price.
- BEVs with a list price below €40,000 an additional reduction to 25 % of the gross list price is planned.
- For PHEVs there is a restriction that the car must have a range of 40 km or the CO_2 emission is less than 50 g/km. Up to 2022 until 2024 the car must have a range of 60 km and up to 2025 the PHEV must have a range of 80 km.

VAT Benefits

Other Financial Benefits

Local Incentives

- In federal states and in emission-polluted cities and regions, additional subsidies are possible, but these subsidies cannot be combined with state subsidies.

Infrastructure Incentives

- The Federal Government is providing €300m towards expanding the charging infrastructure. €200m is available for rapid public charging infrastructure, and €100m for normal public charging.

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Greece

Government Incentives

Purchase Subsidies	> The 'I Move Electric' initiative to sponsor 15% on retail price before taxes (up to €50,000 RPBT) of purchase of electric passenger or light commercial vehicles up to €5,500 & up to €4,500 for PHEVs (+ €1,000 withdrawal benefit for individuals)
Registration Tax Benefits	> For PHEVs & BEVs
Ownership Tax Benefits	
Company Tax Benefits	> No benefit in kind taxation for vehicles with emissions <=50 g/klm with retail price before taxes of up to €40,000 (PHEV, MVEV, BEVs). Additional incentives for installation of charging infrastructure (€500). Tax benefit in asset depreciation & additional incentives for installation of charging infrastructure (€500). Charging costs to be excluded from taxation income. +50% tax relief on lease costs of BEVs and +30% tax relief on lease costs PHEVs and HEVs
VAT Benefits	> Charging costs to be excluded from taxation income
Other Financial Benefits	> Electric and hybrid vehicles are exempt from luxury tax and luxury living tax.
Local Incentives	> Free circulation to the center of Athens & free pass to priority bus lane for BEV & PHEV with CO_2 below 50g/km, BEV benefits: Free Parking Reserved Parking spots. No parking fees and free access to the city center
Infrastructure Incentives	> Tax benefit in asset depreciation and incentives for installation of charging infrastructure (€500). Additional corporate incentives for installation of charging infrastructure

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Hungary

Government Incentives

Purchase Subsidies	> Net 1,5 million HUF state subsidy (21%)
Registration Tax Benefits	> No registration tax
Ownership Tax Benefits	> No vehicle tax
Company Tax Benefits	> No company car tax
VAT Benefits	
Other Financial Benefits	
Local Incentives	> Free parking on public places
Infrastructure Incentives	

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Ireland

Government Incentives

Purchase Subsidies	> A €5,000 grant for private buyers. There is no longer any additional SEAI grant for corporate buyers.
Registration Tax Benefits	> The Government has continued €5,000 reduction in VRT (Vehicle Registration Tax)
Ownership Tax Benefits	> Reduced Motor Tax based on zero CO_2 emissions. For a company car driver there is zero Benefit in Kind up to the end of 2022.
Company Tax Benefits	> There are none for leased vehicles. For company purchased vehicles there are accelerated capital allowances available.
VAT Benefits	
Other Financial Benefits	
Local Incentives	
Infrastructure Incentives	> Fee public charging has ended.

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Italy

Government Incentives

Purchase Subsidies

> ECOBONUS is a turnover mechanism. When the lot (fixed budget from the government) ends there's a window to decide whether to continue, so it's not guaranteed. However values for 2020 are:
- CO_2 <= 20 g/km €6,000 with scrapping, €4,000 without scrapping
- CO_2 > 20 g/km e <= 60 g/km €2,500 with scrapping, €1,500 without scrapping

ECOBONUS has been reviewed twice during the last year

Registration Tax Benefits

Ownership Tax Benefits

> Electric vehicles are exempt from the annual circulation tax (ownership tax) for a period of five years from the date of their first registration. After this five-year period, they benefit from a 75% reduction of the tax rate applied to equivalent petrol vehicles in many regions.

