

Mobil Guide

Green powertrains
EV maturity
Local taxation & specificities

November 2023 edition

Better with every move.

 **ayvens**
SOCIÉTÉ GÉNÉRALE GROUP

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alliance with

 **WHEELS**TM

Wired for success: a country-by-country guide to EV readiness

Welcome to the 2023 Mobility Guide, your trusted compass in the dynamic landscape of global mobility. As we navigate the ever-evolving world of electric vehicles (EVs), sustainable practices, and international fleet management, this guide has been meticulously crafted to empower you with insights and strategies that will shape the future of your mobility.



Navigating EVs in a changing landscape

Over the past year, the sales growth of electric vehicles in 2022 and the first half of 2023 has accelerated compared with previous years confirming that electrification is a megatrend. The question isn't anymore if but how fast the electrification will happen. But, as we venture into the realm of EVs, we also recognise the challenges and uncertainties. Inflation and geopolitical factors affecting cars prices and electricity prices, and concerns about residual values, battery performance and recycling are issues that cannot be overlooked. The main critical concerns on the horizon are the building of a new EV supply chain for the automotive industry, our dependency on a few batteries suppliers, inflation on battery raw materials, particularly lithium, to meet the soaring demand for EVs. These challenges together with legislative and fiscal evolutions could potentially impact the trajectory of EV market share in the second half of this decade.

As we explore the data and trends per market within this guide, keep in mind the dynamic nature of the electric vehicle landscape. Our goal is to empower you with the knowledge and insights needed to navigate this transformative era in the automotive industry successfully and adapt your trajectory according to market maturity. These insights are crucial for businesses looking to navigate the electrified mobility landscape effectively.

Providing a one-stop-shop solution for electrification goes hand in hand with accompanying our clients in this journey, jointly supporting the achievement of their corporate climate goals. With this purpose in mind, we have developed a set of consulting tools that allow joint navigation through this complex environment, characterised by various taxation and incentive schemes, and by different regulations and country specificities.

Global reach, unmatched value

In 2023, the automotive industry witnessed a seismic shift as ALD Automotive joined forces with LeasePlan, creating an automotive juggernaut with unparalleled global reach. This combined group is positioned to be the global mobility player with the world's largest multi-brand EV fleet with half a million of EVs on September 30th, 2023 in 44 countries and 16 partners countries. Think of it as your passport to a worldwide mobility partner, ensuring seamless operations and unparalleled customer value across borders. The synergy of these two giants opens doors to unprecedented possibilities for our valued international mobility managers.

Expanding horizons in Asia and beyond

Our commitment to providing you with a comprehensive view extends beyond traditional boundaries. In this year's Mobility Guide, we proudly incorporate Thailand into our scoring matrix and broaden our lens to encompass the United Arab Emirates (UAE). These additions reflect the ever-expanding landscape of electric vehicle readiness and maturity, offering you a more holistic perspective for your international mobility's strategic decisions.

Client centric electrification

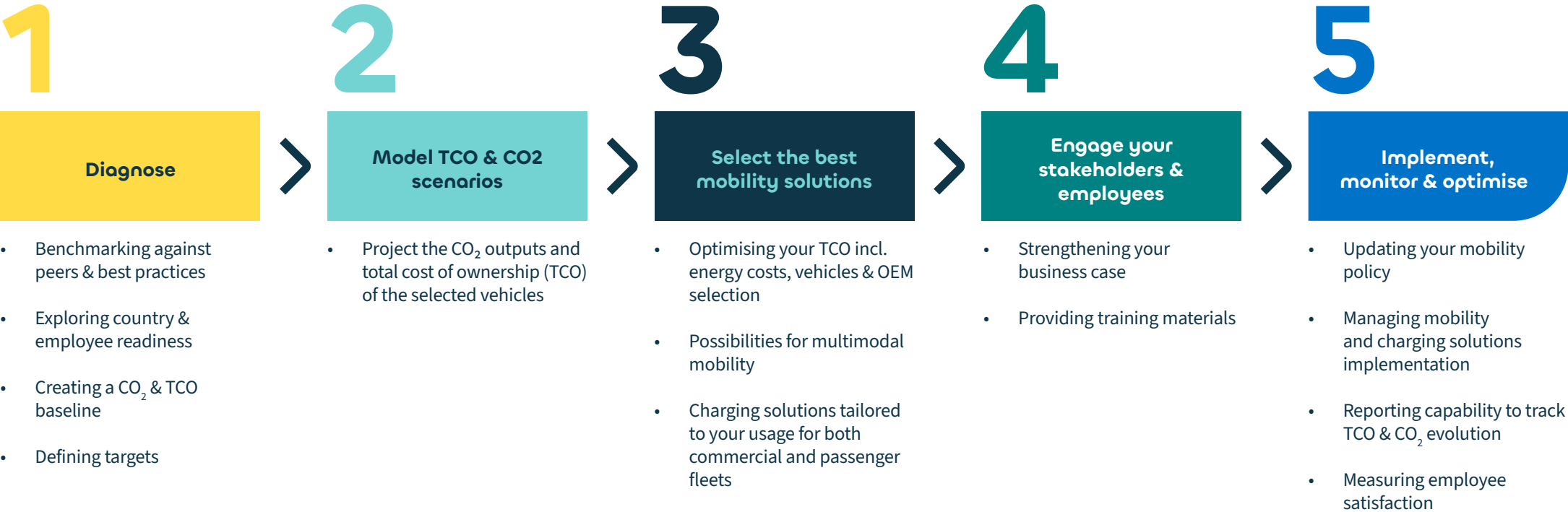
At the heart of our services lies a relentless client focus. We understand that electrification is not a one-size-fits-all endeavour. Our consulting services take centre stage in this edition. We've been hard at work in 2023, performing over 50 specific cases for international clients. Notably, our well-recognised Net Zero Programme, tailored to individual clients, support your journey towards ambitious CO₂ emissions reduction goals and give you concrete outputs in term of

CO₂ footprint baseline, trajectory and action plans. Our commitment to precision and sustainability is unwavering.

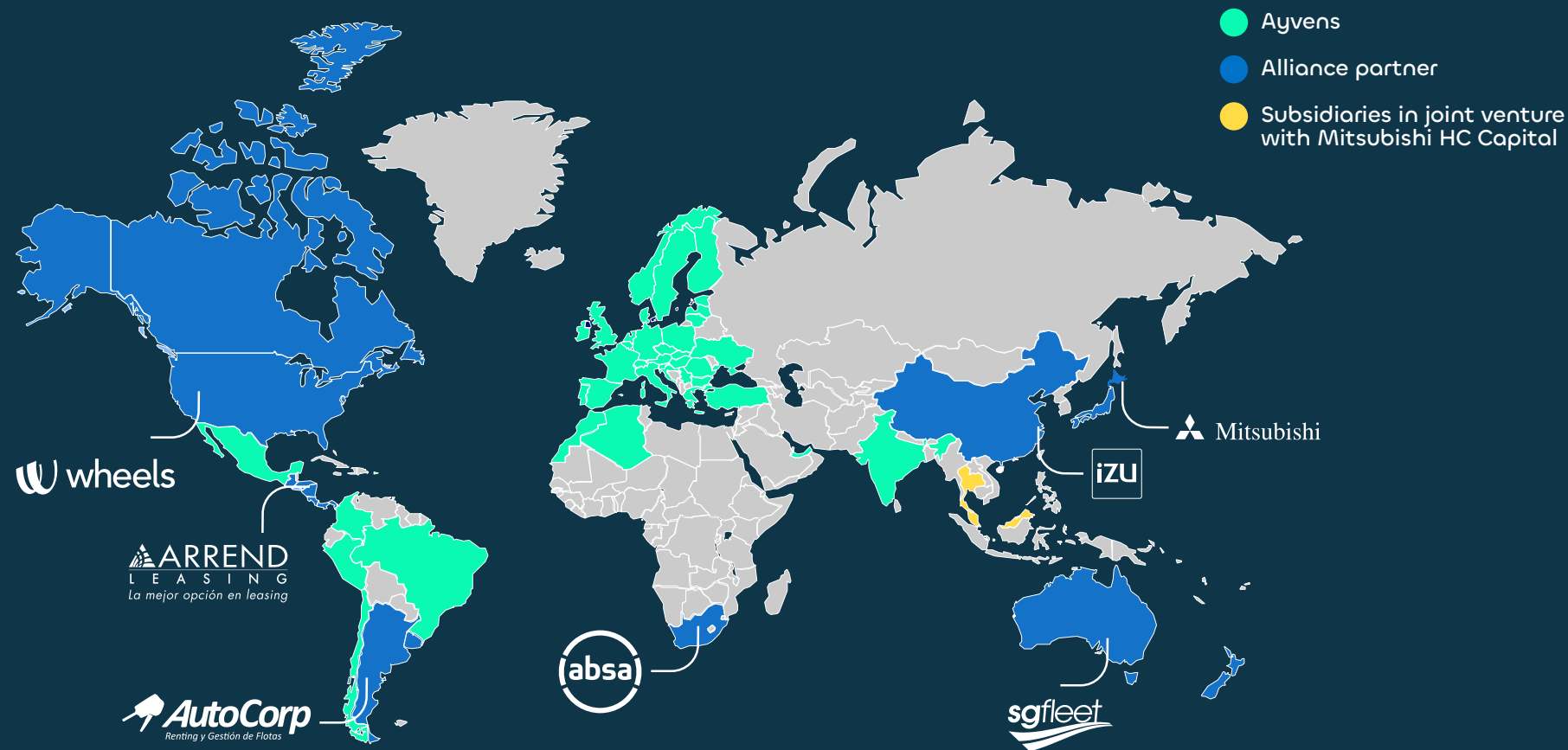
As you immerse yourself in the 2023 Mobility Guide, envision it as your compass in the pursuit of sustainable mobility strategy. It's not just a guide; it's your gateway to a greener future. Happy reading, and may your international fleets thrive in the era of electrification.

"Veolia Group aims to be the benchmark company for ecological transformation. In this journey, our international partnership with Ayvens is key to bring value to our businesses, helping transform our sustainability goals into concrete actions and deliverables, regarding fleet as well as alternative mobility solutions."

Wilfried Duchez
Group Fleet & Mobility Deputy Director Veolia



Supporting you wherever you need us



~3,4 million vehicles in
44 subsidiaries

+ Alliance
Partners

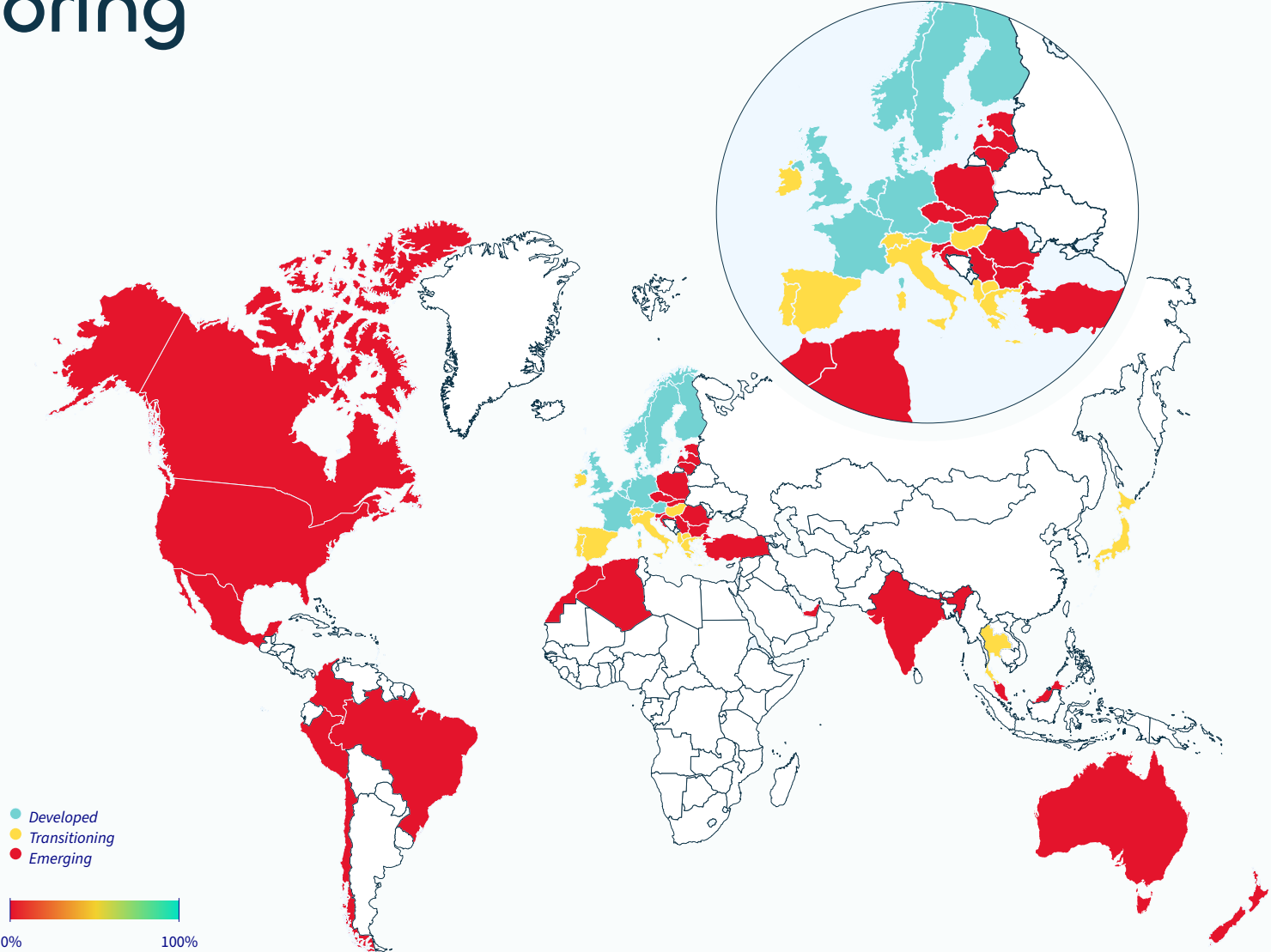
~ 4,5 million vehicles in
61 countries

EV maturity scoring

Our Mobility Guide scores countries according to their level of EV Maturity on an annual basis. **Our aim is to support global fleet managers in their journey towards electrification, providing a snapshot of EV maturity for each country.**

This scoring allows you to answer legitimate questions as where to start the energy transition and at which pace.

- **Countries with scoring above 60 points**
Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, Netherlands, Norway, Sweden, UK
- **Countries with scoring above 40 points**
Greece, Hungary, Ireland, Italy, Japan, Portugal, Spain, Switzerland, Thailand
- **Countries with scoring below 40 points**
Algeria, Australia, Brazil, Bulgaria, Canada, Chile, Colombia, Croatia, Czech Republic, Estonia, India, Latvia, Lithuania, Malaysia, Mexico, Morocco, New Zealand, Peru, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey, UAE, USA



Sources: [EV Volumes](#) - [EAFO](#)-European Alternative Fuels Observatory - [ACEA](#) - [electricitymaps](#)

Our scoring rationale

The scoring methodology we have used for the 2023 edition of the Mobility Guide takes into consideration several **factors and hurdles when transitioning** to an electrified fleet.

The **main barriers to BEV adoption** are **range anxiety, charging infrastructure complexity and affordability**.

In this guide, our aim is to **provide an unbiased view of these barriers**, focusing on **6 pillars**, highlighted here with the **metrics taken into consideration**.

The sum of these pillars produces the total country score.

1. EV adoption

Assessment of the electrified sales volumes and market share versus the total industry volume. A greater weighting is added to the BEV share versus other electrified powertrains.

2. Charging infrastructure

Metrics take into consideration the quality, quantity and complexity of public charging stations, relative to the number of electric cars that will need to charge and the relative coverage per 100 km.

3. Taxation and regulation

Countries identified where the government or main cities apply subsidies and/or incentives to adopt greener powertrains.

4. Green powertrain offering

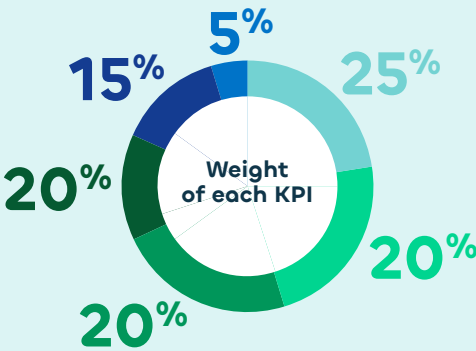
Analysis and measurement on the breadth of BEV model choices available to customers. Consideration is applied to unique models sold over the past 12 months to ensure there is appetite in the market.

5. BEV TCO parity

When measuring the competitiveness of operating a BEV, direct segment comparisons are completed, or when BEV alternatives are not available a basket of ICE competitors is used.

6. Sustainability relevance

Measurement of carbon intensity at the grid. A greater weighting is added to the higher proportion of renewables sources and the share of low carbon.



KPI

Sub category

EV adoption

- 2022 EV registration / Running country fleet
- **Powertrain mix passenger cars & light commercial vehicles - all market**
- **Share of EVs / Total 2022 new car registrations**
- Share of PHEVs / Total 2022 new EVs car registrations
- Share of BEVs / Total 2022 new EVs car registrations

Charging infrastructure

- Number of public chargers / EV Running country fleet
- Number of public chargers / EV 2022 registrations
- **Number of normal, fast & ultra fast chargers / Number of chargers**
- **Number of chargers per 100 km**
- **Number of chargers per 100.000 inhabitants**

Taxation and regulation

- Incentives on EV purchase or ownership
- Incentives on driver benefit-in-kind
- Low Emission Zones or Diesel ban
- Incentives on EV Infrastructure

Green powertrain offering

- **Number of unique BEV models sold in the past 12 months**

BEV TCO parity

- **TCO comparison between a basket of BEV reference models and comparable models in ICE powertrain**

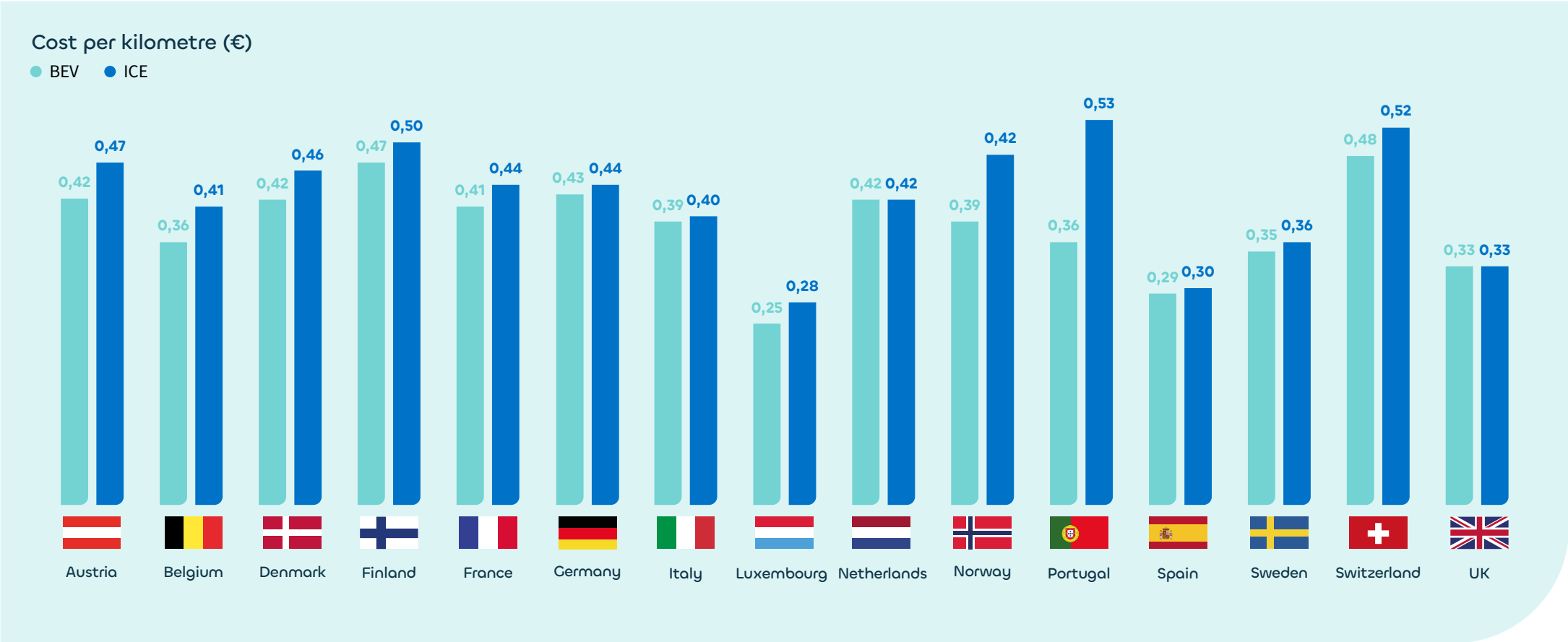
Sustainability relevance

- Snapshot of:
 - **Grid CO₂ Carbon intensity**
 - **Share of low carbon**
 - **Share of renewables**

Sources: EV Volumes - EAFO–European Alternative Fuels Observatory - ACEA - electricity maps - ALD Automotive internal databases. Metrics highlighted in **bold** have been represented in the country individual scorecards.

Operating a BEV is cheaper than ICE in many EU countries

Cost per km for 48 months/120.000 km, BEV VS ICE TCO Benchmark H2 2023 – all passenger car models in scope excluding Top Mgmt



3 levels of maturity across our global scope

Category 1: Developed

For the first category, we selected the TOP 11 countries where EVs have either established a strong presence or where there are favorable conditions towards their adoption in the coming future.

Country Scoring above 60 points

			
Austria	Belgium	Denmark	Finland
			
France	Germany	Luxembourg	Netherlands
			
Norway	Sweden	UK	

Category 2: Transitioning

Within this second category, we have countries that have shown a concrete interest in electrification. However, due to local challenges, we foresee the transition happening in the mid-term for these markets.

Country scoring above 40 points

			
Greece	Hungary	Ireland	Italy
			
Japan	Portugal	Spain	Switzerland
			
Thailand			

Category 3: Emerging

In the Emerging category, we included countries where the hurdles of charging, affordability and availability are still difficult to overcome.

Countries with scoring below 40 points

			
Algeria	Australia	Brazil	Bulgaria
			
Canada	Chile	Colombia	Croatia
			
Czech Rep.	Estonia	India	Latvia
			
Lithuania	Malaysia	Mexico	Morocco
			
New Zealand	Peru	Poland	Romania
			
Serbia	Slovakia	Slovenia	Turkey
			
UAE	USA		

Category 1: Developed

Country		SCORE 2023	EV Adoption (0-25)	Charging infrastructure (0-20)	Taxation & regulation (0-20)	Green powertrain offer (0-15)	Sustainability relevance (0-5)	BEV TCO Parity (0-15)	vs 2022
	Norway	81	21	14	15	15	5	11	-1
	Austria	69	14	10	15	11	5	14	2
	Netherlands	68	18	17	15	14	1	3	-9
	Belgium	65	12	10	14	12	3	14	3
	Sweden	65	20	8	11	14	5	7	-2
	Finland	62	16	13	11	10	3	9	-4
	France	60	14	7	10	13	5	11	=
	Luxembourg	60	14	10	10	11	1	14	=
	Germany	60	15	12	13	12	1	7	=
	Denmark	60	15	8	9	12	3	13	=
	United Kingdom	60	15	11	14	14	3	3	-1
Least EV readyMost EV ready									

Category 2: Transitioning

Country	SCORE 2023	EV Adoption (0-25)	Charging infrastructure (0-20)	Taxation & regulation (0-20)	Green powertrain offer (0-15)	Sustainability relevance (0-5)	BEV TCO Parity (0-15)	vs 2022
 Portugal	57	11	11	7	10	3	15	=
 Switzerland	54	14	7	5	12	5	11	-1
 Ireland	51	14	7	10	9	2	9	-5
 Italy	48	9	10	9	11	1	8	3
 Japan	48	9	9	9	6	1	14	5
 Spain	45	9	8	7	11	3	7	6
 Greece	43	8	9	8	8	1	9	3
 Hungary	40	11	9	7	9	3	1	2
 Thailand	40	8	8	4	6	1	13	N/A
Least EV readyMost EV ready								



Algeria



Ayvens fleet size at end 2022

3.206

EV maturity scoring

6/100



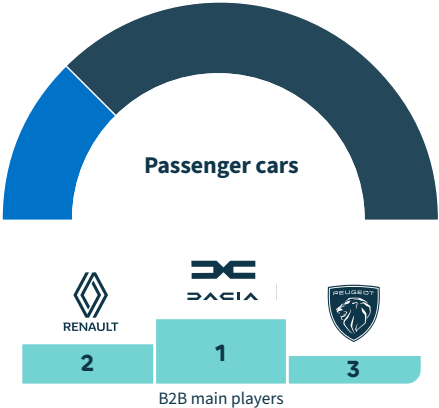
EV adoption

6/25

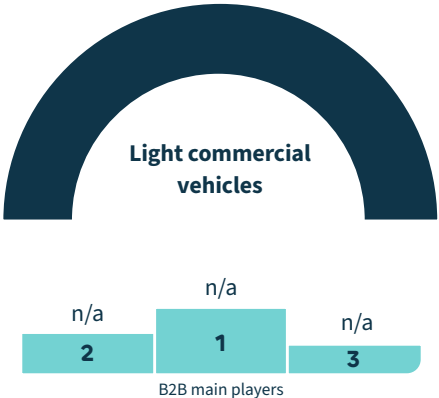
Powertrain mix

All market new vehicles registrations 2022

- 0% BEV
- 0% PHEV
- 0% HEV
- 25% Petrol
- 75% Diesel
- 0% Other



- 0% BEV & PHEV
- 0% Hybrid
- 0% Alt fuel
- 0% Petrol
- 100% Diesel



Growth 2022 vs 2021

All market PC

- n/a BEV
- n/a PHEV
- n/a ICE

Top 3 BEV

All market PC

- 1 Dacia Sandero
- 2 n/a
- 3 n/a

Top 3 e-LCV

All market LCV

- 1 n/a
- 2 n/a
- 3 n/a

BEV TCO parity

0/15

n/a

Charging infrastructure

0/20

n/a

Green powertrain offer

0/15

One model available.

Sustainability relevance

0/5

n/a

Taxation and regulation

0/20

www.mf.gov.dz/index.php/fr/



Australia



Partner fleet size at end 2022
225.000

EV maturity scoring



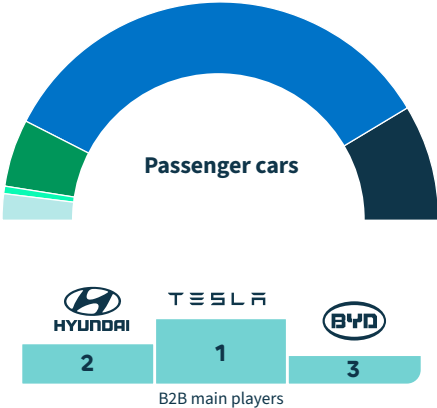
EV adoption

10/25

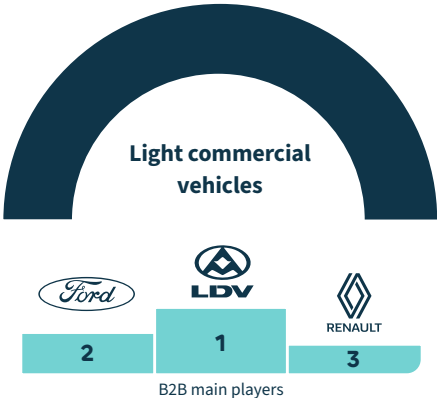
Powertrain mix

All market new vehicles registrations 2022

- 4,3% BEV
- 0,7% PHEV
- 10,5% HEV
- 67,5% Petrol
- 17% Diesel
- 0% Other



- 0,02% BEV & PHEV
- 99,9% Hybrid, alt fuel, petrol and diesel



Growth 2022 vs 2021

All market PC

- +95% BEV
- +70% PHEV
- 2% ICE

Top 3 BEV

All market PC

- 1 Tesla Model 3
- 2 Tesla Model Y
- 3 BYD Yuan Plus / Atto-3 BEV

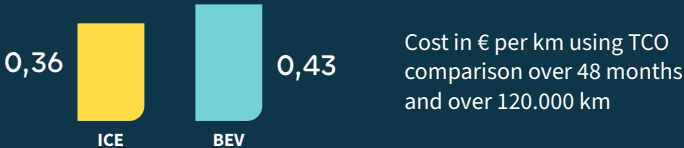
Top 3 e-LCV

All market LCV

- 1 Renault Kangoo
- 2 BYD T3
- 3 Ford E-Transit

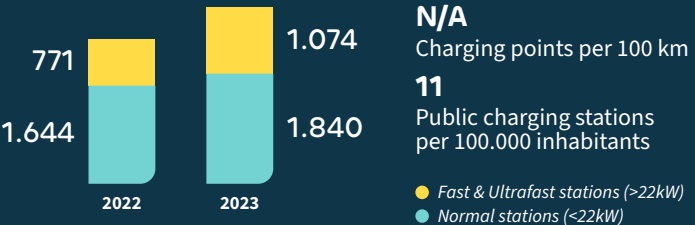
BEV TCO parity

0/15



Charging infrastructure

7/20



Green powertrain offer

5/15

27 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity from 48g to 618g (g CO₂ eq/kWh), with up to 97% low carbon and up to 97% renewable.

Taxation and regulation

10/20

www.dcceew.gov.au/national-electric-vehicle-strategy.pdf



Australia

Taxation and regulation

10/20



Registration tax & ownership benefits

- \$2.500 lower purchase prices thanks to the removed 5% import tariff for EVs priced under the Luxury Car Tax limit.



Employee benefit

- You do not pay Fringe Benefit Tax if you provide private use of an electric car that meets all the following conditions:
 - the car is a zero or low emissions vehicle
 - the first time the car is both held and used is on or after July 1th 2022
 - the car is used by a current employee or their associates (such as family members)
 - luxury car tax (LCT) has never been payable on the importation or sale of the car



EV infrastructure subsidy

- The federal government has announced co-investment with the private sector to fund 50.000 charging stations in Australian homes. Furthermore, states are investing are funding charging infrastructure. For example, the Queensland’s Electric Super Highway fast charging network will provide comprehensive coverage of regional and rural Queensland across more than 54 locations, once complete.



Company tax benefit

- States provide subsidies for fleet electrification. For instance, the New South Wales state government is providing \$105 million in fleet incentives to help local councils and businesses buy new electric vehicles.



Purchase subsidy

- Up to \$2.000 off the purchase price of EVs and PHEVs first used on or after July 1st 2022. The Government will apply the exemption retrospectively to eligible cars. PHEVs will only be covered until April 1st 2025.



Regulation

- Australia has no mandatory fuel efficiency standard for light vehicles.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Austria



Ayvens fleet size at end 2022

7.988

EV maturity scoring

69/100

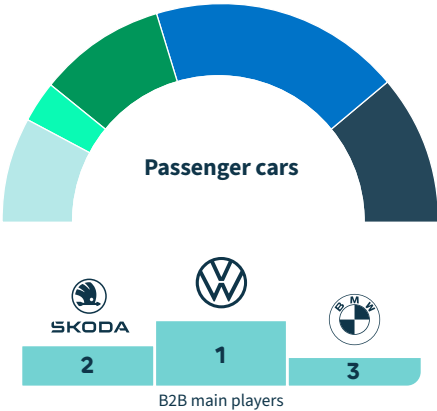
EV adoption

14/25

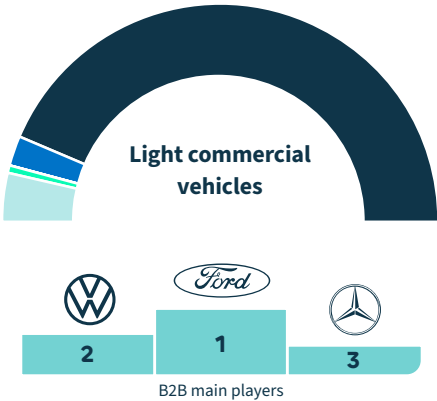
Powertrain mix

All market new vehicles registrations 2022

- 16% BEV
- 6% PHEV
- 19% HEV
- 37% Petrol
- 22% Diesel
- 0% Other



- 7.5% BEV & PHEV
- 1.0% Hybrid
- 0.3% Alt fuel
- 4.4% Petrol
- 87% Diesel



Growth 2022 vs 2021

All Market PC

- +2% BEV
- 15% PHEV
- 16% ICE

Top 3 BEV

All Market PC

- 1 Tesla Model Y
- 2 VW ID.4
- 3 Cupra Born

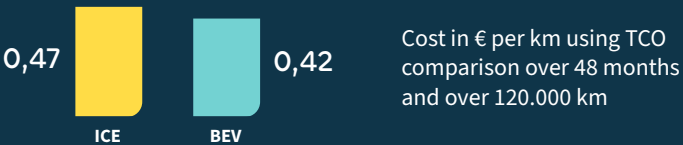
Top 3 e-LCV

All Market LCV

- 1 Renault Kangoo
- 2 Opel/Vxh. Vivaro-e
- 3 Peugeot e-Expert

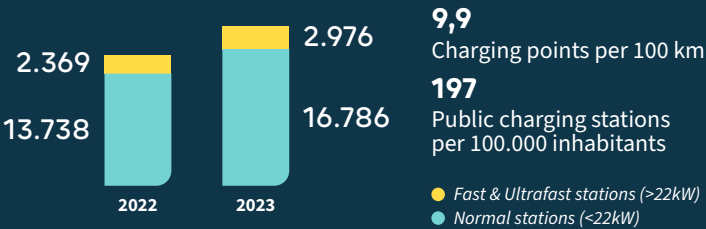
BEV TCO parity

14/15



Charging infrastructure

10/20



Green powertrain offer

11/15

87 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

5/5

Carbon intensity at 79g (g CO₂ eq/kWh), with 95% low carbon and 91% renewable.

Taxation and regulation

15/20

www.oesterreich.gv.at

Austria

Taxation and regulation

15/20

Registration tax & ownership benefits

- All cars below 103gCO₂/km (WLTP value) are registration tax-free, no VAT, no NoVa.
- On ownership tax, BEVs are 100% tax-exempt from all relevant federal taxes, except VAT.
- Circulation tax (motorbezogene Versicherungssteuer) is calculated on the basis of the engine's horsepower. PHEV's have to pay only for the ICE part.

Company tax benefit

- Input tax reduction (Vorsteuerabzug) possible. It is possible for companies to reduce the input tax when purchasing a BEV. The purchase price limit for this (partial) reduction is €80.000 (including VAT).
From January 1st 2023, an investment allowance of 15 percent of the purchase costs can be claimed for tax purposes when purchasing electric cars for business.

Employee benefit

- For employees, the private use of a zero-emission company car, and the electricity to charge it publicly, are exempted from taxation as benefit in kind.
For charging in private homes, the used electricity can be reimbursed tax free to a certain amount (amount is set by the energy regulatory agency once a year).

Purchase subsidy

- For private individuals, companies and municipalities, the subsidy amounts up to €5.000 per BEV & FCEV and up to €2.500 per PHEV on conditions that purchase price is below €60.000 (incl. VAT) & with a pure electric range of 60km or more. Diesel-Hybrids are not eligible.
eLCVs (category N1) can get a grant of up to €12.500 (depending on permissible maximum weight).

EV infrastructure subsidy

- Subsidy scheme supporting the installation and purchase of public charging stations. The subsidy to companies depends on the type of charging stations and its usage, ranging from as low as €900 (if AC and not publicly available) and can be up to €30.000 (DC ≥100 kW and publicly available).
The scheme for private individuals grants €600 per charging station (non OCPP compliant and single or two-family dwellings), but can go up to €1.800 per smart charging station (OCPP compliant) and if in multi-use installation.

Regulation

- BEVs are exempt from paying parking fees in several cities.
- Some highways allows higher speed limits for BEV.

Some exemptions might apply in specific business/operational context.

Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Belgium



Ayvens fleet size at end 2022

146.762

EV maturity scoring

65/100

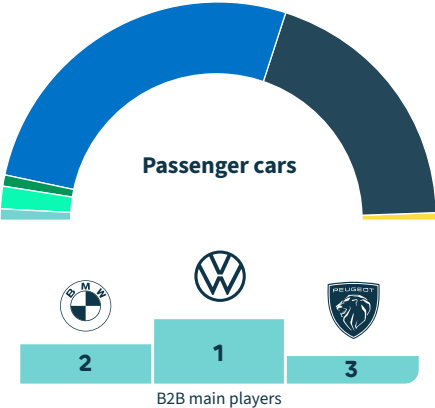
EV adoption

12/25

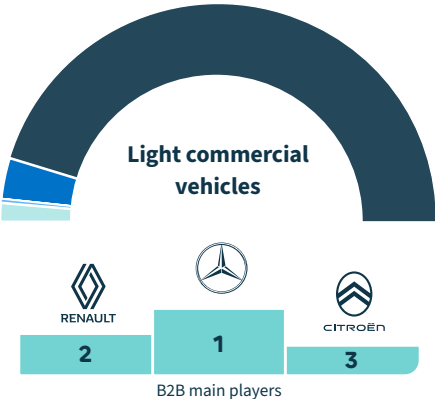
Powertrain mix

All market new vehicles registrations 2022

- 2% BEV
- 3% PHEV
- 2% HEV
- 53% Petrol
- 39% Diesel
- 1% Other



- 3,3% BEV & PHEV
- 0,1% Hybrid
- 0,2% Alt fuel
- 5,9% Petrol
- 90% Diesel



Growth 2022 vs 2021

All Market PC

- +72% BEV
- +51% PHEV
- +28% ICE

Top 3 BEV

All Market PC

- 1 Tesla Model Y
- 2 VW ID.4
- 3 Audi Q4 E-Tron

Top 3 e-LCV

All Market LCV

- 1 Citroën e-Berlingo Van
- 2 VW ID.BUZZ Cargo
- 3 Ford E-Transit

BEV TCO parity

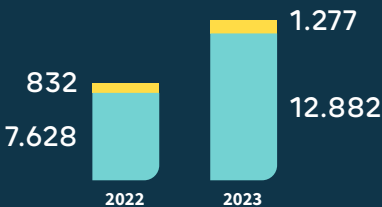
14/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

10/20



10 Charging points per 100 km

122 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

12/15

138 models based on 485 different vehicles with an average of 3,5 trim variations, excluding e-LCV.

Sustainability relevance

3/5

Carbon intensity at 167g (g CO₂ eq/kWh), with 73% low carbon and 34% renewable.

Taxation and regulation

14/20

ald.aldautomotive.com/ready-to-inspire

Belgium

Taxation and regulation

14/20

Registration tax
& ownership benefits

- Regional differences:
 - Brussels: minimal rate of 61,50 for ZEV
 - Flanders: exempted for ZEV
 - Wallonia: minimal rate of 61,50 for ZEV

Employee benefit

- Minimal Benefit in Kind of €1.540 yearly or 4% of 6/7 of fiscal catalog value.

EV infrastructure subsidy

- For corporations: 150% deductibility (including different expenses such as installation and assessment) if installed between January 1st 2023 and August 31th 2024, and only if publically accessible and intelligent.
- Privately: tax benefit of 30% for a maximum €1.500 investment if installed between January 1st 2023 and December 31st 2023 and only if intelligent and providing green electricity.

Company tax benefit

- 100% deductibility for ZEV.
- PHEV ordered between January 1st 2023 - June 31st 2023:
 - 100% deductibility of the vehicle
 - 100% deductibility of the electricity cost
 - 50% deductibility of the fuel cost

Purchase subsidy

n/a

Regulation

- Regional Low Emission Zones (LEZ.).Exclusion of most polluting vehicles in main cities. Brussels, Antwerp and Ghent, based on the Euro standard.
- Regional obligations for companies in specific cities to draft a “Company Mobility Plan”. Promotion of alternative means of transportation, if certain requirements are met.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Brazil



Ayvens fleet size at end 2022
46.748

EV maturity scoring

21/100

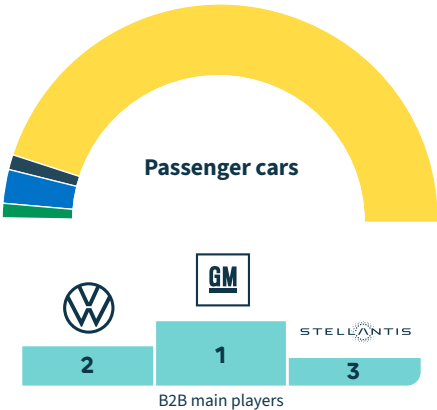
EV adoption

7/25

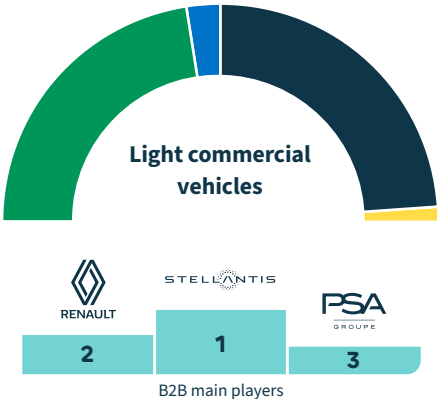
Powertrain mix

All market new vehicles registrations 2022

- 0,5% BEV
- 0,2% PHEV
- 2,5% HEV
- 4,8% Petrol
- 2% Diesel
- 90% Other



- 0,03% BEV & PHEV
- 0,11% HYBRID
- 45% Alt fuel
- 5% Petrol
- 48% Diesel
- 1,86% Other



Growth 2022 vs 2021

All market PC

- +195% BEV
- +27% PHEV
- 2% ICE

Top 3 BEV

All market PC

- 1 Volvo XC 40
- 2 Nissan Leaf
- 3 BYD Yuan Plus / Atto-3

Top 3 e-LCV

All market LCV

- 1 Peugeot e-Expert
- 2 Citroën e-Jumpy
- 3 Renault Kangoo

BEV TCO parity

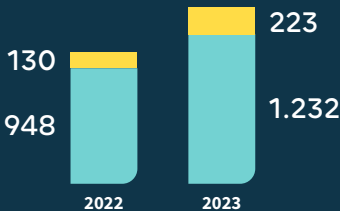
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

3/20



n/a
Charging points per 100 km
1
Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

4/15

25 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

5/5

Carbon intensity from 37 to 122g (g CO₂ eq/kWh), with up to 97% low carbon and up to 97% renewable.

Taxation and regulation

2/20

n/a



Bulgaria



Ayvens fleet size at end 2022

4.300

EV maturity scoring

27/100

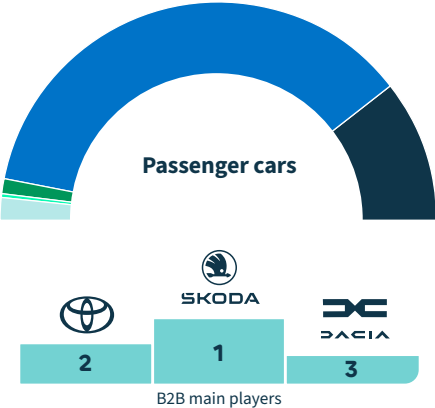
EV adoption

10/25

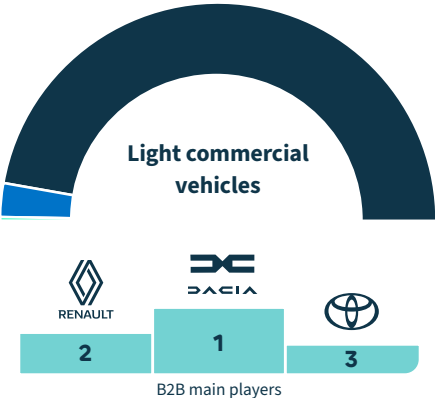
Powertrain mix

All market new vehicles registrations 2022

3,5% BEV
0,5% PHEV
2,5% HEV
73% Petrol
20,1% Diesel
0% Other



0,2% BEV & PHEV
0,5% Hybrid
0% Alt fuel
5,3% Petrol
94% Diesel



Growth 2022 vs 2021

All market PC

83% BEV
70% PHEV
2% ICE

Top 3 BEV

All market PC

- 1 Dacia Spring
- 2 Tesla Model Y
- 3 Mercedes EQS

Top 3 e-LCV

All market LCV

- 1 Toyota Proace Van
- 2 Citroën e-Berlingo Van
- 3 Ford Transit Custom EREV

BEV TCO parity

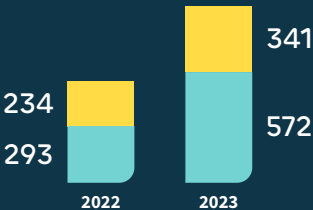
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

7/20



2,3 Charging points per 100 km
11 Public charging stations per 100.000 inhabitants

● Fast & Ultrafast stations (>22kW)
● Normal stations (<22kW)

Green powertrain offer

8/15

44 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity at 207g (g CO₂ eq/kWh), with 78% low carbon and 32% renewable.

Taxation and regulation

0/20

www.minfin.bg/en/779



Partner fleet size at end 2022
20.000

EV maturity scoring

34/100

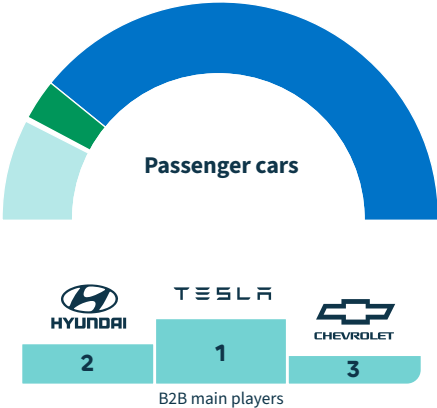
EV adoption

11/25

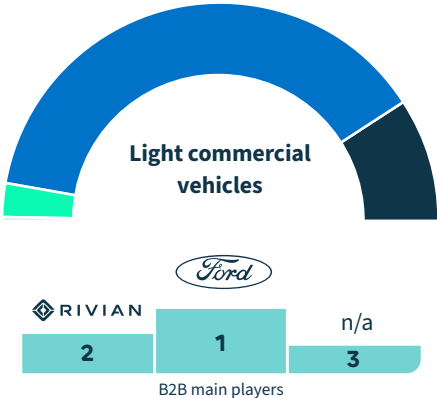
Powertrain mix

All market new vehicles registrations 2022

- 15% BEV
- 1% PHEV
- 6% HEV
- 78% Petrol
- 0% Diesel
- 0% Other



- 1% BEV & PHEV
- 5% Hybrid
- 0% Alt fuel
- 75% Petrol
- 18% Diesel



Growth 2022 vs 2021

- All market PC
- +68% BEV
 - 1% PHEV
 - 12% ICE

Top 3 BEV

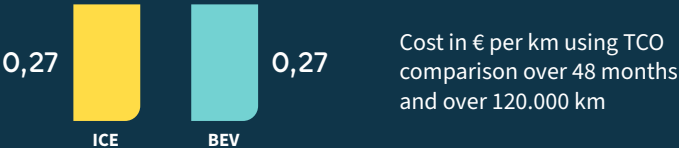
- All market PC
- 1 Tesla Model 3
 - 2 Tesla Model Y
 - 3 Ford Mustang Mach-E

Top 3 e-LCV

- All market LCV
- 1 Ford F150 Lightning
 - 2 Rivian R1T
 - 3 Ford e-Transit

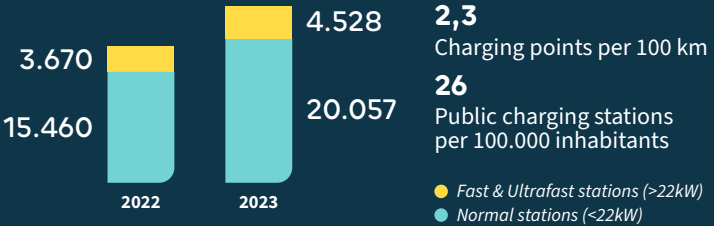
BEV TCO parity

3/15



Charging infrastructure

5/20



Green powertrain offer

5/15

50+ unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity from 31 to 428g (g CO₂ eq/kWh), with up to 100% low carbon and up to 99% renewable.

Taxation and regulation

7/20

www.canada.ca



Taxation and regulation

7/20

Registration tax & ownership benefits

- Federal EV Incentive programs available. iZEV for light duty and passenger vehicles up to \$5.000 (limits apply). iMHZEV for Class 2 to Class 8 trucks ranging from \$10.000 to \$200.000 (limits apply).
- The Provinces of BC, QC, NB, NL, NT, NS, YT, and PE offer EV incentives for passenger vehicles and light trucks. These incentives are stackable on top of the Federal incentive.