Company Tax Benefits

VAT Benefits

Other Financial Benefits

Local Incentives

Infrastructure Incentives

Disclaimer: Government incentives are likely to change over time. Prior local verification of the latest regulation is required before applying the information

Luxembourg

Government Incentives

Purchase Subsidies

> Government subsidy of €8,000 for fully electric vehicles and €2,500 for plug-in hybrid vehicles (< 50g): premium included in the quote. The vehicle must be subject to a leasing contract of a minimum duration of 12 months. On the basis of current information, the premium is applicable only if the vehicle is registered before March 31, 2021, and no later than December 31, 2021, but high possibility is that the premium will be extended until the end of the year (we await formal extension of the rule)

Registration Tax Benefits

Ownership Tax Benefits

> Road Tax Reduction – CO_2 based

Company Tax Benefits

> Reduction of benefit in kind for the driver is taxed based on the CO_2 emissions: with an electric vehicle, the driver takes advantage of a benefit in kind calculated at only 0.5% of the value of the new vehicle (instead of 1,5% for vehicles of all engines and all CO_2 emissions in the past). Regarding PHEV, the calculation is more advantageous for hybrid vehicles with petrol engines, whose CO_2 emissions do not exceed 50 g/km (hence the attractiveness of plug-in versions). In this case, the rate applied for the calculation of the benefit in kind is reduced to 0.8% of the value of a new vehicle

VAT Benefits

Other Financial Benefits

Local Incentives

Infrastructure Incentives

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Netherlands

Government Incentives

Purchase Subsidies

- For private persons a subsidy is in place. €2,000 for a second-hand full EV and €4,000 for new full EV. This subsidy can be obtained with a private purchase of private lease. This incentive was introduced in 2020
- A new €5,000 subsidy is proposed for new zero emission LCVs. This incentive should take effect as of 1 January, 2021

Registration Tax Benefits

- The registration tax is based CO_2 emissions. Zero emission cars are exempt from paying registration tax. Due to low Worldwide Harmonised Light Vehicles Test Procedure (WLTP) CO_2 emissions for PHEVs the registration tax is low.

Ownership Tax Benefits

- Road tax: Zero emission cars are exempt from paying road taxes. For PHEV 50% discount on road tax.

Company Tax Benefits

- Tax deductible investments: The Netherlands has a system of facilitating investments in clean technology, by providing an additional deduction from corporate and business income taxes. The 2021 list of deductible investments is not available yet. But EVs were included on the 2020 list.

VAT Benefits

Other Financial Benefits

- Fringe benefits tax is levied on the private use of company cars. This benefit is valued at 22% of the full catalogue value of the vehicle.
- For zero emission full EVs with a first registration in 2021 this percentage is reduced to 12% for the first €40,000 of the catalogue price.
- For zero emission hydrogen cars this percentage is 12% for the whole purchase value

Local Incentives

Infrastructure Incentives

- When residents of a municipality need a charging point, the municipality provides a public charging point free of charge (under certain conditions)
- Based on the 'Klimaat akkoord' on a national, county and local level there are various initiatives to expand charging infrastructure. The goal is 1.8 million charging points in 2030.
- Based on the 'Klimaat akkoord' measures have been taken to make the energy prices of charging points more transparent and comparable for consumers / users.
- Investments have been made in hydrogen solutions (e.g. buses and waste collection vehicles) and hydrogen stations.
- No fringe benefit of a home charge point is deemed to be included in the fringe benefit on the EV.