Employee benefit

n/a

EV infrastructure subsidy

n/a

Company tax benefit

n/a

Purchase subsidy

n/a

Regulation

n/a

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*



Ayvens fleet size at end 2022

4.926

EV maturity scoring

21/100

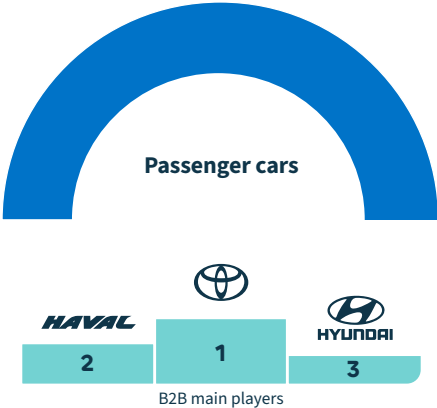
EV adoption

7/25

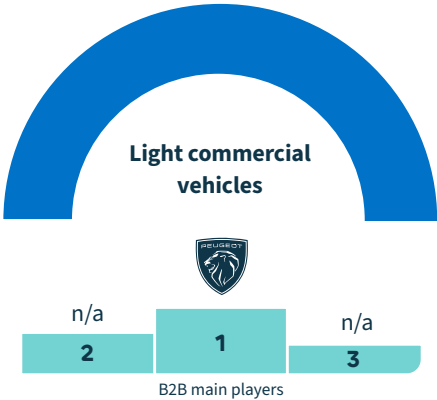
Powertrain mix

All market new vehicles registrations 2022

0,4% BEV
0,2% PHEV
1,8% HEV
96,5% ICE



0,3% BEV
0% PHEV
0,1% HEV
99,6% ICE



Growth 2022 vs 2021

All market PC

+9% BEV
+89% PHEV
+2% ICE

Top 3 BEV

All market PC

- 1 KIA Niro
- 2 MG Marvel R
- 3 MG ZS

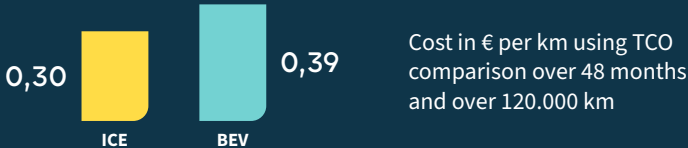
Top 3 e-LCV

All market LCV

- 1 Maxus EV30 / e-Deliver 3
- 2 n/a
- 3 n/a

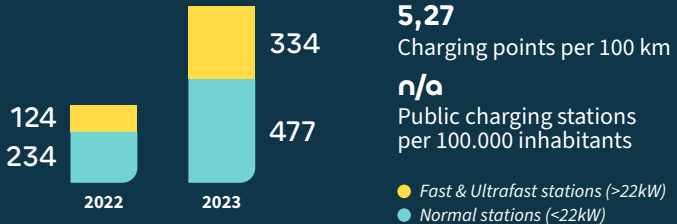
BEV TCO parity

0/15



Charging infrastructure

4/20



Green powertrain offer

5/15

27 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

4/5

Carbon intensity at 211g (g CO₂ eq/kWh), with 53% low carbon and 53% renewable.

Taxation and regulation

1/20

www.sii.cl/servicios_online/



Colombia



Ayvens fleet size at end 2022
4.740

EV maturity scoring

26/100



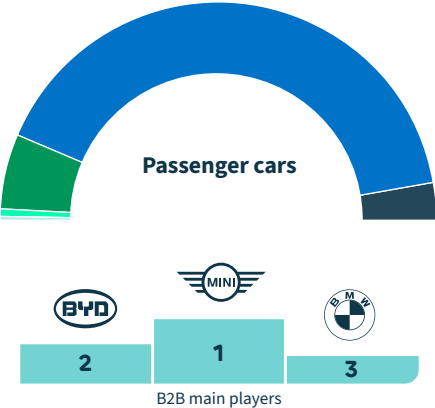
EV adoption

7/25

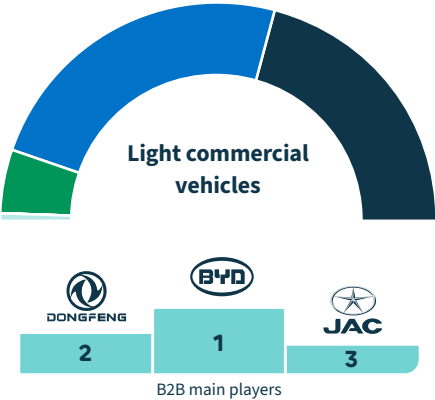
Powertrain mix

All market new vehicles registrations 2022

- 1% BEV
- 1% PHEV
- 11% HEV
- 81% Petrol
- 6% Diesel
- 0% Other



- 1,2% BEV & PHEV
- 0,3% Hybrid
- 9,2% Alt fuel
- 48% Petrol
- 42% Diesel



Growth 2022 vs 2021

All market PC

- +153% BEV
- +42% PHEV
- 2% ICE

Top 3 BEV

All market PC

- 1 BYD Yuan Pro
- 2 Mini Cooper
- 3 Audi E-Tron

Top 3 e-LCV

All market LCV

- 1 Dongfeng Ven E-Cargo 1T
- 2 Dongfeng Rich
- 3 BYD T3

BEV TCO parity

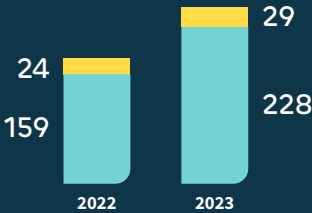
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

3/20



0,1 Charging points per 100 km
n/a Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

7/15

39 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

0/5

n/a

Taxation and regulation

9/20

taxsummaries.pwc.com

Colombia

Taxation and regulation

9/20



Registration tax
& ownership benefits

- Road Tax calculation is based on the list price, and it can vary from 1,5% to 3,5%. BEVs have a reduced percentage amounting to 1%.



Employee benefit

n/a



EV infrastructure subsidy

- Mandatory connections for new habitational projects.



Company tax benefit

- Consumption tax is set between 8% and 16% of the list price of the vehicle.
- In terms of company Tax benefit, the operational lease grant (100% deductibility) on the lease installment and the related services (maintenance, tyres, gasoline, etc.).
- Reduced VAT for Bevs, PHEV and HEV is 5%. (19%).
- For FSL the VAT is calculated depending on the monthly fee and the car price (between 7% to 9%).



Purchase subsidy

n/a



Regulation

- Environmental Mobility Restrictions in main cities except Evs, PHEVs and Mild Hybrid.
- For BEVs there is a 10% discount on SOAT (Mandatory Transit Accidents Insurance - TPL).

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Croatia



Ayvens fleet size at end 2022

8.300

EV maturity scoring

28/100

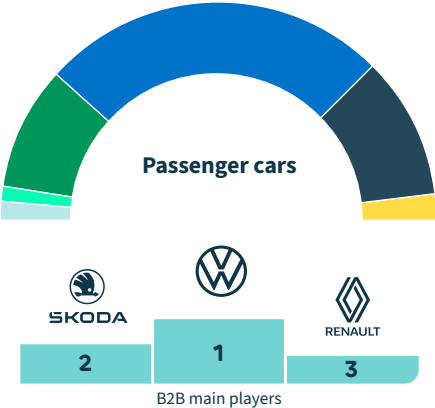
EV adoption

10/25

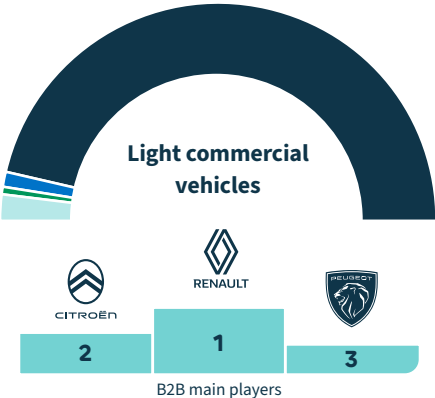
Powertrain mix

All market new vehicles registrations 2022

- 3,1% BEV
- 1,9% PHEV
- 18,6% HEV
- 51,4% Petrol
- 20,8% Diesel
- 4,1% Other



- 4% BEV & PHEV
- 0% Hybrid
- 1,5% Alt fuel
- 2,1% Petrol
- 92,3% Diesel



Growth 2022 vs 2021

All market PC

- +1% BEV
- +110% PHEV
- 10% ICE

Top 3 BEV

All market PC

- 1 Tesla Model Y
- 2 Dacia Spring
- 3 Renault Megane

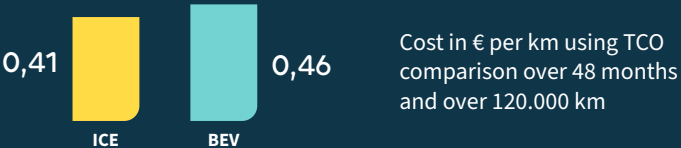
Top 3 e-LCV

All market LCV

- 1 Opel/Vxh. Combo-e Cargo
- 2 Opel/Vxh. Vivaro-e
- 3 Peugeot e-expert

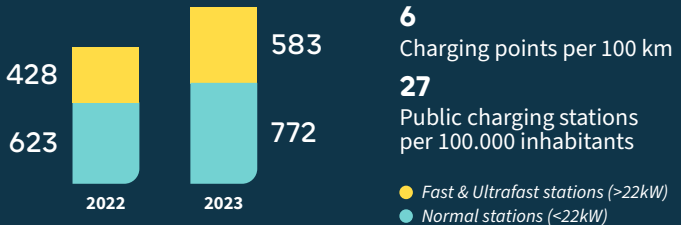
BEV TCO parity

0/15



Charging infrastructure

6/20



Green powertrain offer

8/15

44 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity at 284g (g CO₂ eq/kWh), with 66% low carbon and 62% renewable.

Taxation and regulation

2/20

www.porezna-uprava.hr



Taxation and regulation

2/20

Registration tax & ownership benefits

- No excise duties for electric vehicles.
- Exemption from special environmental tax for electric vehicles.

Employee benefit

n/a

EV infrastructure subsidy

n/a

Company tax benefit

n/a

Purchase subsidy

- Incentive scheme (last subsidy published in 2022, limited funds):
 - €9.291 for BEVs
 - €5.309 for PHEVs (max 40% of the vehicle price). There is a 12 month deadline to purchase the vehicle and submit a grant request. The vehicle must be kept two years.

Regulation

n/a

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Czech Republic



Ayvens fleet size at end 2022
27.000

EV maturity scoring

29/100 

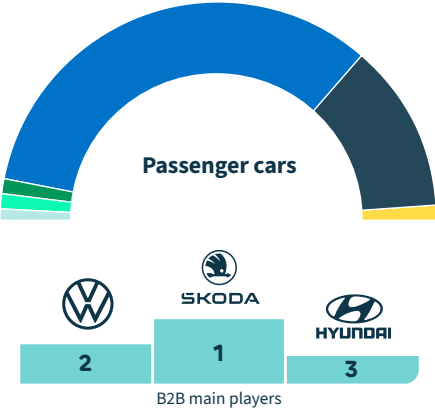
EV adoption

8/25

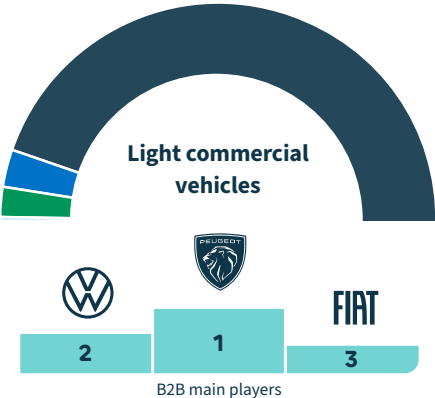
Powertrain mix

All market new vehicles registrations 2022

- 2% BEV
- 1,9% PHEV
- 2,5% HEV
- 66% Petrol
- 25% Diesel
- 2,5% Other



- 0,8% BEV & PHEV
- 0% Hybrid
- 4,6% Alt fuel
- 5,2% Petrol
- 89% Diesel



Growth 2022 vs 2021

All market PC

- +70% BEV
- 0% PHEV
- 4% ICE

Top 3 BEV

All market PC

- 1 Škoda Enyaq
- 2 Tesla Model Y
- 3 Hyundai Kona

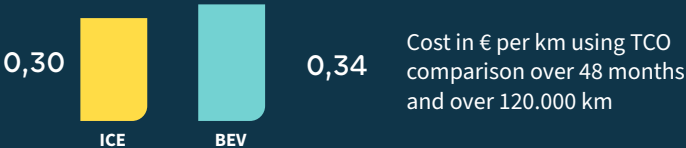
Top 3 e-LCV

All market LCV

- 1 Ford E-Transit
- 2 VW ID.BUZZ Cargo
- 3 Renault Kangoo BEV

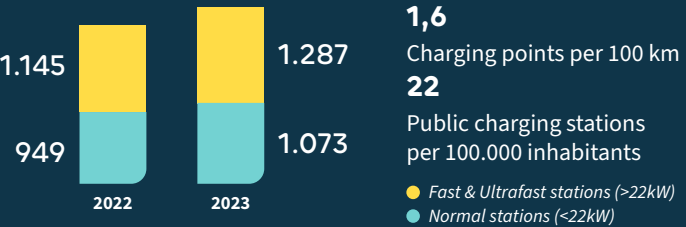
BEV TCO parity

0/15



Charging infrastructure

6/20



Green powertrain offer

10/15

72 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 406g (g CO₂ eq/kWh), with 61% low carbon and 19% renewable.

Taxation and regulation

4/20

www.aldautomotive.cz



Czech Republic

Taxation and regulation

4/20



Registration tax & ownership benefits

- BEVs and FCEVs emitting $\leq 50\text{g CO}_2/\text{km}$ exempt from registration charges (with a special number plate). BEVs and HEVs exempt from road tax. Vehicles emitting $\leq 50\text{g CO}_2/\text{km}$ exempt from road toll.
- Reduction of the depreciation period for charging stations for electric vehicles from 10 to five years (wallboxes and standalone charging stations).
- Accelerated depreciation for BEVs and PHEVs below $50\text{g CO}_2/\text{km}$.



Employee benefit

- Tax reduction from 0,5-1% for BEVs and PHEVs used for private purposes.



EV infrastructure subsidy

- Support from the Ministry of Transport for the development of charging infrastructure.



Company tax benefit

- Road tax exemption for alternatively powered vehicles (ie BEVs, HEVs, FCEVs, CNG, LPG, and E85).



Purchase subsidy

- Purchase incentive for low- and zero-emission vehicles by state and local government bodies.



Regulation

- The highway toll exemption for vehicles with CO_2 emission level lower than 50 g/km (In 2023: yearly ticket price 1.500 Kč).
- Vehicles with the special registration number (ELX XX XX) can park for free or with a reduction in the big cities.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Denmark



Ayvens fleet size at end 2022

45.100

EV maturity scoring

60/100

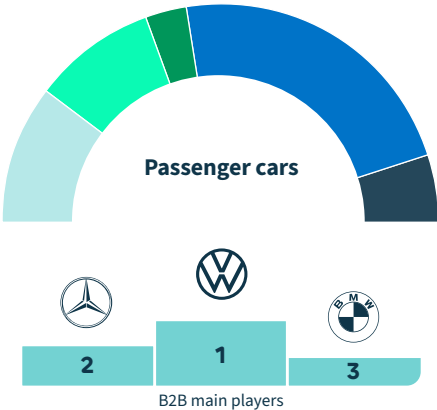
EV adoption

15/25

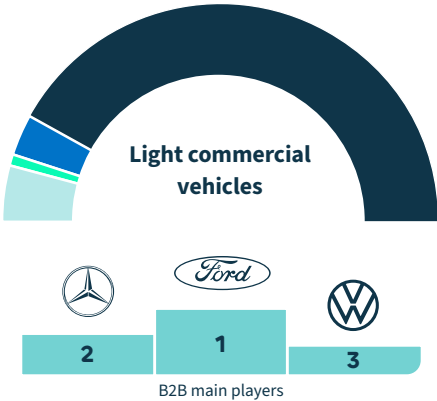
Powertrain mix

All market new vehicles registrations 2022

- 21% BEV
- 18% PHEV
- 6% HEV
- 45% Petrol
- 10% Diesel
- 0% Other



- 8,5% BEV & PHEV
- 2% Hybrid
- 0% Alt fuel
- 6% Petrol
- 84% Diesel



Growth 2022 vs 2021

All market PC

- +24% BEV
- 34% PHEV
- 28% ICE

Top 3 BEV

All market PC

- 1 Škoda Enyaq iV
- 2 VW ID.4
- 3 Tesla Model Y

Top 3 e-LCV

All market LCV

- 1 Mercedes-Benz Vito
- 2 Citroën Jumpy
- 3 Maxu e-Deliver 3

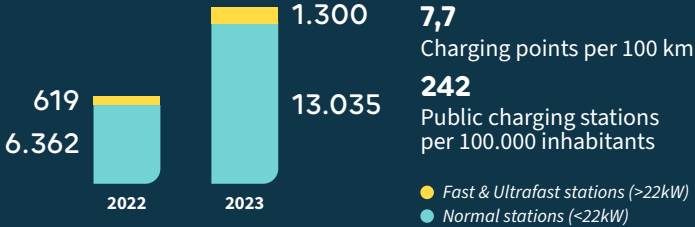
BEV TCO parity

13/15



Charging infrastructure

8/20



Green powertrain offer

12/15

127 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity from 115 to 119g (g CO₂ eq/kWh), with up to 91% low carbon and up to 82% renewable.

Taxation and regulation

9/20

www.aldautomotive.dk

Denmark

Taxation and regulation

9/20

Registration tax & ownership benefits

- Zero-emission vehicles:
 - Pay 40% of the registration tax
 - Additional kr. 165.000 registration tax deduction
 - kr. 900 deduction of taxable value per kWh battery capacity (max 45 kWh)
- Low-emission vehicles (emitting < 50g CO₂/km):
 - 55% of the registration tax
 - Additional kr. 47.500 registration tax deduction
 - kr. 900 deduction of taxable value per kWh battery capacity (max 45 kWh)
- Taxes on ownership are based on CO₂ emissions.
- Zero-emission cars and cars with CO₂ emissions of max 58g/km pay the minimum semi-annual tax rate of kr. 370.

Company tax benefit

- LCVs above 3.000 kg have a fixed registration taxation fee. This means that these vehicles are exempt from the additional CO₂ supplement of kr. 253 per gram of CO₂/km.
- Extra basic taxation deduction of kr. 78.750.

Employee benefit

n/a

EV infrastructure subsidy

- The value of a charging stand/charging outlet provided together with a company car (at the employee's residence) is not taxed.

Purchase subsidy

- The legislation put in place at beginning of 2021 favours the choice of EV's and PHEV's with CO₂ emission < 50 g/km, especially premium PHEV.
- However the PHEV taxation will slowly increase making PHEV gradually becoming more expensive.
- Taxation for BEVs will remain stable until 2026.

Regulation

- BEVs benefit of parking for free exempt in several cities, with a limit of kr. 5.000 yearly per vehicle.

Some exemptions might apply in specific business/operational context.

Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Estonia



Ayvens fleet size at end 2022

1.500

EV maturity scoring

26/100

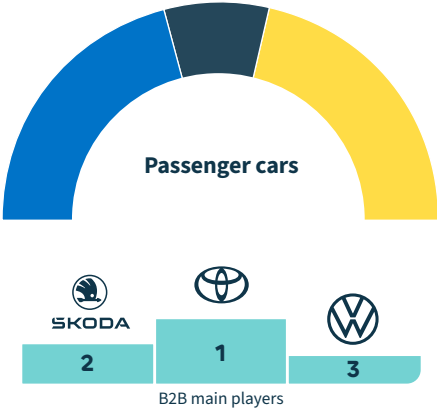
EV adoption

10/25

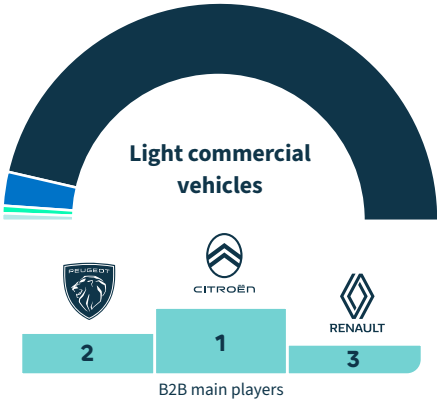
Powertrain mix

All market new vehicles registrations 2022

- 0% BEV
- 0% PHEV
- 0% HEV
- 42% Petrol
- 15% Diesel
- 43% Other



- 1,5% BEV & PHEV
- 0,9% Hybrid
- 0% Alt fuel
- 5,1% Petrol
- 92% Diesel



Growth 2022 vs 2021

All market PC

- +42% BEV
- +102% PHEV
- +1% ICE

Top 3 BEV

All market PC

- 1 Škoda Enyaq
- 2 KIA Niro
- 3 Nissan Leaf

Top 3 e-LCV

All market LCV

- 1 VW ID.BUZZ Cargo
- 2 Peugeot e-Partner
- 3 Toyota Proace City Van

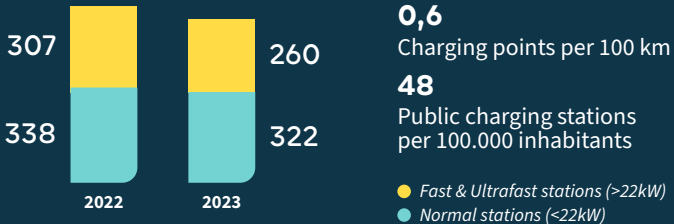
BEV TCO parity

0/15



Charging infrastructure

6/20



Green powertrain offer

7/15

39 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 234g (g CO₂ eq/kWh), with 75% low carbon and 47% renewable.

Taxation and regulation

2/20

www.aldautomotive.ee



Estonia

Taxation and regulation

2/20



Registration tax & ownership benefits

- 50% VAT deductible.
- NEW registration tax expected in 2024.



Employee benefit

n/a



EV infrastructure subsidy

n/a



Company tax benefit

n/a



Purchase subsidy

- New M1 BEVs and FCEVs (purchase and leasing):
 - €5.000/vehicle for individuals
 - €4.000/vehicle for legal persons



Regulation

n/a

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*

Finland



Ayvens fleet size at end 2022

22.000

EV maturity scoring

62/100

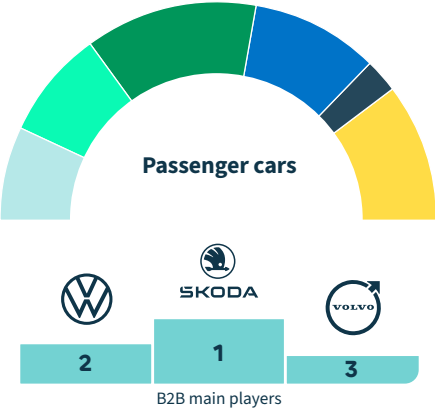
EV adoption

16/25

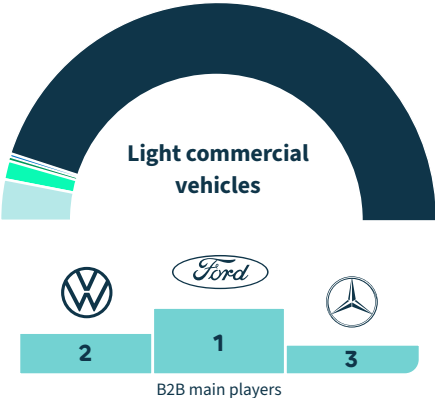
Powertrain mix

All market new vehicles registrations 2022

- 14% BEV
- 16% PHEV
- 25% HEV
- 19% Petrol
- 5% Diesel
- 20% Other



- 6,4% BEV & PHEV
- 3% Hybrid
- 0,1% Alt fuel
- 0,9% Petrol
- 90% Diesel



Growth 2022 vs 2021

- All market PC
- +43% BEV
 - 20% PHEV
 - 31% ICE

Top 3 BEV

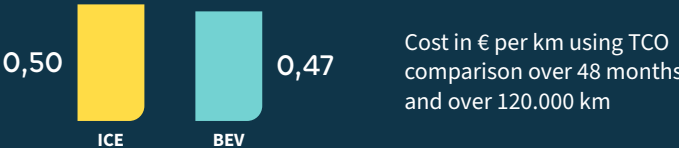
- All market PC
- 1 Tesla Model Y
 - 2 VW ID.4
 - 3 Škoda Enyaq

Top 3 e-LCV

- All market LCV
- 1 Toyota Proace City Van
 - 2 Opel/Vxh. Combo-e Cargo
 - 3 Citroën e-Berlingo Van

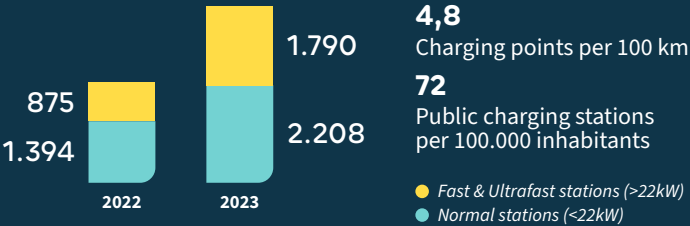
BEV TCO parity

9/15



Charging infrastructure

13/20



Green powertrain offer

10/15

70 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 42g (g CO₂ eq/kWh), with 96% low carbon and 45% renewable.

Taxation and regulation

11/20

www.aldautomotive.fi

Finland

Taxation and regulation

11/20

Registration tax & ownership benefits

- Zero-emission passenger cars are exempt from registration tax as of October 1st 2021.

Employee benefit

- Users will be able to charge BEVs and PHEVs at the workplace and at public charging points tax-free. The tax value of on-the-job charging is currently €30 per month. This benefit will also be valid for a limited period, 2021-2023.
- BIK benefits for drivers will remain unchanged 2022 - 2025, being reduced for:
 - BEV, unlimited benefit €290 per month
 - BEV, limited benefit €170 per month
 - PHEV or gas car < 100 g/km, unlimited benefit €145 per month
 - PHEV or gas car < 100 g/km, limited benefit €85 per month
 - PHEV or gas car > 100 g/km, unlimited benefit €60 per month
 - HEV or MHEV, < 100 g/km unlimited or limited benefit €85 per month
 - Hydrogen vehicle, 0 g/km, unlimited or limited benefit €170 per month

Company tax benefit

- Tax deduction of €170 per month from taxable value (income tax) for BEVs (2021-2025).
- Charging of electric vehicles at a workplace is exempt from income tax (2021-2025).

Purchase subsidy

- Scheme dedicated to private individuals amounting to €2.000 for a BEV priced below €50.000 threshold.
- e-LCV subsidy scheme applies for both private individuals and companies amount up to €6.000. Limit of 5 e-LCV purchase or lease per companies.

EV infrastructure subsidy

- 30 % subsidy for building > 11 kW public charging stations and 35 % subsidy for building > 22 kW fast charging stations.
- Public charging is supported by €750 per operative charging station. Companies can apply between 2022-2023.
- With the Limited Car Benefit, employees driving a company car or their own car, can have their charging costs paid for by their employer, at the workplace or at public charging points.
- Charging at home is not paid for by the employer.
- It is tax free for the driver. The benefit depends on whether or not the employer wants to pay for it.

Regulation

- Government is supporting companies to provide bikes as mobility solution to employee's.
- Employee can also be offered (limited value) tickets for public transportation, travels between home and work.
- Low-CO₂ emission cars can receive a 50% discount for parking in roadside places in Helsinki city.

Some exemptions might apply in specific business/operational context.

Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

France

Ayvens fleet size at end 2022

640.000

EV maturity scoring

60/100

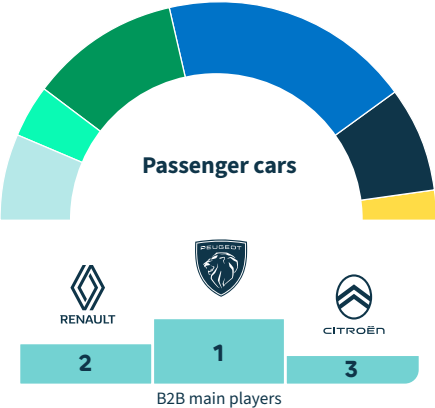
EV adoption

14/25

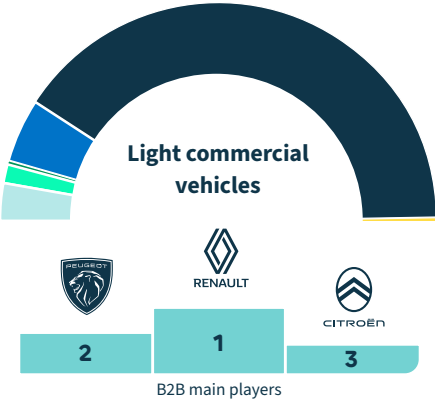
Powertrain mix

All market new vehicles registrations 2022

- 13% BEV
- 8% PHEV
- 22% HEV
- 37% Petrol
- 16% Diesel
- 4% Other



- 5,8% BEV & PHEV
- 2,7% Hybrid
- 0,8% Alt fuel
- 9,3% Petrol
- 81% Diesel



Growth 2022 vs 2021

All market PC

- +25% BEV
- 10% PHEV
- 13% ICE

Top 3 BEV

All market PC

- 1 Peugeot e-208
- 2 Dacia Spring
- 3 Tesla Model 3

Top 3 e-LCV

All market LCV

- 1 Renault Kangoo
- 2 Citroën e-Jumpy
- 3 Peugeot e-Expert

BEV TCO parity11/15

0,44

ICE

0,41

BEV

Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure7/20

4.351

17.904

2022

6.789

23.187

2023

4,6

Charging points per 100 km

46

Public charging stations per 100.000 inhabitants

Fast & Ultrafast stations (>22kW)

Normal stations (<22kW)

Green powertrain offer13/15

103 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance5/5

Carbon intensity at 43g (g CO₂ eq/kWh), with 94% low carbon and 27% renewable.

Taxation and regulation10/20

ald.aldautomotive.com/guide-fiscalite2023

 France

Taxation and regulation

10/20

 Registration tax & ownership benefits

- BEVs, FCEVs, and PHEVs (with a range of > 50km) are exempt from the malus and mass-based malus.
- Regions provide an exemption on the registration tax (either total or 50%) for alternatively powered vehicles (ie electric, HEVs, CNG, LPG, and E85).

 Employee benefit

- Company tax benefit (for passenger cars only):
A reduction of 50% on the benefit-in-kind (BIK) tax until end 2024. The amount of this allowance is capped at €1.800 per year.

 EV infrastructure subsidy

- No more incentives regarding installation of office chargers for coporates/fleets, except if the chargers are made public.

 Company tax benefit

- Company tax benefit (for passenger cars only):
Exemption from CO₂-based tax component ('TVS') for vehicles emitting < 60g CO₂/km (apart from diesel vehicles).

 Purchase subsidy

- Bonus 2023 for a new BEV or FCEV (Hydrogen):
 - Passenger cars: €3.000 for legal persons if vehicle ≤ €47.000 and weight <2,4 tons
 - LCVs: €4.000 maximum, regardless of price

 Regulation

- Traffic regulation in main cities during pollution peak (Crit'air and LEZ).
- New quotas of low emissions cars to be considered in the renewals starting form 2022 (Fleets >= 100 vehicles)
- Ban on sales of vehicles emitting more than 123 g/km CO₂ in 2030. ICE car sales banned by 2035.
- Regarding Mobility, Companies must ensure and facilitate the mobility of all the employees if the company employees more than 50 employees.
- Significant network and availability of public Shared Mobility Means (carsharing, bikesharing...)

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Germany



Ayvens fleet size at end 2022
217.000

EV maturity scoring

60/100

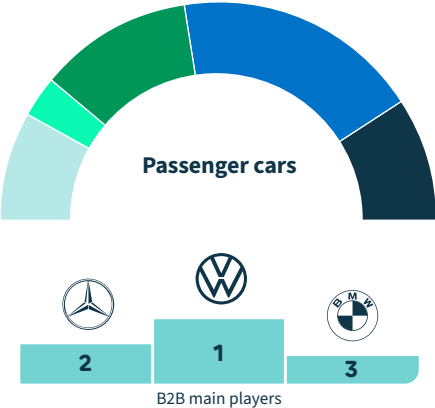
EV adoption

15/25

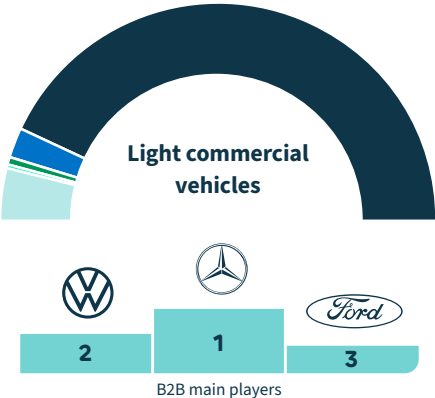
Powertrain mix

All market new vehicles registrations 2022

- 16% BEV
- 6% PHEV
- 23% HEV
- 36% Petrol
- 18% Diesel
- 1% Other



- 7,9% BEV & PHEV
- 0,7% Hybrid
- 1,2% Alt fuel
- 4,5% Petrol
- 86% Diesel



Growth 2022 vs 2021

All market PC

- +32% BEV
- +12% PHEV
- 11% ICE

Top 3 BEV

All market PC

- 1 Tesla Model Y
- 2 VW ID.4
- 3 VW ID.3

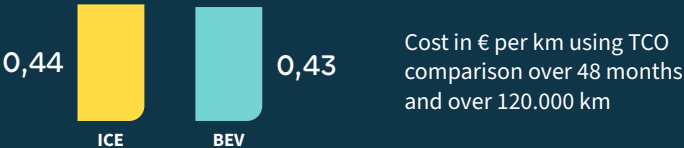
Top 3 e-LCV

All market LCV

- 1 Mercedes eVito Van
- 2 Mercedes eSprinter Van
- 3 VW ID.BUZZ Cargo

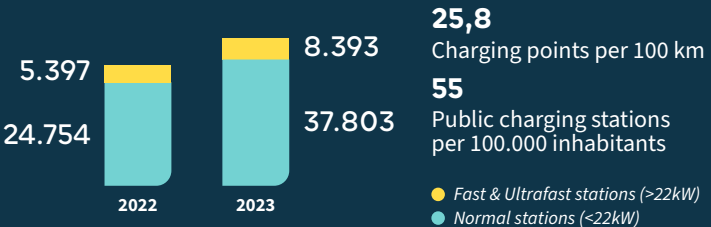
BEV TCO parity

7/15



Charging infrastructure

12/20



Green powertrain offer

12/15

94 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 357g (g CO₂ eq/kWh), with 66% low carbon and 62% renewable.

Taxation and regulation

13/20

www.acea.be



Taxation and regulation

13/20



Employee benefit

The car tax benefit is valid until 2030.

- For BEVs and PHEVs procured from January 2020 to December 2030, the monetary advantage should be reduced to 50% of the gross list price.
- BEVs with a list price below €60.000 receive an additional reduction to 25% of the gross list price.
- For PHEVs, there is the restriction that the car must have a range of 60 km, or the CO₂ emission is less than 50 g/km. Requirements are becoming more stringent over time.



Company tax benefit

- Reduction of the taxable amount for BEVs and PHEVs (from 0,5-1% of the gross catalogue price per month). PHEVs must meet further requirements, which become more stringent over time.
- Additional reduction of taxable amount for BEVs with a gross list price up to €60.000 (0,25-1% of the gross catalogue price per month).



Registration tax & ownership benefits

- 10 year exemption for BEVs and FCEVs registered until December 31st 2025. Exemption granted until December 31st 2030.



Purchase subsidy

- The subsidy for new electric cars was stopped for companies. From September 1st 2023, only private individuals are able to apply for funding.



EV infrastructure subsidy

- Cost-free charging of privately driven electric vehicles at your employer is tax-exempt until 2030.
- There are local subsidies on a regional basis.
- A greenhouse gas reduction quota ("THG-Quote") can be applied for all BEV which means €100-300 per BEV per year.



Regulation

- Significant amount of players in carsharing; ridesharing; ridehailing; e-scooter, focused on bigger cities > 100.000 inhabitants.
- Benefits such as reserved parking spots depending on region. Additional subsidies are possible in federal states and emissionpolluted cities and regions, but these subsidies cannot be combined with state subsidies.
- Support programmes for the e-LCVs of craftsmen in certain federal states.

Some exemptions might apply in specific business/operational context.

Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Greece



Ayvens fleet size at end 2022
50.380

EV maturity scoring



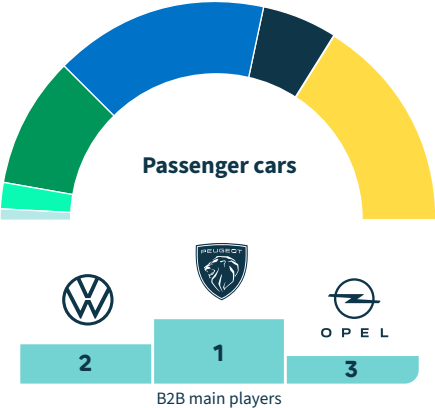
EV adoption

8/25

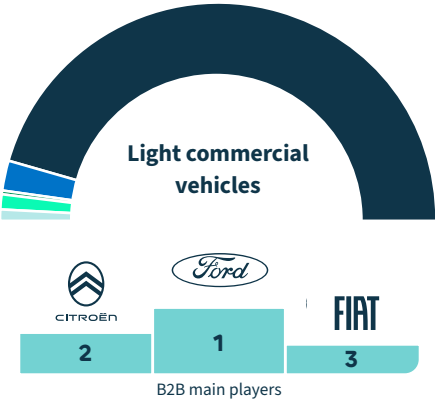
Powertrain mix

All market new vehicles registrations 2022

- 2% BEV
- 4% PHEV
- 19% HEV
- 32% Petrol
- 11% Diesel
- 32% Other



- 1,7% BEV & PHEV
- 2,6% Hybrid
- 0,4% Alt fuel
- 4,2% Petrol
- 91% Diesel



Growth 2022 vs 2021

All market PC

- +40% BEV
- +11% PHEV
- 7% ICE

Top 3 BEV

All market PC

- 1 Tesla Model Y
- 2 Tesla Model 3
- 3 Volvo XC40

Top 3 e-LCV

All market LCV

- 1 Mercedes eVito Van
- 2 Ford E-Transit
- 3 Maxus EV30 / e-Deliver 3

BEV TCO parity

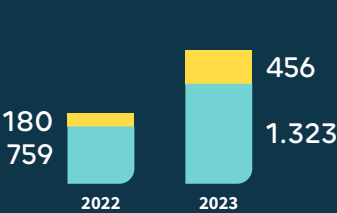
9/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

9/20



0,4 Charging points per 100 km
12 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

8/15

55 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 360g (g CO₂ eq/kWh), with 47% low carbon and 45% renewable.

Taxation and regulation

8/20

www.acea.auto/files/ACEA_Tax_Guide_2022.pdf



Taxation and regulation

8/20

€ Registration tax & ownership benefits

- 75% reduction in registration tax (RT) for PHEVs up to 50g CO₂/km.
- 50% reduction in RT for HEVs and PHEVs emitting ≥ 50g CO₂/km.
- HEVs with an engine capacity ≤ 1.549cc and registered before October 31st 2010 are exempt from circulation tax.
- 60% of the circulation tax for HEVs with engine capacity ≥ 1.550cc registered before October 31st 2010.
- Exemption for cars emitting ≤ 90g CO₂/km (NEDC) or 122g (WLTP).
- BEVs are exempt from the personal income presumption system.

✓ Company tax benefit

- Deductible of €40.000 in the NRP for BEVs and PHEVs up to 50g CO₂/km with higher NRP value.

🔌 EV infrastructure subsidy

- Companies will be able to be subsidized for the purchase and installation of smart chargers, provided that they serve purely the company's purposes.
- €500 incentive for installing charging infrastructure for individuals and €400 for companies.
- Additional corporate incentives for the installation of charging infrastructure.

📄 Purchase subsidy

- 30% cashback on NRP for BEVs, with a max cashback of €8.000. Extra €1.000 if a car of ≥ 10 years is scrapped, or the buyer is ≤ 29 years old.
- 40% cashback on NRP for BEV taxis, with a max cashback of €17.500. Extra €5.000 for scrapping the old taxi, which is mandatory.

👤 Employee benefit

- Exemption of the benefit-in-kind tax for BEVs and PHEVs emitting ≤ 50g CO₂/km (NEDC or WLTP) with a net retail price (NRP) ≤ €40.000.

📈 Regulation

- Free circulation to the centre of Athens and free pass to priority bus lane for BEVs and PHEVs with CO₂ below 50 g/km.
- BEV benefits:
 - Free parking.
 - Reserved parking spots.
 - No parking fees and free entrance to the citycentre.
- New regulation for business fleets:
 - January 1st, 2024 and onwards: 25% of new PC registrations has to be PHEV or BEV.
 - January 1st, 2026 and onwards: 1/3 of new PC registrations need to be BEV.
 - January 1st, 2035 and onwards: All new PC and LCV registrations need to be BEV.

Some exemptions might apply in specific business/operational context.

Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Hungary



Ayvens fleet size at end 2022

28.300

EV maturity scoring

40/100

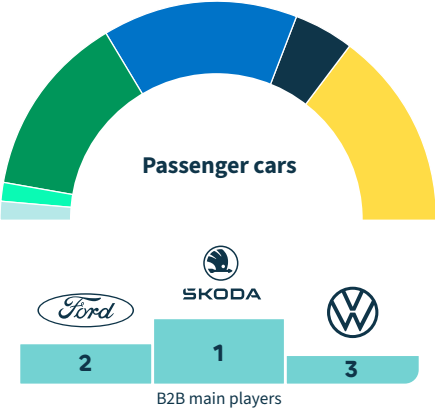
EV adoption

11/25

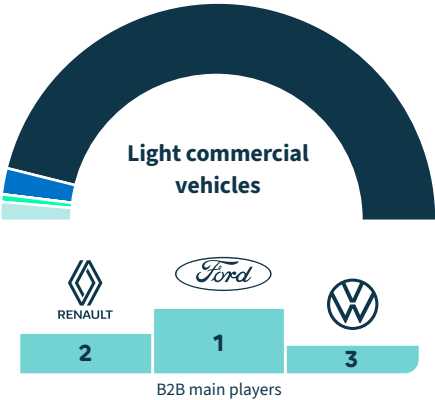
Powertrain mix

All market new vehicles registrations 2022

- 3% BEV
- 3% PHEV
- 27% HEV
- 29% Petrol
- 9% Diesel
- 29% Other



- 3,2% BEV & PHEV
- 0,7% Hybrid
- 0,3% Alt fuel
- 4,1% Petrol
- 92% Diesel



Growth 2022 vs 2021

All market PC

- +22% BEV
- +16% PHEV
- 21% ICE

Top 3 BEV

All market PC

- 1 Tesla Model Y
- 2 Tesla Model 3
- 3 Volvo XC40 BEV

Top 3 e-LCV

All market LCV

- 1 Opel/Vxh. Vivaro-e BEV
- 2 Mercedes eSprinter Van
- 3 Fiat E-Ducato BEV

BEV TCO parity

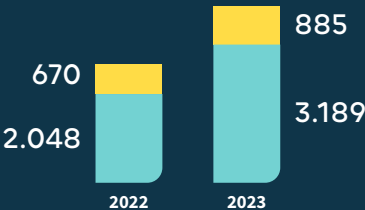
1/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

9/20



1.1 Charging points per 100 km
38 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

9/15

63 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 223g (g CO₂ eq/kWh), with 74% low carbon and 33% renewable.

Taxation and regulation

7/20

[ACEA_Tax_Guide_2022.pdf](#)



Hungary

Taxation and regulation

7/20



Registration tax & ownership benefits

- Tax exemption for BEVs and PHEVs.



Employee benefit

n/a



EV infrastructure subsidy

n/a



Company tax benefit

- Tax exemption for BEVs and PHEVs.



Purchase subsidy

n/a



Regulation

- Free parking in public places in numerous towns.
- Traffic allowance during smog alerts.

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*



Ayvens fleet size at end 2022

37.013

EV maturity scoring

23/100

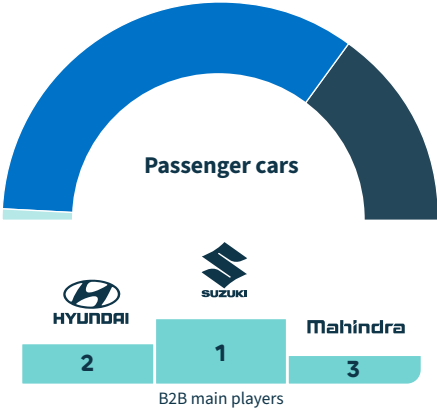
EV adoption

6/25

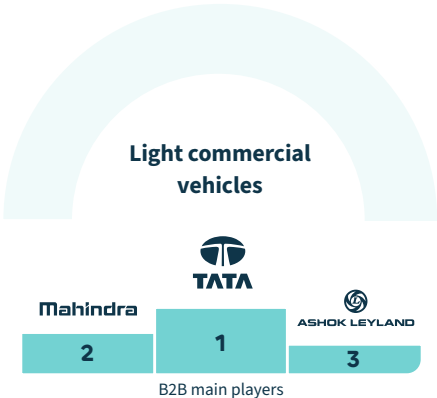
Powertrain mix

All market new vehicles registrations 2022

- 2% BEV
- 0% PHEV
- 0% HEV
- 68% Petrol
- 30% Diesel
- 0% Other



- 0,0% BEV & PHEV
- 0,0% Hybrid
- n/a Alt fuel
- n/a Petrol
- n/a Diesel



Growth 2022 vs 2021

All market PC

- +82% BEV
- +76% PHEV
- +12% ICE

Top 3 BEV

All market PC

- 1 Tata Nexon
- 2 MG EZS
- 3 Mahindra XUV400

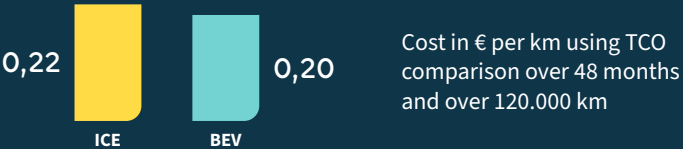
Top 3 e-LCV

All market LCV

- 1 TATA ACE EV
- 2 Jupiter JEM TEZ
- 3 Omega Seiki

BEV TCO parity

8/15



Charging infrastructure

0/20

n/a

Green powertrain offer

2/15

13 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

0/5

Carbon intensity from 346 to 664g (g CO₂ eq/kWh), with up to 45% low carbon and 45% renewable.

Taxation and regulation

7/20

morth.nic.in/Motor-Vehicle-Legislation



Taxation and regulation

7/20

Registration tax & ownership benefits

- Different Road tax for each state, mandating the cost independently and in some cases favouring BEV.

Employee benefit

n/a

EV infrastructure subsidy

n/a

Company tax benefit

n/a

Purchase subsidy

- Introduction of Bharat Stage VI emission.
- Electric Vehicle promotion with incentives on taxes and additional subsidy to BEV.

Regulation

- No ban on ICE vehicles yet established but continuous efforts by Government on electrification. For example, all vehicles used by government will be BEV by 2025.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Ireland



Ayvens fleet size at end 2022

13.825

EV maturity scoring

51/100



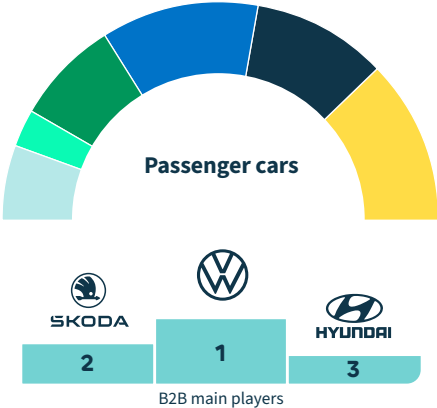
EV adoption

14/25

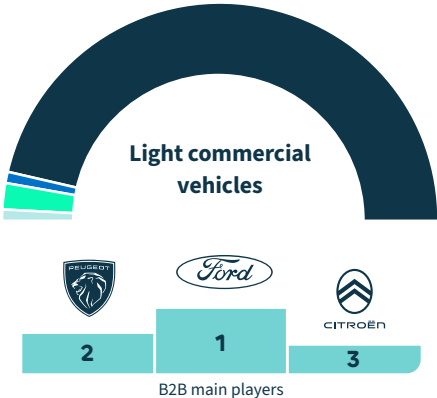
Powertrain mix

All market new vehicles registrations 2022

- 11% BEV
- 6% PHEV
- 15% HEV
- 23% Petrol
- 20% Diesel
- 24% Other



- 2,2% BEV & PHEV
- 3,8% Hybrid
- 0% Alt fuel
- 1,3% Petrol
- 93% Diesel



Growth 2022 vs 2021

All market PC

- +75% BEV
- 2% PHEV
- 19% ICE

Top 3 BEV

All market PC

- 1 VW ID.4
- 2 Hyundai Ioniq 5
- 3 Tesla Model Y

Top 3 e-LCV

All market LCV

- 1 Ford E-Transit
- 2 Peugeot e-Expert
- 3 Opel/Vxh. Vivaro-e

BEV TCO parity

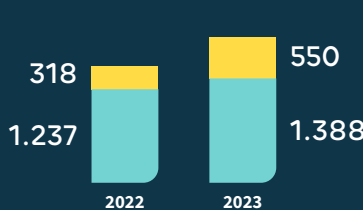
9/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

7/20



1 Charging points per 100 km
35 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

9/15

76 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity at 410g (g CO₂ eq/kWh), with 29% low carbon and 27% renewable.