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Norway

Government Incentives

Purchase Subsidies	
Registration Tax Benefits	> No registration fee for EVs (with the exception of the wreckage fee (NOK 2 400)
Ownership Tax Benefits	> Reduced Road Tax for BEVs
Company Tax Benefits	> Reduced employer tax related to reduced benefit in kind tax for the driver
VAT Benefits	> No VAT on purchase of BEV
Other Financial Benefits	> There is a new incentive scheme in place to support acquisitions of eLCV. The support is from NOK 10.000 to NOK 50.000 based on the motor power
Local Incentives	> Urban toll exemption will be reduced in some cities, but the fee for EVs will not exceed 50% of the cost of an ICE car
Infrastructure Incentives	> There are several local initiatives supporting installation of chargers. The support ranges normally from NOK 5.000-10.000

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Poland

Government Incentives

Purchase Subsidies

> We expect that The National Fund for Environmental Protection and Water Management will make first proposals in Q1 2021. At the moment there are no details but we expect there will be different incentives for private individuals and companies

Registration Tax Benefits

Ownership Tax Benefits

Company Tax Benefits

VAT Benefits

Other Financial Benefits

Local Incentives

> Unchanged: BEVs are allowed to drive in bus lanes; electric vehicles can park free of charge in the paid parking area

Infrastructure Incentives

> At the moment we do not have any details.

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Portugal

Government Incentives

Purchase Subsidies

> Companies: National Subsidy for BEVs : €2,250.
Privates: National Subsidy for BEVs : €3,000

Registration Tax Benefits

> For BEVs there has been a change for this incentive: a 60% reduction only for PHEVs with CO_2 less than 50g CO_2/km and autonomy higher than 50 km. Tax reduction / exemption – CO_2 based tax. BEVs are exempt. (Imposto Sobre Veículos)

Ownership Tax Benefits

> Road tax exemption for BEVs

Company Tax Benefits

> Exemption of Autonomos taxation for BEVs. For BEVs maintained: There has been a change for this incentive the 50% tax reduction. For PHEVs: its only for vehicles with CO_2 less than 50g CO_2/km and autonomy higher than 50 km

VAT Benefits

> VAT is deductable for companies (With acquisition costs: BEV < €62,500; PHEVs < €50,000)

Other Financial Benefits

> VAT deduction of the energy consumed by BEVs and PHEVs.

Local Incentives

> Free parking in several cities in Portugal (Lisbon, Beja, Guimarães and others)

Infrastructure Incentives

> All public infrastructure is now paid

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Romania

Government Incentives

Purchase Subsidies

> The same subsidy for acquisition will remain valid, because the FX in euros is a bit less than previous years – electric cars €9,300 and €4,100 for hybrid

Registration Tax Benefits

Ownership Tax Benefits

> Up to 95% discount from standard property tax, based on each local city tax decision. Taxation is made based on cylindrical capacity of the car engine

Company Tax Benefits

VAT Benefits

Other Financial Benefits

Local Incentives

Infrastructure Incentives

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Slovakia

Government Incentives

Purchase Subsidies	> Purchase subsidy of €5,000 for PHEVs and €8,000 for BEVs was stopped as the budget was spent
Registration Tax Benefits	> Lowest possible registration fee (€33)
Ownership Tax Benefits	
Company Tax Benefits	
VAT Benefits	
Other Financial Benefits	> Lowest possible third-party liability insurance (similar to ICE to 999 cm)
Local Incentives	> EVs licence plate colors can be green which will probably allow drivers to use bus lanes in future in Bratislava in order to avoid traffic jams and commute faster. Entrance to low emission zones in the city centre would also likely be approved.
Infrastructure Incentives	> €2,500 to €18,000 government subsidy to build an EV charger, which must be public and equipped with a Type 2 connector

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Spain

Government Incentives

Purchase Subsidies

> General budget for 2021 is still under discussion. The plan to incentivize EVs for 2020 (Plan Moves II) was launched in June 2020 with a budgeted amount of €100m. These funds are transferred to the Autonomous Communities aimed at encouraging the purchase of alternative vehicles, installing electric vehicle charging infrastructure and the development of incentives to implement electric bicycle lending systems. Subsidies for passenger cars and LCVs goes from €4,000 to €6,000 (higher if the old vehicle is scrapped)

Registration Tax Benefits

> Exemption for luxury tax

Ownership Tax Benefits

> Road tax exemption / reduction depending on local policies, e.g. in place for Madrid, Barcelona, Zaragoza, Valencia