Taxation and regulation

10/20

www.revenue.ie/en/



Taxation and regulation

10/20

Registration tax & ownership benefits

- VRT relief - all purchasers:
 - The government has continued the reduction in VRT (Vehicle Registration Tax) of up to €5.000 per vehicle, extended until the end of 2025.
 - EV's qualify for VRT relief's (purchase tax) of up to €5.000 where the original market value (OMV) of the vehicle is under €40.000, over this amount reliefs are still available but at reduced rates to an upper ceiling of €49.999. Any vehicle with an OMV above this amount does NOT qualify for VRT relief.
 - Reduced motor tax rates based on CO₂ emissions table for passenger cars.

Company tax benefit

- There are none for leased vehicles. For company purchased vehicles, there are accelerated capital allowances available.

Employee benefit

- 0% BIK (benefit in kind) for EV's extended beyond 2023, with new bands in play.
- Considering all supports relating to BIK the 0% threshold will now be;
 - €45.000 in 2024 (same as presently in 2023)
 - €35.000 in 2025
 - €20.000 in 2026
 - €10.000 in 2027

Purchase subsidy

- €5.000 grant for private buyers issued via the SEAI (Sustainable Energy Authority of Ireland). This is reduced to €3.500 from July 1st 2023.
- There is no longer any additional SEAI grant for corporate buyers of passenger vehicles.
- New Commercial Vehicles can obtain SEAI grants of between €3.800 and €7.600, but this is subject to a rolling 3 year / €200.000 (de minimis state aid) per company.

EV infrastructure subsidy

- A €600 SEAI grant is available towards purchasing and installing a home charger. Now available to any homeowner regardless of if they have an EV or not.
- Introduction of a grant scheme tapered specifically to Apartment owners/management companies, previously apartments were excluded from the €600 grant funding.

Regulation

- Low-emission-zoned proposed for major cities and should to be implemented by 2026.
Reduced by 50% tolls for BEV.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Ayvens fleet size at end 2022

298.000

EV maturity scoring

48/100

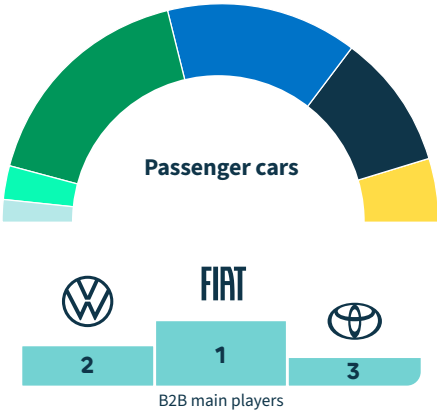
EV adoption

9/25

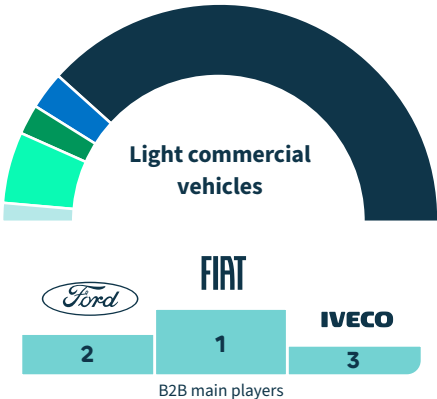
Powertrain mix

All market new vehicles registrations 2022

- 3,7% BEV
- 5,1% PHEV
- 34% HEV*
- 28% Petrol
- 20% Diesel
- 9,6% Other



- 3% BEV & PHEV
- 10,9% Hybrid
- 4,2% Alt fuel
- 5,4% Petrol
- 77% Diesel



Growth 2022 vs 2021

All market PC

- 27% BEV
- 3% PHEV
- 16% ICE

Top 3 BEV

All market PC

- 1 Fiat 500E
- 2 Smart fortwo
- 3 Tesla Model Y

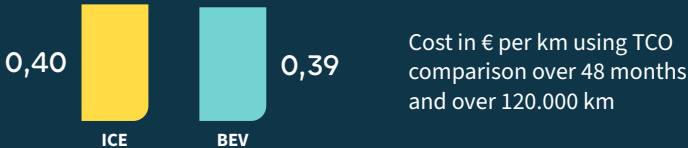
Top 3 e-LCV

All market LCV

- 1 Fiat E-Ducato
- 2 Toyota Proace City
- 3 Fiat Scudo

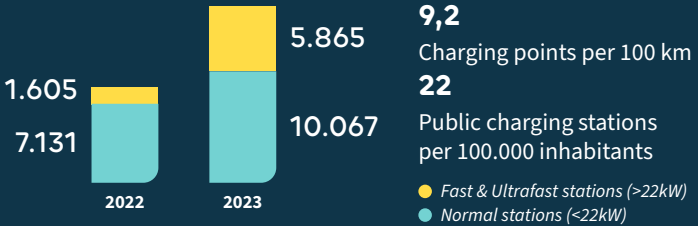
BEV TCO parity

8/15



Charging infrastructure

10/20



Green powertrain offer

11/15

104 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity from 265 to 662g (g CO₂ eq/kWh), with up to 60% low-carbon and up to 57% renewable.

Taxation and regulation

9/20

[ACEA_Tax_Guide_2022.pdf](#)



Taxation and regulation

9/20

Registration tax & ownership benefits

- BEVs: five-year exemption from the date of first registration. After this period, 75% reduction of the tax rate applied to equivalent petrol vehicles.
- HEVs: Application of a minimum flat rate (€2,58/kW). Some regions apply discounts on the tax ownership.

Company tax benefit

n/a

EV infrastructure subsidy

- For domestic users, a contribution of €1.500 for the purchase and installation price of standard power infrastructures for recharging electric vehicles.
- For condominium Building a contribution of 8.000.

Employee benefit

- Starting from 2020, fringe benefit cars emitting up to 60 g/km CO₂ are taxed at a lower rate (25% on conventional parameters related to an average journey and cost per km) compared to the previous taxation (30% applied to all vehicles on the basis of the abovementioned parameters). At the same time, the new legislation introduces different rates based on car emissions.
- Benefit in kind is based on CO₂ emissions' level, to encourage lower CO₂ emissions vehicles as BEVs and PHEVs.
- Specific BIK calculation for vehicles with higher emission levels (between 161-190 g and >190 g CO₂/km).

Purchase subsidy

- 190 million for category M1 vehicles with emissions in the range 0-20g of CO₂/Km (electric) with list price limit of €42.700 (VAT and optional included)*
- 235 million for M1 vehicles with emissions in the range 21-60g of CO₂/Km (plug-in hybrids), with a list price limit of €54.900 (VAT and optional included)*
- 150 million for M1 category vehicles with emissions in the 61-135g of CO₂/Km (low-emission), the list price limit of €42.700 (VAT and optional included).
- * 5% of these amounts are reserved for purchases made by legal entities for commercial car sharing or rental activities.

Regulation

- No parking fee for EV and hybrid vehicles in several cities.
- Free entry in LTZ for EV & Hybrid vehicles.
- Companies with more than 100 employees located in cities with more than 50.000 inhabitants must draw up a mobility plan for employees in order to reduce the use of personal/ company cars for the home-office journey.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Japan



Partner fleet size at end 2022
260.000

EV maturity scoring

48/100

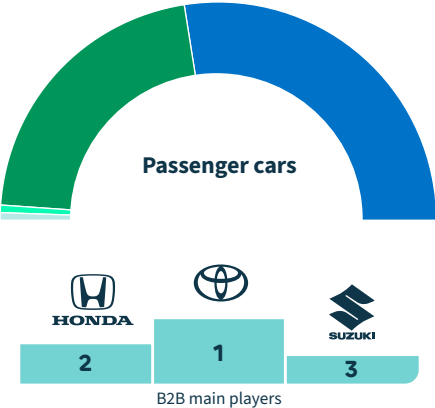
EV adoption

9/25

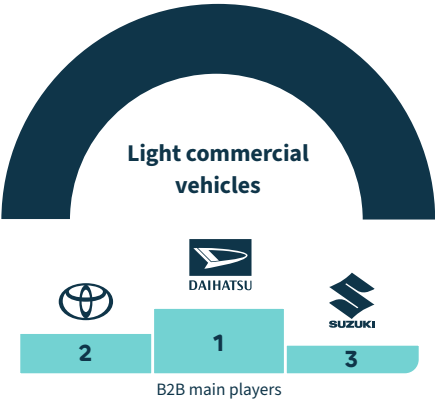
Powertrain mix

All market new vehicles registrations 2022

- 1,5% BEV
- 1,1% PHEV
- 42,5% HEV
- 54,9% Petrol and Diesel
- 0% Other



- 0,3% BEV & PHEV
- 99,7% Hybrid, Alt fuel, Petrol and Diesel



Growth 2022 vs 2021

- All market PC
- +291% BEV
 - +154% PHEV
 - +89% ICE

Top 3 BEV

- All market PC
- 1 Nissan Sakura
 - 2 Nissan Leaf
 - 3 Mitsubishi eK X EV

Top 3 e-LCV

- All market LCV
- 1 Mitsubishi Minicab-MiEV
 - 2 n/a
 - 3 n/a

BEV TCO parity

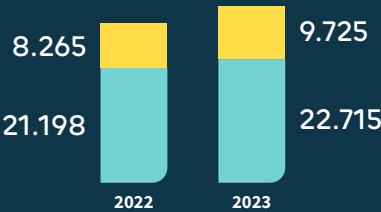
14/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

9/20



14,9 Charging points per 100 km
25 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

6/15

49 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity from 384 to 544g (g CO₂ eq/kWh), with up to 47% low-carbon and up to 36% renewable.

Taxation and regulation

9/20

www.mlit.go.jp

Latvia

Ayvens fleet size at end 2022

2.100

EV maturity scoring

31/100

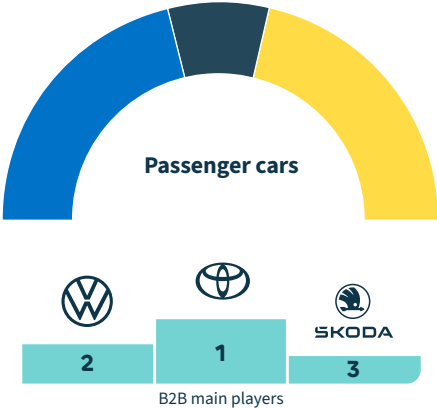
EV adoption

11/25

Powertrain mix

All market new vehicles registrations 2022

- 0% BEV
- 0% PHEV
- 0% HEV
- 42% Petrol
- 15% Diesel
- 42% Other



- 1,4% BEV & PHEV
- 0% Hybrid
- 0,3% Alt fuel
- 4,6% Petrol
- 94% Diesel



Growth 2022 vs 2021

- All market PC
- +80% BEV
 - +79% PHEV
 - +11% ICE

Top 3 BEV

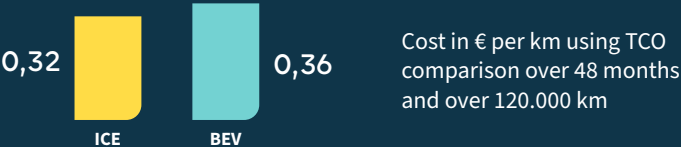
- All market PC
- 1 Škoda Enyaq
 - 2 VW ID. 4
 - 3 Dacia Spring

Top 3 e-LCV

- All market LCV
- 1 Citroën e-Jumpy
 - 2 Mercedes eSprinter Van
 - 3 Citroën Berlingo

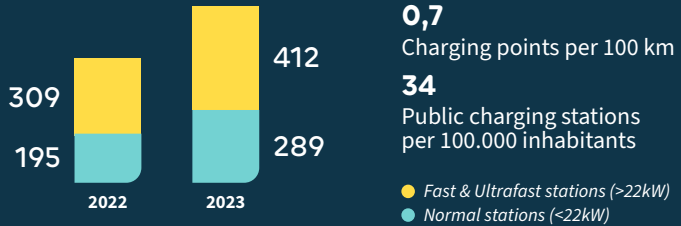
BEV TCO parity

0/15



Charging infrastructure

6/20



Green powertrain offer

8/15

42 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity at 220g (g CO₂ eq/kWh), with 70% low carbon and 53% renewable.

Taxation and regulation

4/20

www.aldautomotive.lv



Taxation and regulation

4/20

Registration tax & ownership benefits

- Exemption from the registration costs for BEV vehicles (first registration).
- Exemption for M1 vehicles emitting $\leq 50\text{g CO}_2/\text{km}$.

Employee benefit

n/a

EV infrastructure subsidy

n/a

Company tax benefit

- Minimum tax rate (€10) for BEVs.

Purchase subsidy

n/a

Regulation

n/a

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Lithuania



Ayvens fleet size at end 2022
2.600

EV maturity scoring

29/100



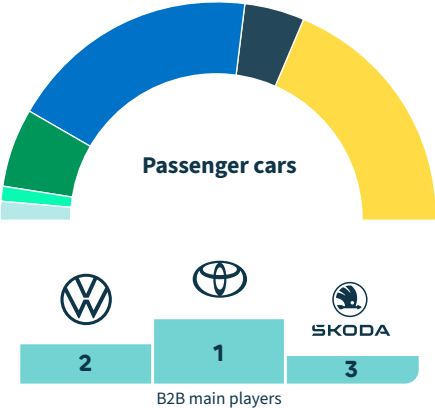
EV adoption

10/25

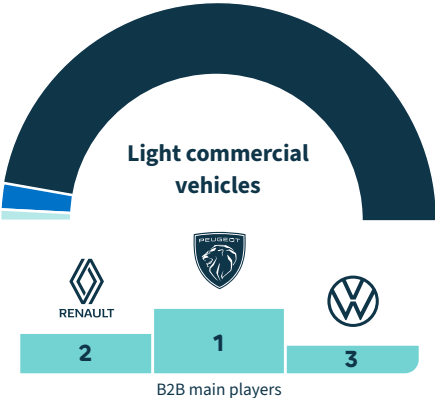
Powertrain mix

All market new vehicles registrations 2022

- 3% BEV
- 2% PHEV
- 12% HEV
- 37% Petrol
- 9% Diesel
- 37% Other



- 2% BEV & PHEV
- 0% Hybrid
- 0% Alt fuel
- 4% Petrol
- 94% Diesel



Growth 2022 vs 2021

All market PC

- +18% BEV
- +910% PHEV
- 23% ICE

Top 3 BEV

All market PC

- 1 Dacia Spring
- 2 Škoda Envaq
- 3 Nissan Leaf

Top 3 e-LCV

All market LCV

- 1 Toyota Proace City Van
- 2 Nissan e-NV200
- 3 Renault Kangoo

BEV TCO parity

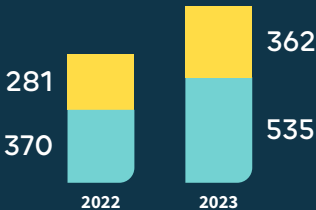
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

5/20



0,2 Charging points per 100 km
28 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

7/15

36 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 200g (g CO₂ eq/kWh), with 74% low carbon and 58% renewable.

Taxation and regulation

4/20

www.aldautomotive.lv

Lithuania

Taxation and regulation

4/20



Registration tax
& ownership benefits

- €4.000 state support for EVs, 100% VAT deductible for EVs - price below €50.000.
- ICE PCs - 100% VAT deductible from Service part of rental fee.



Employee benefit

n/a



EV infrastructure subsidy

n/a



Company tax benefit

- Purchase incentives (bonus) for vehicles ≤ six months:
M1 electric vehicle: €4.000.
- Additional €1.000 for scrapping an old diesel or petrol M1, owned for at least 12 months, with a valid MOTMaximum subsidy is €400.000 per company.



Purchase subsidy

n/a



Regulation

n/a

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Luxembourg



Ayvens fleet size at end 2022

16.700

EV maturity scoring

60/100

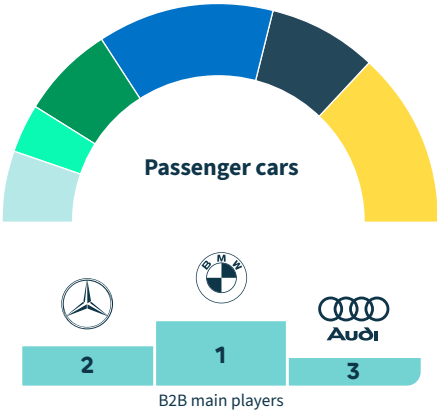
EV adoption

14/25

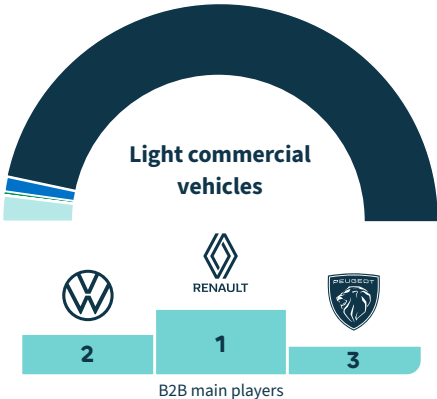
Powertrain mix

All market new vehicles registrations 2022

- 11% BEV
- 7% PHEV
- 14% HEV
- 26% Petrol
- 16% Diesel
- 26% Other



- 4,3% BEV & PHEV
- 0,1% Hybrid
- 0,1% Alt fuel
- 2,4% Petrol
- 93,1% Diesel



Growth 2022 vs 2021

All market PC

- +44% BEV
- 16% PHEV
- 15% ICE

Top 3 BEV

All market PC

- 1 Fiat 500
- 2 Tesla Model Y
- 3 Opel Corsa

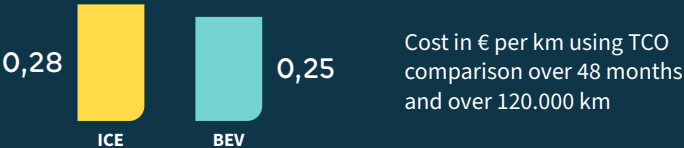
Top 3 e-LCV

All market LCV

- 1 VW ID.BUZZ Cargo
- 2 Nissan Townstar Van
- 3 Peugeot e-Partner

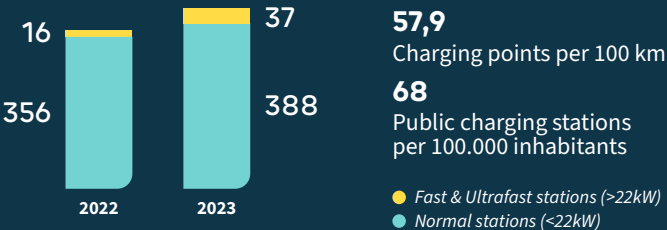
BEV TCO parity

14/15



Charging infrastructure

10/20



Green powertrain offer

11/15

94 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 252g (g CO₂ eq/kWh) with up to 74% low-carbon and up to 62% renewable.

Taxation and regulation

10/20

legilux.public.lu

Luxembourg

Taxation and regulation

10/20



Registration tax
& ownership benefits

- Only 50% of administrative tax.
- Minimum tax rate of €30 per year for zero-emission vehicles. Government subsidy to the owner of the car (individuals and legal entities of private law-residents or non-residents) of €8.000 for fully electric vehicles; premium included in the quote. The vehicle must be subject to a leasing contract of a minimum duration of 12 months.



Company tax benefit

n/a



Employee benefit

- Monthly benefit in kind from 0.5-1.8% depending on CO₂ emissions.
- The calculation of the benefit in kind for the driver is taxed based on the powertrain type and CO₂ emissions. With an electric vehicle, the driver takes advantage of a benefit in kind calculated at only 0.5% of the net value of the new vehicle.
 - For gasoline vehicles from 1% to 1.7% (depending on CO₂ emissions)
 - For diesel vehicles from 1% to 1.8 (depending on CO₂ emissions)
- There will be changes in the calculation of the benefit in kind for 2022 (to be confirmed): currently, the highest BIK is applied for vehicles with CO₂ emissions over 150 g/km - this will be decreased by 20 g to 130 g/km from January 1st 2022 on (new orders).



Purchase subsidy

- BEVs: ≤ 18 kWh: €8.000> 18 kWh: €3.000.
- PHEVs: ≤ 50g CO₂/km: €2.500.



EV infrastructure subsidy

- SMEs can benefit from a subsidy of up to 50% of the costs related to charging stations and up to 60% of the costs related to the connection to the electricity grid. €60.000 for grid connection costs and €40.000 for the other costs related to the deployment per company.
- Subsidy up to €1.200 for the installation of a private charge point (purchase between July 1st 2020 and June 30th 2023) and only for private individuals.



Regulation

- New Tramway for city center. Free public transports. New park & rides to avoid traffic to the city center.
- Regarding Electromobility, 800 public double charging stations (currently 700).

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Malaysia



Ayvens fleet size at end 2022

237

EV maturity scoring

11/100

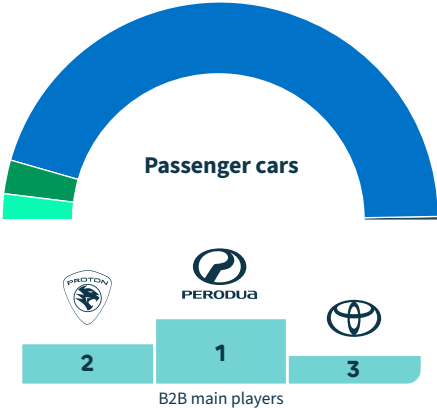
EV adoption

4/25

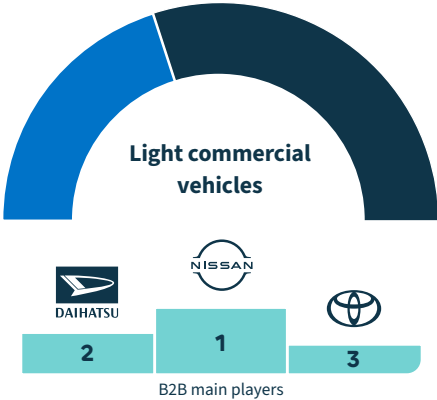
Powertrain mix

All market new vehicles registrations 2022

- 0,5% BEV
- 3,5% PHEV
- 5% HEV
- 90% Petrol
- 1% Diesel
- 0% Other



- 0% BEV & PHEV
- 0% Hybrid
- 0% Alt fuel
- 40% Petrol
- 60% Diesel



Growth 2022 vs 2021

All market PC

- +353% BEV
- +93% PHEV
- +38% ICE

Top 3 BEV

All market PC

- 1 BMW iX3
- 2 BMW iX
- 3 Hyundai Ioniq 5

Top 3 e-LCV

All market LCV

- 1 n/a
- 2 n/a
- 3 n/a

BEV TCO parity

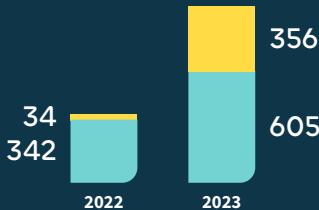
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

4/20



0,5 Charging points per 100 km
2 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

2/15

11 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

0/5

Carbon intensity at 663g (g CO₂ eq/kWh), with 5% low carbon and 5% renewable.

Taxation and regulation

1/20

www.aseanbriefing.com

Mexico



Ayvens fleet size at end 2022

36.328

EV maturity scoring

20/100



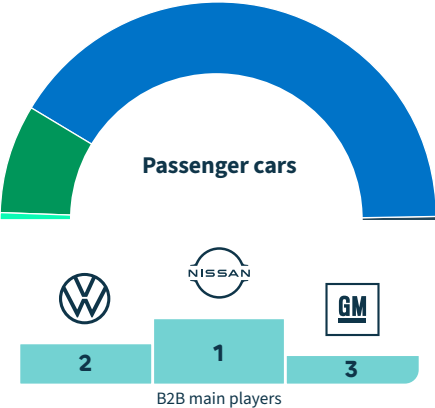
EV adoption

7/25

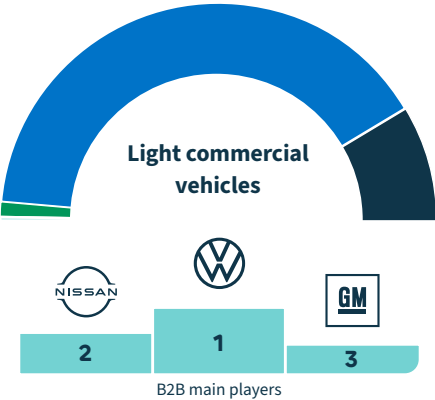
Powertrain mix

All market new vehicles registrations 2022

- 0,3% BEV
- 1% PHEV
- 16% HEV
- 82% Petrol
- 1% Diesel
- n/a Other



- 1% BEV & PHEV
- 0,03% Hybrid
- 2% Alt fuel
- 80% Petrol
- 17% Diesel



Growth 2022 vs 2021

All market PC

- +116% BEV
- 22% PHEV
- +7% ICE

Top 3 BEV

All market PC

- 1 Sehol E10X
- 2 Tesla Model Y
- 3 BMW iX

Top 3 e-LCV

All market LCV

- 1 Ford E-Transit
- 2 JAC eSunray
- 3 JAC GML X150/T6

BEV TCO parity

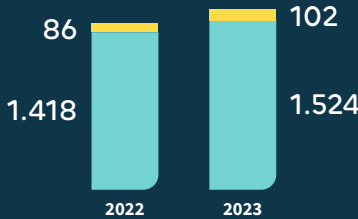
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

1/20



n/a
Charging points per 100 km
2
Public charging stations per 100.000 inhabitants

● Fast & Ultrafast stations (>22kW)
● Normal stations (<22kW)

Green powertrain offer

6/15

34 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 461g (g CO₂ eq/kWh).

Taxation and regulation

5/20

www.dof.gob.mx



Taxation and regulation

5/20

Registration tax & ownership benefits

- Road taxes and Ownership tax exemptions on hybrids and BEVs.

Employee benefit

- Some roads offers discounts on payments to EV vehicles.

EV infrastructure subsidy

- Supporting scheme vary depending on the regoin, the scheme rules set by the Comisión Federal de Electricidad (CFE).

Company tax benefit

- Incentives for BEV, operational lease grant tax benefits taking full monthly rental as a basis for calculation.
- For alternative powertrains (BEV/PHEV/FCEV/HEV), higher deductible amount to \$250.000.
- Following the latest stimulus law, "Ley de Ingresos de la Federación", the BEV and FCEV are exempted from the new vehicle TAX (ISAN, impuesto sobre automóviles nuevos).

Purchase subsidy

- Vehicles are not required to do periodic technical controls about pollution.

Regulation

- HEV/BEV/PHEV are able to transit daily in Mexico city, even if a pollution phase applies.
- For HEV, PHEVs a and BEVs 20% discounts in urban tools.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Morocco



Ayvens fleet size at end 2022

10.300

EV maturity scoring

12/100



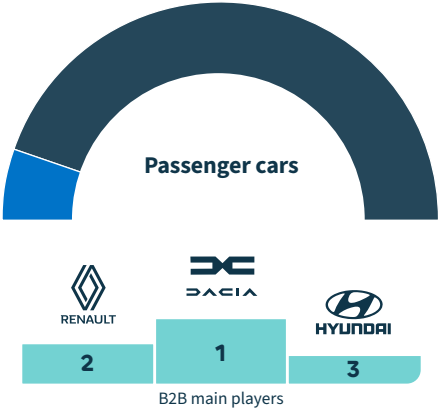
EV adoption

7/25

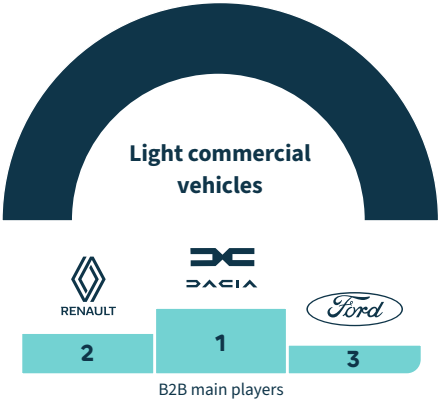
Powertrain mix

All market new vehicles registrations 2022

- 0% BEV
- 0% PHEV
- 0% HEV
- 11% Petrol
- 89% Diesel
- 0% Other



- n/a BEV & PHEV
- n/a Hybrid
- n/a Alt fuel
- n/a Petrol
- 100% Diesel



Growth 2022 vs 2021

All market PC

- n/a BEV
- n/a PHEV
- n/a ICE

Top 3 BEV

All market PC

- 1 Dacia Spring
- 2 Renault Zoe
- 3 Audi e-tron Quattro

Top 3 e-LCV

All market LCV

- 1 n/a
- 2 n/a
- 3 n/a

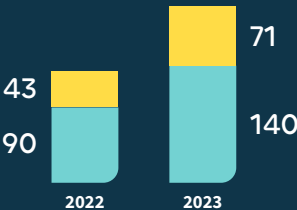
BEV TCO parity

0/15

n/a

Charging infrastructure

4/20



n/a
Charging points per 100 km
n/a
Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

1/15

8 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

0/5

n/a

Taxation and regulation

0/20

n/a

Netherlands



Ayvens fleet size at end 2022

233.100

EV maturity scoring

68/100

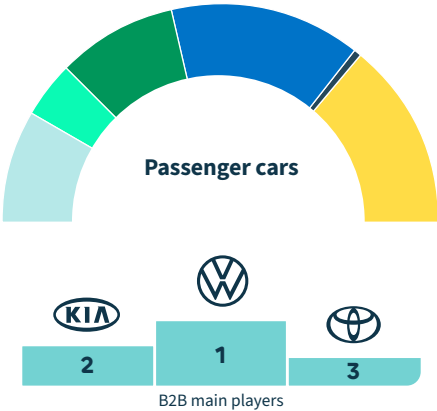
EV adoption

18/25

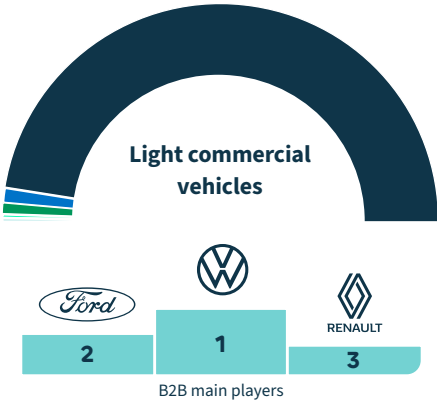
Powertrain mix

All market new vehicles registrations 2022

- 17% BEV
- 8% PHEV
- 18% HEV
- 28% Petrol
- 1% Diesel
- 28% Other



- 0,9% BEV & PHEV
- 0,5% Hybrid
- 1,6% Alt fuel
- 2% Petrol
- 95% Diesel



Growth 2022 vs 2021

All market PC

- +15% BEV
- +11% PHEV
- 17% ICE

Top 3 BEV

All market PC

- 1 Tesla Model Y
- 2 Volvo XC40
- 3 Renault Megane

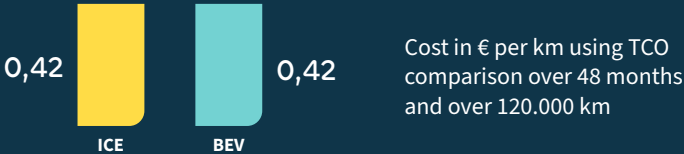
Top 3 e-LCV

All market LCV

- 1 Renault Kangoo
- 2 Opel/Vxh. Vivaro-e
- 3 Mercedes eVito Van

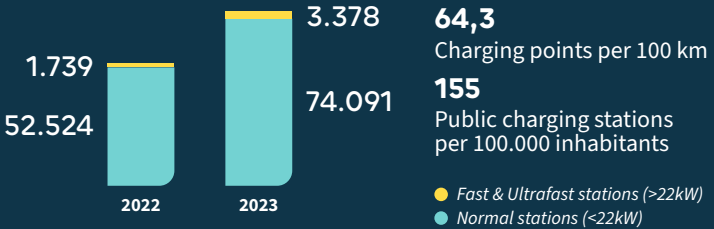
BEV TCO parity

3/15



Charging infrastructure

17/20



Green powertrain offer

14/15

More than 100 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 244g (g CO₂ eq/kWh), with 63% low carbon and 57% renewable.

Taxation and regulation

15/20

www.aldautomotive.nl

Netherlands

Taxation and regulation

15/20



Registration tax & ownership benefits

- Exemption for zero-emission cars.
- 50% tariff for PHEVs.



Employee benefit

- BEV registered in 2023, have a reduced Benefit in Kind. The first €30.000 of catalogue price trigger 16% BIK tax. The remaining part of catalogue price, if any, is calculated at 22% BIK.



EV infrastructure subsidy

- Using the Environmental Investment Allowance (MIA), companies can receive an investment deduction of up to 36% of the amount invested into a charging point.
- 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 national, country and local levels, various initiatives exist 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 are made in hydrogen solutions (e.g., buses and garbage trucks) and hydrogen filling stations.
 - Home charge points, paid for by the employer, are not taxed separately but deemed to be included in the fringe benefit on the EV.



Company tax benefit

- Minimum rate (16%) for zero-emission cars. Cap at €30.000 for BEVs. No cap for hydrogen cars.
- Subsidy scheme (SEPP) for individuals to buy/lease a small or compact.



Purchase subsidy

- Subsidy scheme (SEPP) for individuals to buy/lease a small or compact BEV car, new or used.
- Arbitrary depreciation of environmental investments scheme (Vamil) for FCEV cars or taxis and BEV cars equipped with solar panels.



Regulation

- Public car sharing widely available.

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*



New Zealand



Partner fleet size at end 2022
25.500

EV maturity scoring

37/100

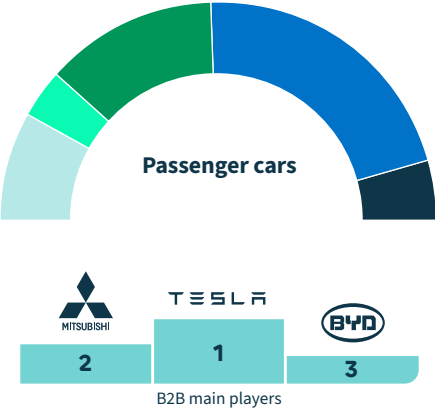
EV adoption

14/25

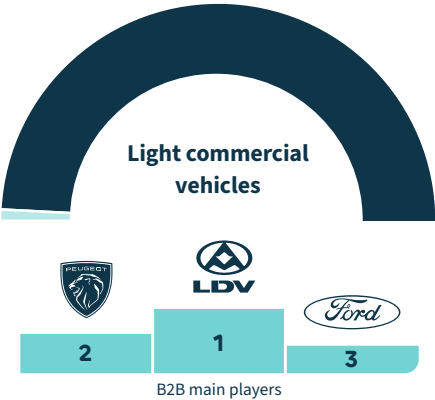
Powertrain mix

All market new vehicles registrations 2022

16,2% BEV
7,4% PHEV
25,4% HEV
42,5% Petrol
8,5% Diesel
0% Other



1% BEV & PHEV
0% Hybrid
0% Alt fuel
0% Petrol
0% Diesel



Growth 2022 vs 2021

All market PC

+135% BEV
+193% PHEV
-15% ICE

Top 3 BEV

All market PC

- 1 BYD Yuan Plus / Atto-3 BEV
- 2 Kia Niro
- 3 MG EZS

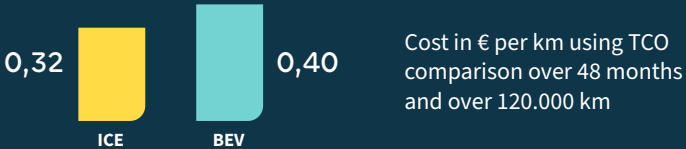
Top 3 e-LCV

All market LCV

- 1 Maxus EV90 / e-Deliver 9
- 2 Maxus EV30 / e-Deliver 3
- 3 Mercedes eVito Van

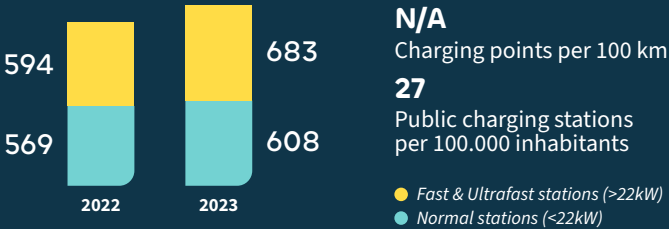
BEV TCO parity

0/15



Charging infrastructure

6/20



Green powertrain offer

6/15

34 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

5/5

Carbon intensity from 71g (g CO₂ eq/kWh), with up to 92% low carbon and up to 92% renewable.

Taxation and regulation

6/20

n/a



New Zealand

Taxation and regulation

6/20



Registration tax & ownership benefits

- The Clean Car Discount consists of rebates and fees based on CO₂ emissions for new and used eligible vehicles the first time they are registered in New Zealand. The higher the CO₂ emissions, the greater the fee.
Road user charges exemption for light elec"tric vehicles extended until March 31st 2024.



Employee benefit

n/a



EV infrastructure subsidy

- The Low Emission Vehicles Contestable Fund has committed co-funding to over 1.200 private and public electric vehicle (EV) chargers.



Company tax benefit

n/a



Purchase subsidy

- The New Zealand Government offers a Clean Car Discount of \$7.015 on new electric vehicles with a Drive Away Price under \$80.000 (including GST and on road cost).



Regulation

n/a

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*



Norway



Ayvens fleet size at end 2022

35.160

EV maturity scoring

81/100

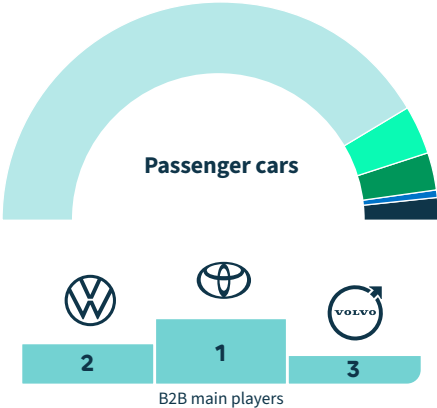
EV adoption

21/25

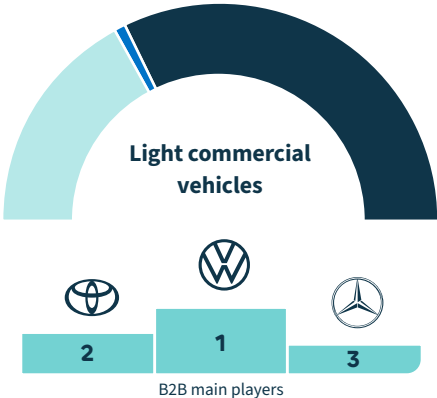
Powertrain mix

All market new vehicles registrations 2022

- 83% BEV
- 7% PHEV
- 6% HEV
- 1% Petrol
- 3% Diesel
- 0% Other



- 34% BEV & PHEV
- 0% Hybrid
- 0% Alt fuel
- 2% Petrol
- 64% Diesel



Growth 2022 vs 2021

- All market PC
- +22% BEV
 - 58% PHEV
 - 23% ICE

Top 3 BEV

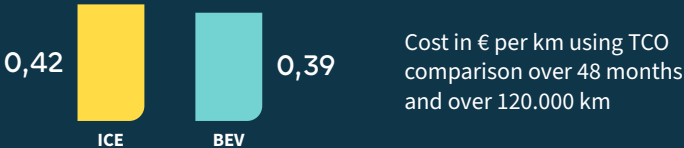
- All market PC
- 1 Tesla Model Y
 - 2 VW ID.4
 - 3 Škoda Enyaq

Top 3 e-LCV

- All market LCV
- 1 ProAce
 - 2 Proace City
 - 3 ID.Buzz Cargo

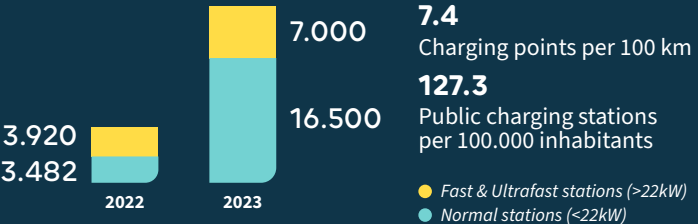
BEV TCO parity

11/15



Charging infrastructure

14/20



Green powertrain offer

15/15

More than 100 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

5/5

Carbon intensity from 25 to 33g (g CO₂ eq/kWh), with 99% low-carbon and 99% renewable.

Taxation and regulation

15/20

skatteetaten.no



Norway

Taxation and regulation

15/20



Registration tax & ownership benefits

- BEVs are now subject to a weight related registration tax of 12,50 kr per kg exceeding 500kg.
- Wreckage fee of 2.400 kr.
- Lower road tax for BEVs.



Employee benefit

- No company car benefits for employers driving BEVs any more.



EV infrastructure subsidy

- Local subsidies scheme are in place supporting charging installation. The range is between 5.000 kr to 10.000 kr.



Company tax benefit

n/a



Purchase subsidy

- VAT exemption for BEV purchase, but only for the amount up to 500.000 kr. The amount exceeding 500.000 kr sees 25% VAT.



Regulation

- The scheme that has been granting urban toll exemption in some cities will be gradually phase-out. However BEV will not pay more than 50% of comparable ICE toll.
- Target from government is to sell only zero emission vehicles from 2025.

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*

Peru

Ayvens fleet size at end 2022

2.630

EV maturity scoring

10/100

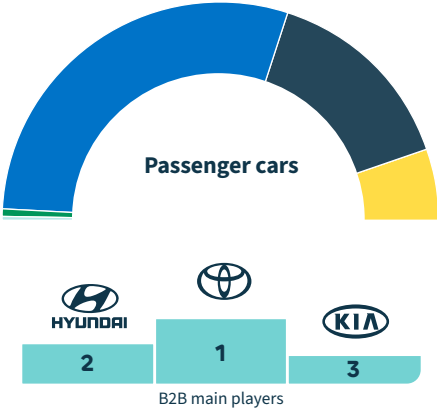
EV adoption

4/25

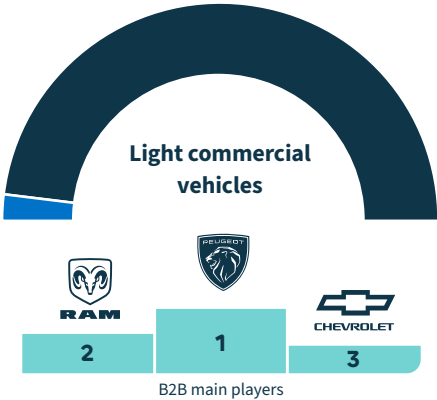
Powertrain mix

All market new vehicles registrations 2022

- 1% BEV
- 0% PHEV
- 1% HEV
- 58% Petrol
- 29% Diesel
- 11% Other



- 0% BEV & PHEV
- 0% Hybrid
- 0% Alt fuel
- 4% Petrol
- 96% Diesel



Growth 2022 vs 2021

All market PC

- n/a BEV
- n/a PHEV
- +40% ICE

Top 3 BEV

All market PC

- 1 BMW iX
- 2 Audi e-tron Quattro
- 3 Porsche Taycan

Top 3 e-LCV

All market LCV

- 1 BYD T3
- 2 Voltera
- 3 Electron

BEV TCO parity

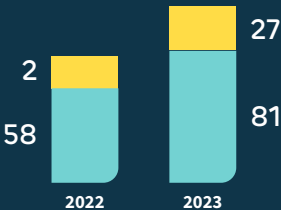
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

0/20



n/a Charging points per 100 km
n/a Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

0/15

3 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 275g (g CO₂ eq/kWh), with 47% low carbon and 47% renewable.

Taxation and regulation

3/20

sat.gob.pe



Poland



Ayvens fleet size at end 2022

42.600

EV maturity scoring

39/100

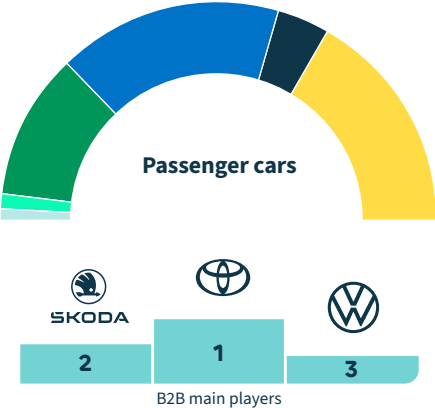
EV adoption

9/25

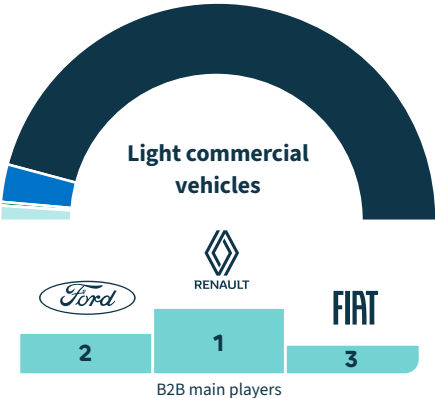
Powertrain mix

All market new vehicles registrations 2022

- 2% BEV
- 2% PHEV
- 22% HEV
- 33% Petrol
- 8% Diesel
- 33% Other



- 2,3% BEV & PHEV
- 0,2% Hybrid
- 0,3% Alt fuel
- 5,6% Petrol
- 92% Diesel



Growth 2022 vs 2021

All market PC

- +72% BEV
- +22% PHEV
- 19% ICE

Top 3 BEV

- All market PC
- 1 Tesla Model 3
 - 2 Tesla Model Y
 - 3 KIA EV6

Top 3 e-LCV

- All market LCV
- 1 Mercedes eSprinter Van
 - 2 Opel/Vxh. Vivaro-e
 - 3 Ford E-Transit

BEV TCO parity

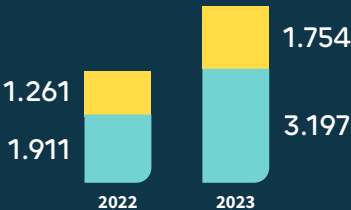
13/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

6/20



0.7 Charging points per 100 km

10 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

7/15

58 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

0/5

Carbon intensity at 715g (g CO₂ eq/kWh), with 33% low carbon and 31% renewable.

Taxation and regulation

4/20

acea.auto/publication/acea-tax-guide-2022



Poland

Taxation and regulation

4/20



Registration tax & ownership benefits

- Excise tax exemption for BEVs.
- Excise tax exemption for PHEVs up to 2.000cc until end 2029.
- Depreciation:
 - up to zł225.000 for BEVs and FCEVs
 - up to zł150.000 for vehicles emitting 0-50g CO₂/km
 - up to zł100.000 for vehicles emitting > 50g CO₂/km



Employee benefit

- Benefit in kind calculation is based on engine power for ICE and can vary from zł250 to zł400 monthly. For BEV and FCEV it is fixed at level of zł250 monthly.



EV infrastructure subsidy

- Entire budget of scheme supporting the installation of EV public charge infrastructure has been utilized. Up to 50% of the eligible costs for hydrogen stations.



Company tax benefit

- Companies can deduct up to the entirety of VAT, depending on the type use of the car (mixed, professional use).
- Lease related fees are tax-deductible to different extend depending on the powertrain. ICE car tax cost limit is set for zł150.000 and for EV the limit amounts to zł225.000.



Purchase subsidy

- Purchase incentives for individuals and legal persons (purchase, leasing):
 - Passenger cars: from zł18.750 to zł27.000 for BEVs and FCEVs of a max price of zł225.000.
 - LCV: up to zł70.000 for BEVs and FCEVs.