Company Tax Benefits

VAT Benefits

Other Financial Benefits

Local Incentives

> Toll exemption on regional highways for electric vehicles
> Free parking in selected cities

Infrastructure Incentives

> Infrastructure subsidies are included in Plan Moves II

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Sweden

Government Incentives

Purchase Subsidies	> Climate bonus (klimatbonus) is available ranging up to 60,000 SEK for BEVs and PHEVs. Linear decrease from 60,000 SEK to 10,000 SEK as CO_2 increases from 0 to 70g CO_2
Registration Tax Benefits	
Ownership Tax Benefits	> 360 SEK road tax for vehicles with up to 95g CO_2 WLTP (diesel-PHEVs get a small tax due to diesel engine). Increased road tax for Petrol and Diesel vehicles.
Company Tax Benefits	> Lower road tax as above. Lower benefit value for drivers (Annual benefit value EV/PHEV = benefit value of equivalent combustion engine car (10,000 SEK has now been removed) as well as 360 SEK for road tax instead of full combustion engine road tax which is the case for combustion engines as of January 2018, but comes in to full effect with WLTP January 2020). Lower benefit value also results in lower employer taxes.
VAT Benefits	
Other Financial Benefits	
Local Incentives	> As of 2020 municipalities can choose to exempt vehicles with high emissions from certain areas. Only pre-EU5 vehicles so far are restricted from certain streets in Stockholm.
Infrastructure Incentives	> Support for company installations: 50% up 15,000 SEK per charge point. Support for Home installations (appl): 50% up to 10,000 SEK. Support for public chargers up to 50%.

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Switzerland

Government Incentives

Purchase Subsidies	> Some Kantons offer up to CHF 3000 per car when purchasing a PHEV / EV
Registration Tax Benefits	> Zero road tax in most Kantons for the first 3 years
Ownership Tax Benefits	
Company Tax Benefits	
VAT Benefits	
Other Financial Benefits	> No import tax for BEVs
Local Incentives	
Infrastructure Incentives	> Some power companies offer support installing chargers

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United Kingdom

Government Incentives

Purchase Subsidies

- The maximum subsidy for cars was reduced to £3,000 as of 12 March 2020. Cars valued at more than £50,000 are no longer eligible for the subsidy.
- The van subsidy is unchanged at up to £8,000.
- The scheme is funded until 2022/23

Registration Tax Benefits

- Zero emission vehicles continue to pay no registration tax

Ownership Tax Benefits

- Zero emission vehicles continue to pay no ownership tax. The charge for high-value vehicles has been removed, so all EVs are now exempt

Company Tax Benefits

- Tax on BIK is currently 0%, and will rise to 1% in 2021/22 and 2% from 2022/23 until at least 2024/25.

VAT Benefits

- Domestic electricity attracts a reduced rate of VAT, only 5% rather than 20% applicable elsewhere

Other Financial Benefits

- Ultra-low emission vehicles (up to 75 g/km CO_2) are carved out of Optional-remuneration arrangement regulations. This means company car drivers in a salary sacrifice scheme can contribute to their vehicle costs using gross salary, pre-tax and a NI salary sacrifice scheme can contribute to their vehicle costs using gross salary, pre-tax and NI

Local Incentives

- Currently EVs and most PHEVs get 100% 'cleaner vehicle discount' in the London Congestion Charge zone. From 25th October 2021, the discount will only be available for zero-emission vehicles. It will continue on this basis until 25th December 2025
- A new green licence plate is now available, making it easier for local authorities to provide incentives such as reduced parking fees or use of bus lanes

Infrastructure Incentives

- The 'Electric vehicle homecharge scheme' (EVHS) and 'Workplace charging scheme' (WCS) continue to offer a grant for installation of chargepoints. This was reduced from £500 to £350 from 1st April 2020.
- The ORCS scheme, under which local councils get a grant for installation of chargepoints in areas with on-street parking, continues, with the grant reduced from £7,500 to £6,500 from 1st April 2020.

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