Regulation

- Some cities allow to BEV drivers the usage of Bus lanes.
- In some cities, BEV can benfit of free parking spots.
- Cities can establish Clean Transportation Zones on their territory.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Portugal



Ayvens fleet size at end 2022
62.796

EV maturity scoring



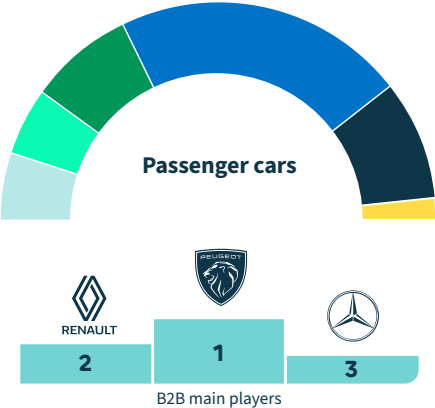
EV adoption

11/25

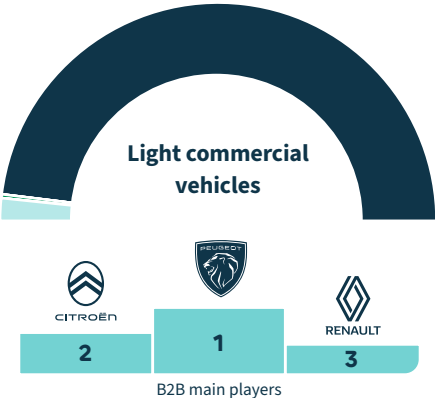
Powertrain mix

All market new vehicles registrations 2022

- 10% BEV
- 10% PHEV
- 16% HEV
- 43% Petrol
- 18% Diesel
- 3% Other



- 3,6% BEV & PHEV
- 0,1% Hybrid
- 0,2% Alt fuel
- 0,4% Petrol
- 95,7% Diesel



Growth 2022 vs 2021

All market PC

- +69% BEV
- +32% PHEV
- 15% ICE

Top 3 BEV

All market PC

- 1 Renault Zoe
- 2 Tesla Model 3
- 3 Tesla Model Y

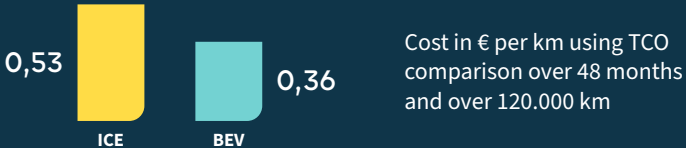
Top 3 e-LCV

All market LCV

- 1 Peugeot e-Partner
- 2 Renault Kangoo
- 3 Mercedes Sprinter

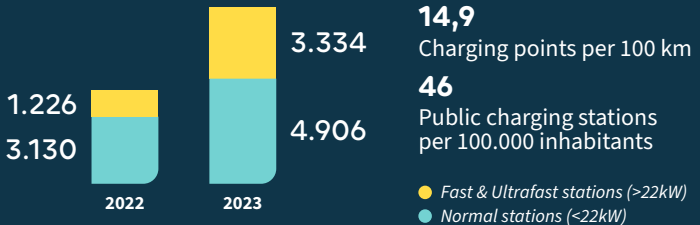
BEV TCO parity

15/15



Charging infrastructure

11/20



Green powertrain offer

10/15

115 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 203g (g CO₂ eq/kWh), with 66% low carbon and 60% renewable.

Taxation and regulation

7/20

[ACEA_Tax_Guide_2022.pdf](#)



Portugal

Taxation and regulation

7/20



Registration tax & ownership benefits

- Car tax:
 - BEVs: complete exemption.
 - PHEVs: 75% reduction if range in all-electric mode $\geq 50\text{km}$ and $< 50\text{g CO}_2/\text{km}$.
 - HEVs: 40% reduction if range in all-electric mode $> 50\text{km}$ and CO_2 emissions $\leq 50\text{g}/\text{km}$.
 - Exemption for battery electric vehicles (BEVs).



Employee benefit

n/a



EV infrastructure subsidy

n/a



Company tax benefit

- Autonomous corporate income tax:
 - Exemption for BEVs
 - Reduction for PHEVs if range in all-electric mode $\geq 50\text{km}$ and CO_2 emissions $< 50\text{g}/\text{km}$ VAT deduction for M1:
 - 100% for BEVs $\leq €62.500 + \text{VAT}$
 - 100% for PHEVs $\leq €50.000 + \text{VAT}$



Purchase subsidy

- Private users: €3.000 to buy a new BEV (M1 vehicle), with purchasing price of up to €62.500, limited to one vehicle per person.



Regulation

- City parking free for BEV cars.
- Free parking in several cities in Portugal for BEVs (Lisbon, Beja, Guimarães and others).

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Romania

Ayvens fleet size at end 2022

23.408

EV maturity scoring

33/100

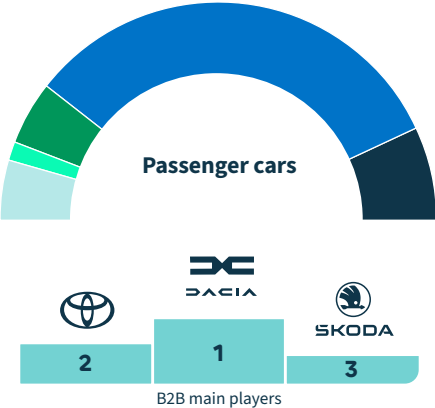
EV adoption

10/25

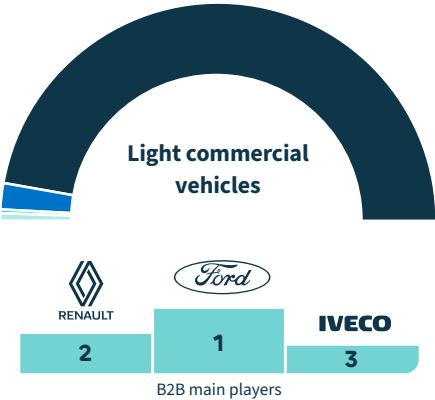
Powertrain mix

All market new vehicles registrations 2022

- 9,1% BEV
- 3,0% PHEV
- 9,6% HEV
- 65% Petrol
- 13,8% Diesel
- 0% Other



- 1,3% BEV & PHEV
- 0,7% Hybrid
- 0% Alt fuel
- 4,1% Petrol
- 94% Diesel



Growth 2022 vs 2021

All market PC

- +84% BEV
- +32% PHEV
- 1% ICE

Top 3 BEV

All market PC

- 1 Dacia Spring
- 2 Tesla Model 3
- 3 VW UP!

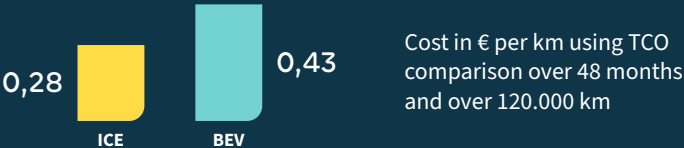
Top 3 e-LCV

All market LCV

- 1 Maxus EV30
- 2 Nissan e-NV200
- 3 Citroën e-Berlingo Van

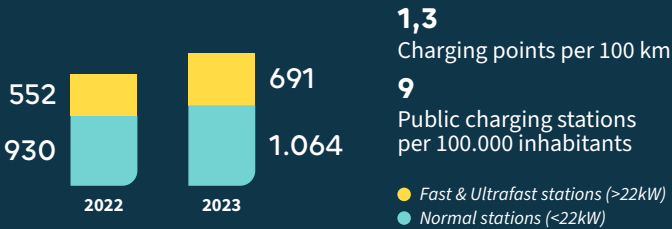
BEV TCO parity

3/15



Charging infrastructure

7/20



Green powertrain offer

9/15

66 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity at 230g (g CO₂ eq/kWh), with 80% low carbon and 62% renewable.

Taxation and regulation

6/20

[ACEA_Tax_Guide_2022.pdf](#)



Romania

Taxation and regulation

6/20



Registration tax & ownership benefits

- Electric or hybrid cars have a special taxation status. According to the Fiscal Code, in the case of hybrida, the taxation is reduced by at least 50%, according to the decision of the local council of each municipality, and electric vehicles are exempt from paying the tax. The 50% tax reduction established by the Fiscal Code is the minimum. For example, for hybrid vehicles registered in Bucharest, the discount is 95%.



Company tax benefit

n/a



Employee benefit

n/a



Purchase subsidy

- An eco-voucher of RON 26,000 (€5.200) for the purchase of a plug-in hybrid electric car with CO₂ emissions of 80g or less CO₂/km WLTP; the scrappage of an old car is mandatory.
- An eco-voucher of RON 29.000 (€5,800) for the purchase of a plug-in hybrid electric car with CO₂ emissions of 78g CO₂/km WTLTP; the scrappage of two old cars is mandatory.
- An eco-voucher of RON 51,000 (€10.200) for the purchase of a pure electric vehicle; the scrappage of an old car is mandatory. The value of the incentive cannot be more than 50% of the total value of the vehicle.
- An eco-voucher of RON 54.000 (€10.800) for the purchase of a pure electric vehicle; the scrappage of two old cars is mandatory. The value of the incentive cannot be more than 50% of the total value of the vehicle.



EV infrastructure subsidy

- Grants up to €100.000 for the creation of photovoltaic parks and the purchase of electric charging stations.



Regulation

- BEVs, PHEVs and HEVs benefit of free parking in public parkings in the main cities, including Bucharest; Online easy procedure to obtain the digital parking vignette;

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.

Serbia



Ayvens fleet size at end 2022
5.237

EV maturity scoring

14/100



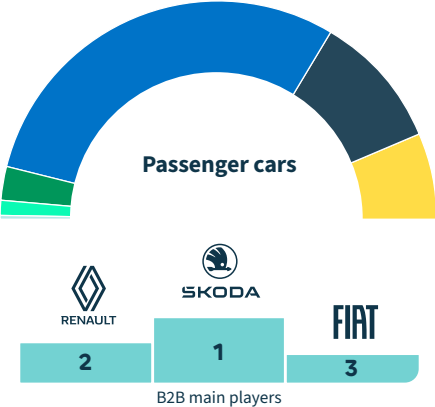
EV adoption

4/25

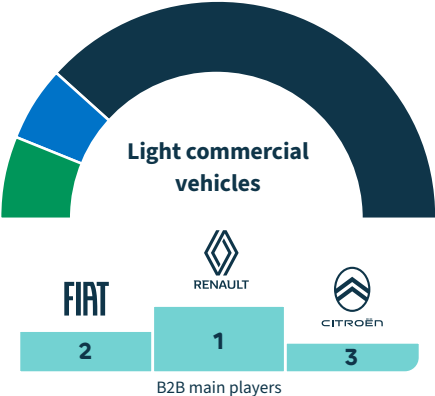
Powertrain mix

All market new vehicles registrations 2022

- 1% BEV
- 2% PHEV
- 5% HEV
- 59% Petrol
- 20% Diesel
- 13% Other



- 0% BEV & PHEV
- 0% Hybrid
- 12,2% Alt fuel
- 11,5% Petrol
- 76% Diesel



Growth 2022 vs 2021

All market PC

- 0% BEV
- 0% PHEV
- +4% ICE

Top 3 BEV

All market PC

- 1 BMW iX
- 2 Hyundai Ioniq 5
- 3 Hyundai Kona

Top 3 e-LCV

All market LCV

- 1 Peugeot Expert
- 2 Renault Kangoo
- 3 SAIC Motor Maxus EV80

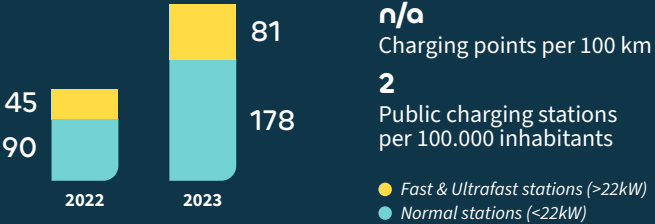
BEV TCO parity

0/15

n/a

Charging infrastructure

4/20



Green powertrain offer

2/15

35 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity at 398g (g CO₂ eq/kWh), with 54% low carbon and 52% renewable.

Taxation and regulation

3/20

www.srbija.gov.rs



Slovakia



Ayvens fleet size at end 2022

14.900

EV maturity scoring

28/100

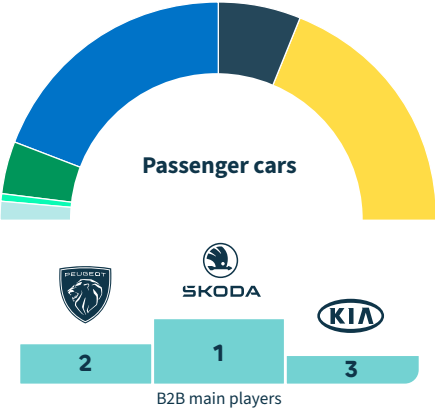
EV adoption

6/25

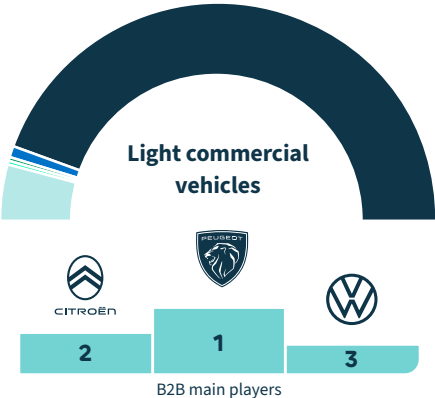
Powertrain mix

All market new vehicles registrations 2022

- 1% BEV
- 1% PHEV
- 14% HEV
- 36% Petrol
- 11% Diesel
- 36% Other



- 1,5% BEV & PHEV
- 0% Hybrid
- 0,2% Alt fuel
- 4,4% Petrol
- 93,8% Diesel



Growth 2022 vs 2021

All market PC

- +30% BEV
- +62% PHEV
- 0,4% ICE

Top 3 BEV

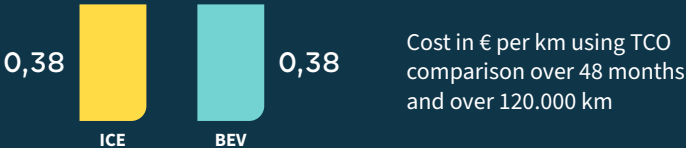
- All market PC
- 1 Škoda Enyaq
 - 2 Dacia Spring
 - 3 Kia EV6

Top 3 e-LCV

- All market LCV
- 1 Mercedes eSprinter Van
 - 2 Opel/Vxh. Combo-e Cargo
 - 3 Opel/Vxh. Vivaro-e

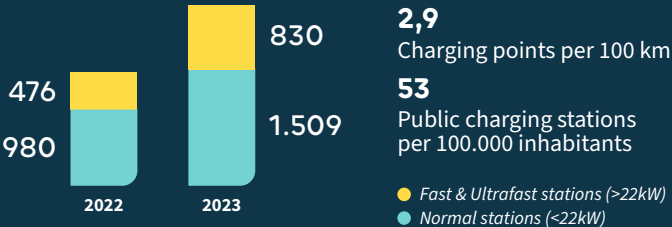
BEV TCO parity

3/15



Charging infrastructure

4/20



Green powertrain offer

9/15

61 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 179g (g CO₂ eq/kWh), with 79% low carbon and 23% renewable.

Taxation and regulation

3/20

www.financnasprava.sk



Slovakia

Taxation and regulation

3/20



Registration tax & ownership benefits

- BEV registration is subject to a maximum charge of €33.
- BEVs or PHEVs combined with other fuel types or energy sources, are depreciated for two years.
- Exemption for BEVs.
- 50% for FCEVs and HEVs.



Employee benefit

n/a



EV infrastructure subsidy

n/a



Company tax benefit

- BEVs & PHEVs vehicle can be classified as company asset within the scope of “zero depreciation group of assets”. This grants a full depreciation within two years instead of the normal period being four years.



Purchase subsidy

n/a



Regulation

- Soon to be expected low emission zones for hybrids/EV- in capital city. EV licence plates are green and start with the letters EL.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Slovenia



Ayvens fleet size at end 2022

2.500

EV maturity scoring

33/100

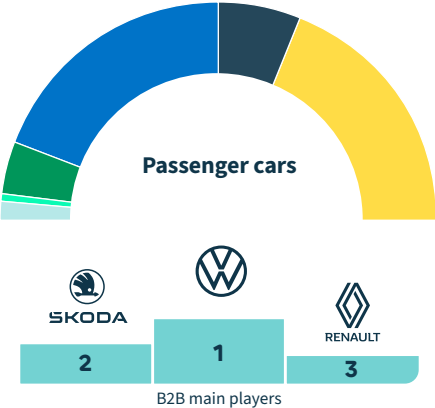
EV adoption

10/15

Powertrain mix

All market new vehicles registrations 2022

- 3% BEV
- 1% PHEV
- 8% HEV
- 38% Petrol
- 12% Diesel
- 38% Other



- 8,4% BEV & PHEV
- 0,9% Hybrid
- 0,3% Alt fuel
- 1,6% Petrol
- 88,9% Diesel



Growth 2022 vs 2021

- All market PC
- +34% BEV
 - +120% PHEV
 - 19% ICE

Top 3 BEV

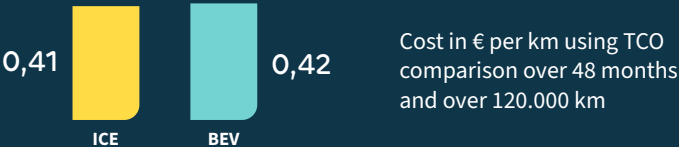
- All market PC
- 1 Tesla Model 3
 - 2 VW ID.4
 - 3 Škoda Enyaq

Top 3 e-LCV

- All market LCV
- 1 Citroën e-Berlingo Van
 - 2 Citroën e-Jumpy
 - 3 Maxus EV80

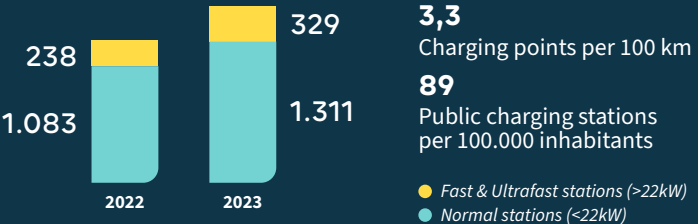
BEV TCO parity

3/15



Charging infrastructure

6/20



Green powertrain offer

8/15

59 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 247g (g CO₂ eq/kWh), with 46% low carbon and 44% renewable.

Taxation and regulation

3/20

www.fu.gov.si



Slovenia

Taxation and regulation

3/20

 Registration tax & ownership benefits • Minimum additional tax rate (0,5%) for BEVs.	 Employee benefit • No benefit in kind for BEV.	 EV infrastructure subsidy n/a
 Company tax benefit n/a	 Purchase subsidy • Incentive scheme: up to €4.500 for BEVs.	 Regulation n/a

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Spain



Ayvens fleet size at end 2022

228.500

EV maturity scoring

45/100

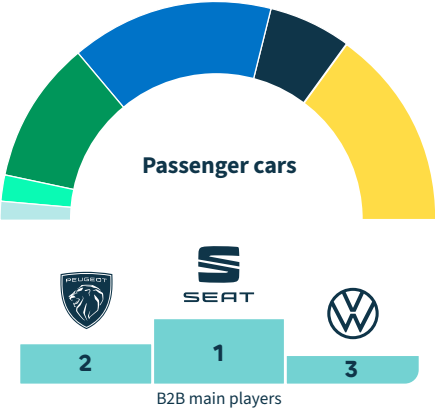
EV adoption

9/25

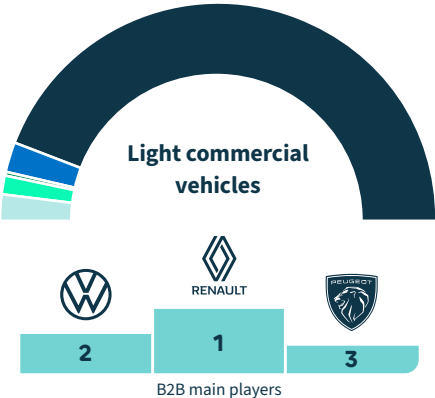
Powertrain mix

All market new vehicles registrations 2022

- 3% BEV
- 4% PHEV
- 21% HEV
- 30% Petrol
- 12% Diesel
- 30% Other



- 4,2% BEV & PHEV
- 2,9% Hybrid
- 0,4% Alt fuel
- 4,3% Petrol
- 88% Diesel



Growth 2022 vs 2021

- All market PC
- +31% BEV
 - +11% PHEV
 - 19% ICE

Top 3 BEV

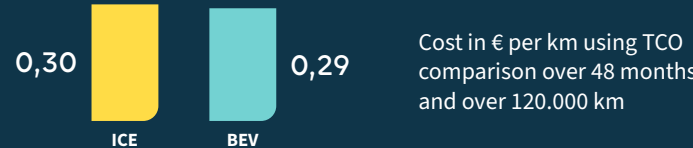
- All market PC
- 1 Tesla Model Y
 - 2 MG 4
 - 3 Fiat 500

Top 3 e-LCV

- All market LCV
- 1 Citroën e-Berlingo Van
 - 2 Renault Kangoo
 - 3 Maxus EV30 / e-Deliver 3

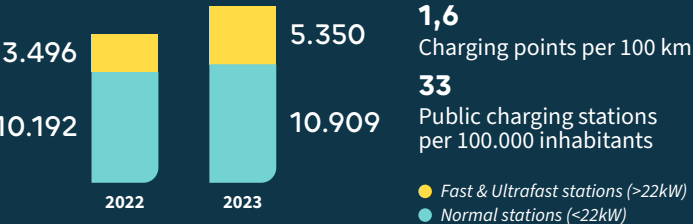
BEV TCO parity

7/15



Charging infrastructure

8/20



Green powertrain offer

11/15

More than 100 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 281g (g CO₂ eq/kWh), with 70% low carbon and 49% renewable.

Taxation and regulation

7/20

[ACEA_Tax_Guide_2022.pdf](#)



Taxation and regulation

7/20

Registration tax & ownership benefits

- Exemption from ‘special tax’ for vehicles emitting $\leq 120\text{g CO}_2/\text{km}$.
- Canary Islands: VAT exemption for alternatively powered vehicles (eg BEVs, FCEVs, PHEVs, EREVs, and HEVs) emitting $\leq 110\text{g CO}_2/\text{km}$.
- 75% reduction for BEVs in main cities (eg Barcelona, Madrid, Valencia, Zaragoza, etc).

Company tax benefit

The use of a company car for private purposes is regarded as a payment in kind and included in the calculation of personal income tax:

- 30% reduction for BEVs and PHEVs $\leq \text{€}40.000$
- 20% reduction for HEVs $\leq \text{€}35.000$

Employee benefit

n/a

Purchase subsidy

Incentive scheme (MOVES III) in 2021-2023:

- Cars (M1): $\text{€}4.500\text{--}\text{€}7.000$ for BEVs and FCEVs, and $\text{€}2.500\text{--}\text{€}5.000$ for PHEVs, for private individuals, depending on whether a vehicle is being scrapped.
- Different incentives for SMEs and large companies (+ MOVES FLOTAS) For more details:
- www.idae.es/ayudas-y-financiacion/para-movilidad-y-vehiculos/programa-moves-iii
- www.idae.es/ayudas-y-financiacion/para-movilidad-y-vehiculos/programa-moves-flotas

EV infrastructure subsidy

Incentive scheme (MOVES III) in 2021-2023:

- Self-employed, individuals, neighbouring communities, and administration: 70% of the eligible cost.
- Companies and public charging points (power $\leq 50\text{ kW}$): 35% of the eligible cost for a large, 45% for a medium, and 55% for a small company.
- Companies and public charging points (power $> 50\text{ kW}$): 30% of the eligible costs. These amounts are increased if the location is in municipalities with less than 5.000 inhabitants.

Regulation

Free parking for BEV in some cities.

- BEV can use reserved traffic lanes in some cities.
- Regulation of traffic in main cities during pollution peak. Restricted traffic areas in main cities, except EV i.e. Madrid 360 & Barcelona ZBE.

Some exemptions might apply in specific business/operational context.

Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Sweden



Ayvens fleet size at end 2022

41.100

EV maturity scoring

65/100

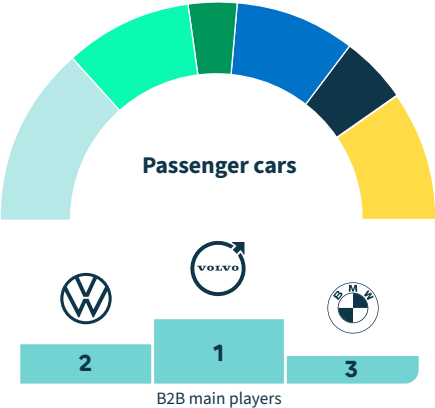
EV adoption

20/25

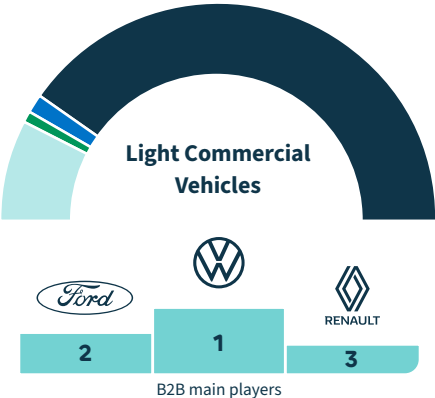
Powertrain mix

All market new vehicles registrations 2022

- 27% BEV
- 19% PHEV
- 7% HEV
- 18% Petrol
- 10% Diesel
- 19% Other



- 15,3% BEV & PHEV
- 0% Hybrid
- 1,8% Alt fuel
- 2,8% Petrol
- 80% Diesel



Growth 2022 vs 2021

- All market PC
- +65% BEV
 - 15% PHEV
 - 29% ICE

Top 3 BEV

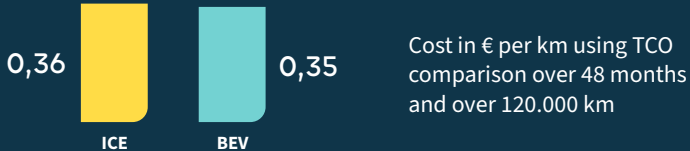
- All market PC
- 1 Tesla Model Y
 - 2 Volvo XC40
 - 3 VW ID.4

Top 3 e-LCV

- All market LCV
- 1 Toyota Proace Van
 - 2 Renault Kangoo
 - 3 Ford E-Transit

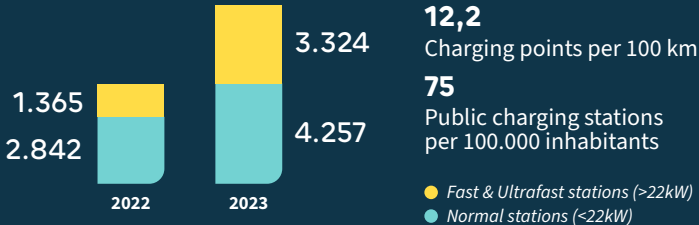
BEV TCO parity

7/15



Charging infrastructure

8/20



Green powertrain offer

14/15

91 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

5/5

Carbon intensity at 16g to 30g (g CO₂ eq/kWh), with 100% low carbon and 57% to 100% renewable.

Taxation and regulation

11/20

Bil och trafik | Skatteverket



Taxation and regulation

11/20

Registration tax & ownership benefits

- Low annual road tax (360 kr) for zero-emission vehicles and PHEVs.

Employee benefit

- The private use of a company car is taxed on benefits. For some cars, there is a permanent tax reduction of the benefit value. The reduction is a fixed amount based on the environmental technology:
 - BEVs and FCEVs: 350.000 kr
 - PHEVs: 140.000 kr
- The taxable benefit value is based on the new car price and reduced by the relevant amount. The discount may not exceed 50% of the car price.

EV infrastructure subsidy

- 50% tax deduction (max 15.000 kr) for households installing a charging box at home for an electric car.
- *Ladda bilen* grant for the installation of AC charging for residents in apartment buildings.

Company tax benefit

- The lower road tax and reduction in taxable list price described above for EVs/PHEVs/CNG
- Vehicles benefits the company through lower employer taxes on drivers, BIK compared to diesel/petrol vehicles.

Purchase subsidy

Since November 2022 no Subsidy amount from the Government for Electric vehicles.

Regulation

- As of 2020, municipalities can exempt vehicles with high emissions from specific areas. Only pre-EU5 vehicles are so far denied from certain streets in Stockholm. Furthermore, there are plans to expand this so that only EVs/fuel cell/CNG vehicles are allowed to enter. The regulations will be gradually implemented between 2024 and 2026.

Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.



Switzerland



Ayvens fleet size at end 2022

6.432

EV maturity scoring

54/100

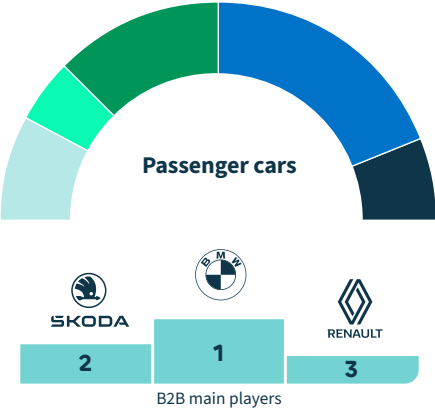
EV adoption

14/25

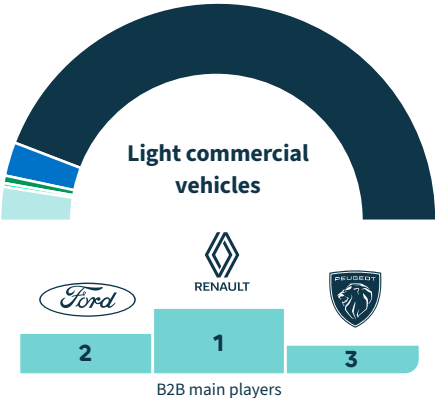
Powertrain mix

All market new vehicles registrations 2022

- 16% BEV
- 9% PHEV
- 25% HEV
- 38% Petrol
- 12% Diesel
- 0% Other



- 5,4% BEV & PHEV
- 0,3% Hybrid
- 1,2% Alt fuel
- 5,2% Petrol
- 88% Diesel



Growth 2022 vs 2021

All market PC

- +4% BEV
- 1% PHEV
- 7% ICE

Top 3 BEV

All market PC

- 1 Tesla Model Y
- 2 Tesla Model 3
- 3 Škoda Enyaq

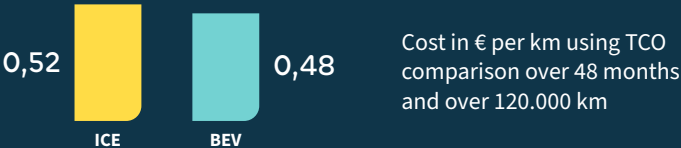
Top 3 e-LCV

All market LCV

- 1 Renault Master Z.E
- 2 Renault Kangoo Z.E.
- 3 Ford Transit

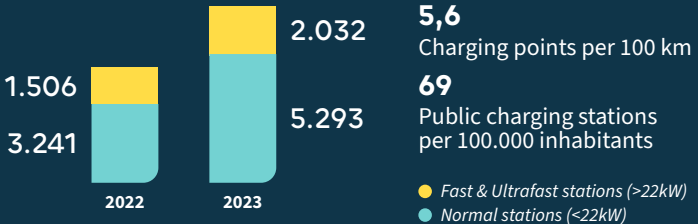
BEV TCO parity

11/15



Charging infrastructure

7/20



Green powertrain offer

12/15

95 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

5/5

Carbon intensity at 83g (g CO₂ eq/kWh), with 92% low carbon and 63% renewable.

Taxation and regulation

5/20

www.ch.ch



Switzerland

Taxation and regulation

5/20



Registration tax & ownership benefits

- Electric cars are exempt from the automobile tax.
- Various cantons reduce or exempt the traffic tax over a certain period, depending on the fuel consumption (CO₂/km).



Employee benefit

n/a



EV infrastructure subsidy

- Various cantons and municipalities contribute to the installation costs for electromobility.



Company tax benefit

- Various cantons reduce or exempt the traffic tax over a certain period, depending on the fuel consumption (CO₂/km).



Purchase subsidy

- Purchase subsidies for a BEV can be up to CHF 5.000, depending on city/canton.



Regulation

n/a

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*

Thailand



Ayvens fleet size at end 2022

2.506

EV maturity scoring

40/100

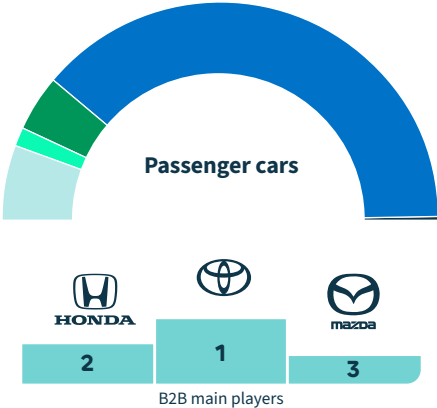
EV adoption

8/25

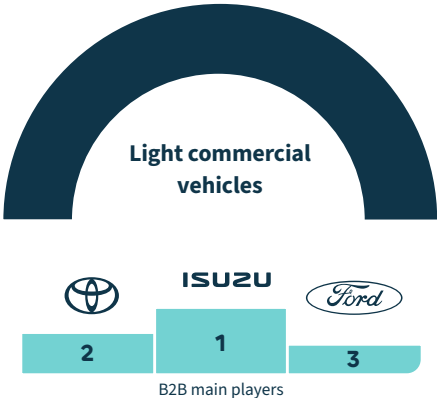
Powertrain mix

All market new vehicles registrations 2022

- 11,5% BEV
- 2,4% PHEV
- 8,7% HEV
- 77,3% Petrol
- 0,1% Diesel



- 0,10% BEV & PHEV
- 99,9% Hybrid, alt fuel, petrol and diesel



Growth 2022 vs 2021

All market PC

- +776% BEV
- +420% PHEV
- +13% ICE

Top 3 BEV

All market PC

- 1 BYD Yuan Plus / Atto-3
- 2 Hozon auto Neta V
- 3 Ora R3 / Good Cat

Top 3 e-LCV

All market LCV

- 1 BYD T3 BEV
- 2 n/a
- 3 n/a

BEV TCO parity

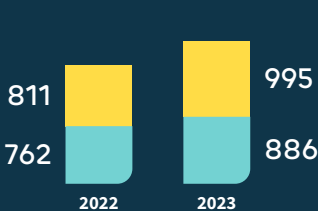
13/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

8/20



0.9
Charging points per 100 km

2
Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

6/15

45 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity from 509g (g CO₂ eq/kWh), with up to 16% low carbon and up to 16% renewable.

Taxation and regulation

4/20

Government subsidy for BEV produced in Thailand.

Turkey



Ayvens fleet size at end 2022
34.941

EV maturity scoring

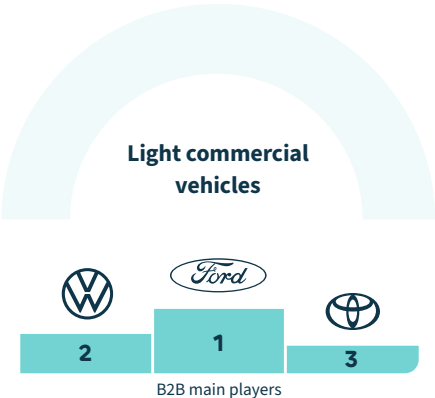
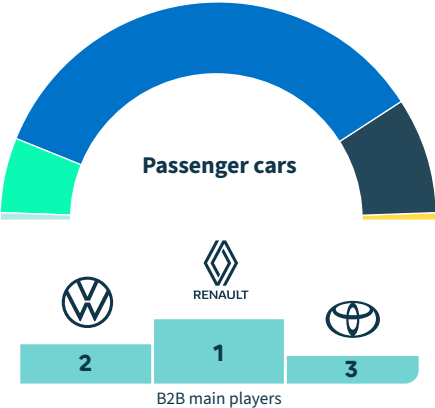
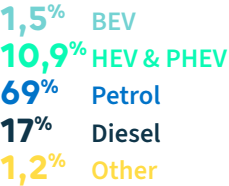


EV adoption

7/25

Powertrain mix

All market new vehicles registrations 2022



Growth 2022 vs 2021

All market PC
+171% BEV
+30% HEV
+6% ICE

Top 3 BEV

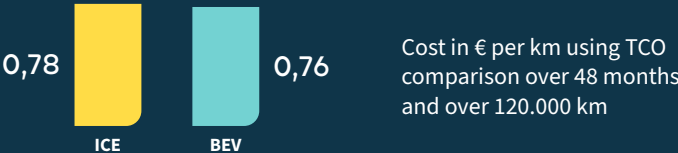
All market PC
1 Tesla Model Y
2 TOGG T10X
3 Renault ZOE

Top 3 e-LCV

All market LCV
1 Ford e-Transit
2 n/a
3 n/a

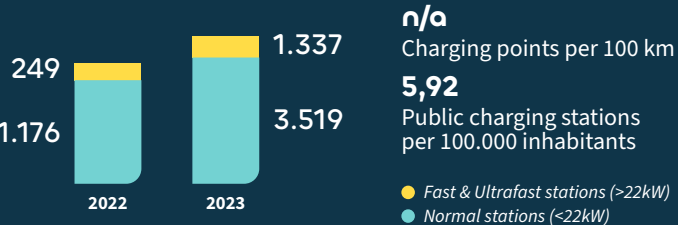
BEV TCO parity

6/15



Charging infrastructure

4/20



Green powertrain offer

4/15

25 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity at 387g (g CO₂ eq/kWh), with 50% low carbon and 50% renewable.

Taxation and regulation

2/20

www.gib.gov.tr



United Arab Emirates



Ayvens fleet size at end 2022

4.700

EV maturity scoring

26/100

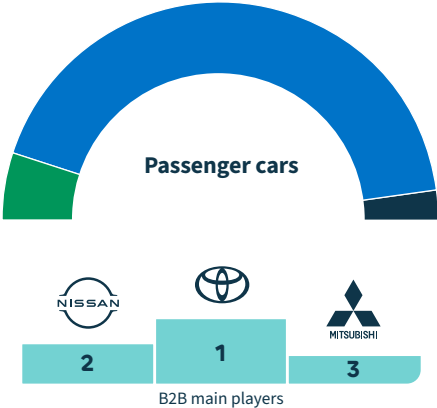
EV adoption

9/25

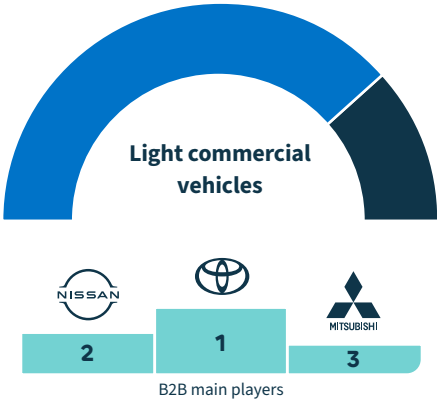
Powertrain mix

All market new vehicles registrations 2022

- 0,2% BEV
- 0% PHEV
- 10% HEV
- 86% Petrol
- 4% Diesel
- n/a Other



- n/a BEV & PHEV
- n/a Hybrid
- n/a Alt fuel
- 77% Petrol
- 23% Diesel



EV adoption % related to Ayvens fleet.

Growth 2022 vs 2021

All market PC

- +45% BEV
- 24% PHEV
- +8% ICE

Top 3 BEV

All market PC

- 1 Tesla Model Y
- 2 Tesla Model 3
- 3 Tesla Model S

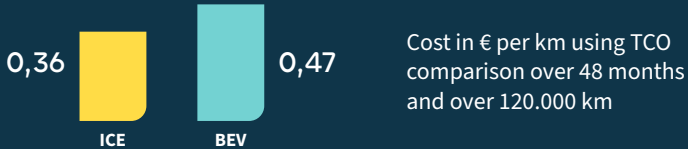
Top 3 e-LCV

All market LCV

- 1 Peugeot e-Partner
- 2 Peugeot e-Expert
- 3 n/a

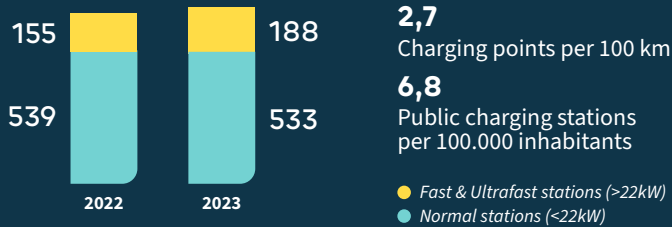
BEV TCO parity

0/15



Charging infrastructure

8/20



Green powertrain offer

7/15

20 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

1/5

Carbon intensity from 462g (g CO₂ eq/kWh).

Taxation and regulation

1/20

dubaievhub.ae/government-framework/incentives/



United Kingdom



Ayvens fleet size at end 2022
317.700

EV maturity scoring

60/100

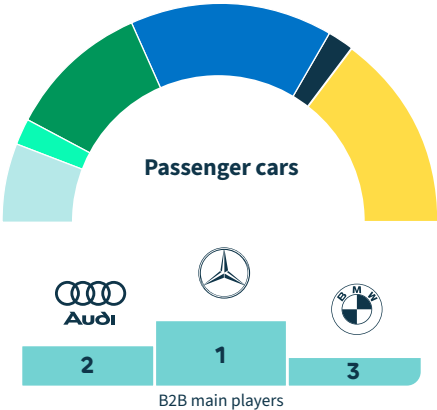
EV adoption

15/25

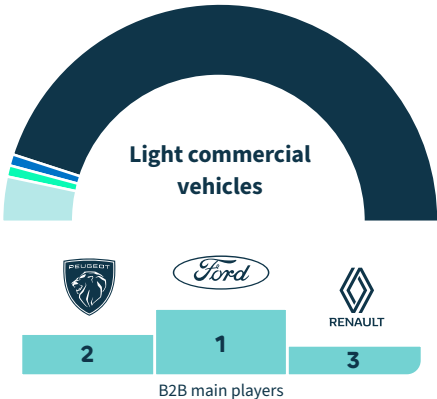
Powertrain mix

All market new vehicles registrations 2022

- 12% BEV
- 4% PHEV
- 21% HEV
- 30% Petrol
- 4% Diesel
- 30% Other



- 6,7% BEV & PHEV
- 1,7% Hybrid
- 0% Alt fuel
- 1,6% Petrol
- 90% Diesel



Growth 2022 vs 2021

All market PC

- +39% BEV
- 16% PHEV
- 17% ICE

Top 3 BEV

All market PC

- 1 Tesla Model 3
- 2 Audi Q4 E-Tron
- 3 VW ID.3

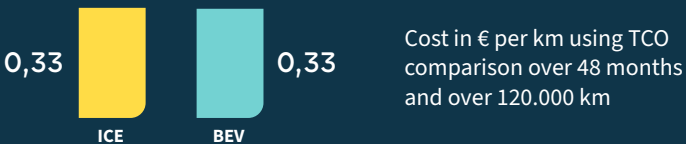
Top 3 e-LCV

All market LCV

- 1 Opel/Vxh. Vivaro-e
- 2 Peugeot e-Partner
- 3 Peugeot e-Expert

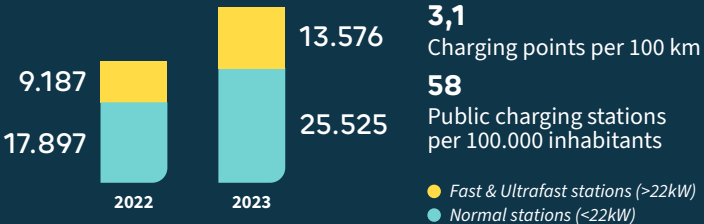
BEV TCO parity

3/15



Charging infrastructure

11/20



Green powertrain offer

14/15

85 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

3/5

Carbon intensity at 213g (g CO₂ eq/kWh), with 61% low carbon and 39% renewable.

Taxation and regulation

14/20

alntaxguide.co.uk

United Kingdom

Taxation and regulation

14/20

Registration tax & ownership benefits

- BEV costing less than £40,000 are exempt from payment of annual circulation tax (Vehicle excise duty) until April 1st 2025 where all BEVs (including vehicles registered historically) will be required to pay road tax.

Company tax benefit

- Preferential tax rates for electric and ultralow emission cars (< 75g CO₂/km). For more details: www.gov.uk/tax-company-benefits/tax-on-company-cars.
- Company cars are taxed on 2% of list price. Between 2025/26 and 2027/28 this will increase by one percentage point each year, reaching 5% in the year from April 2028.
- Employers pay Class 1 A National Insurance contributions on benefits provided to employees at the above rates.

Employee benefit

- Benefit In Kind taxation is currently at 2% for BEV, between 2025/26 and 2027/28 this will increase by one percentage point each year, reaching 5% in the year from April 2028.

Purchase subsidy

- Additional grants for different vehicle types e.g. wheelchair accessible vehicles (MAVs), taxis, motorbikes etc - <https://www.gov.uk/plug-in-vehicle-grants>
- No purchase subsidies for passenger cars but there are purchase subsidies for eLCVs:
 - Purchase subsidies for cars have been withdrawn.
 - > Small vans < 2,500, < 50 g/km CO₂ and travel at least 60 miles with zero emissions = 35% of the purchase price up to £2,500
 - > Large Vans >2,500 to 4,250, < 50 g/km CO₂ and travel at least 60 miles with zero emissions = 35% of the purchase price up to £5,000. This is capped at 1,000 grants per end user.

EV infrastructure subsidy

- There are different schemes for workplace charging, landlord owned property and local authorities, details can be found here: <https://www.gov.uk/government/collections/government-grants-for-low-emission-vehicles>
- There are no longer grants for owner occupied dwellings.
- From 2023, all new build property has an associated parking space is required to have access to EV charging.

Regulation

- EVs get a 100% “cleaner vehicle discount” in the London Congestion Charge zone. It will continue to be available until at least December 25th 2025.
- A green licence plate is now available, making it easier for local authorities to provide incentives such as reduced parking fees or the use of bus lanes.

*Some exemptions might apply in specific business/operational context.
Regulation and subsidy might be subject of modification from government with no prior notice. Get in touch with your Ayvens consultant to get an ad-hoc study.*



United States of America



Partner fleet size at end 2022

620.000

EV maturity scoring

32/100

EV adoption

11/25

Powertrain mix

All market new vehicles registrations 2022

- 7,6%

BEV
- 3,4%

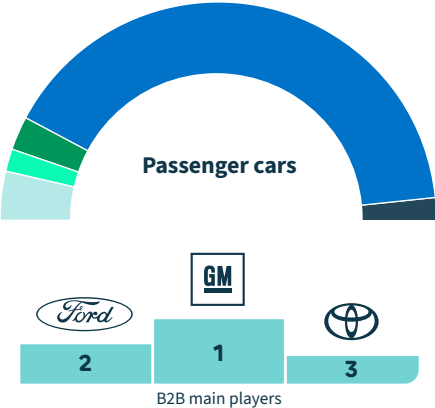
PHEV
- 5%

HEV
- 80,5%

Petrol
- 4%

Diesel
- 0%

Other



- n/a

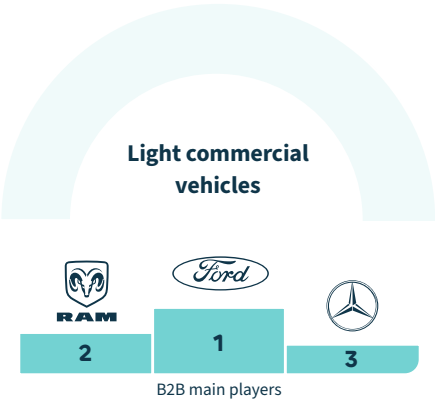
BEV & PHEV
- n/a

Hybrid
- n/a

Alt fuel
- n/a

Petrol
- n/a

Diesel



Growth 2022 vs 2021

All market PC

- +66%

BEV
- +6%

PHEV
- 11%

ICE

Top 3 BEV

All market PC

- 1

Tesla Model Y
- 2

Tesla Model 3
- 3

Ford Mustang Mach-E

Top 3 e-LCV

All market LCV

- 1

Rivian EDV
- 2

Ford E-Transit
- 3

Brightdrop EV600

BEV TCO parity

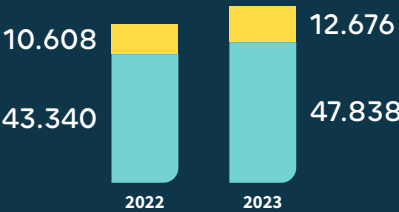
0/15



Cost in € per km using TCO comparison over 48 months and over 120.000 km

Charging infrastructure

4/20



0,9 Charging points per 100 km

18 Public charging stations per 100.000 inhabitants

- Fast & Ultrafast stations (>22kW)
- Normal stations (<22kW)

Green powertrain offer

10/15

41 unique different models with at least one unit sold in the last 12 months.

Sustainability relevance

2/5

Carbon intensity from 24g to 671g (g CO₂ eq/kWh), with up to 100% low carbon and up to 100% renewable.

Taxation and regulation

5/20

home.treasury.gov

Better with every move.



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