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Deloitte EV Index
EU comparison of market readiness

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Index by dimension and country
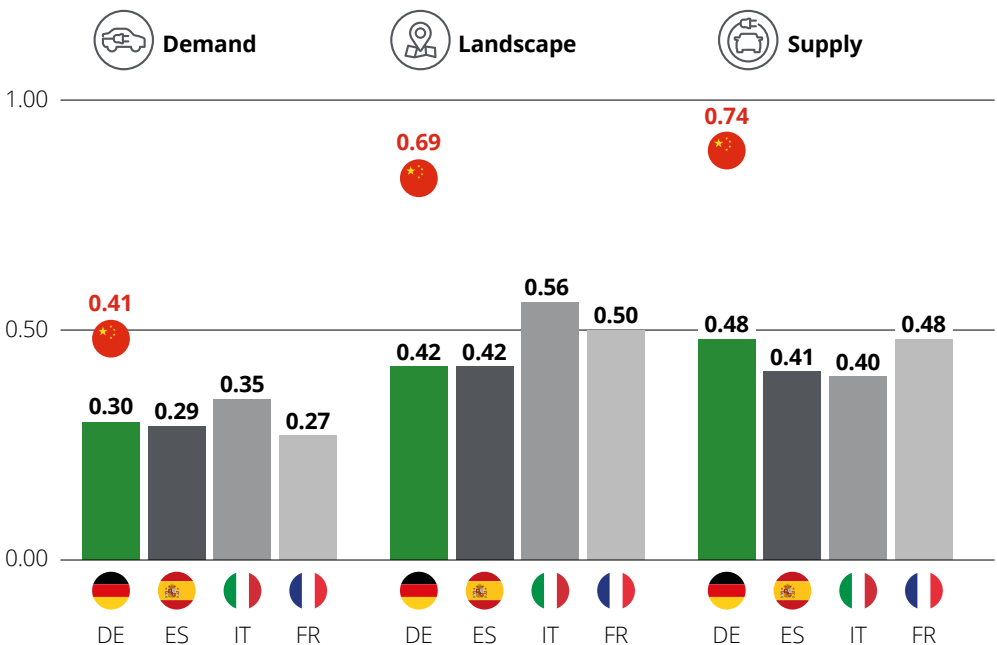
The four largest markets in the EU show a similar situation, making it difficult for BEV vehicles to penetrate the market.

- **Demand:** Consumers remain uneasy due to cost and range and charging concerns, not wanting to bear the loss of comfort of conventional drives. This keeps demand low.
- **Landscape:** The operating costs of BEVs are lower compared to ICEs, but not perceived to compensate for the higher purchase costs. High depreciation in the used car market for BEVs exacerbates the unfavorable cost-savings ratio, as does the lack of adequate infrastructure.
- **Supply:** BEVs are currently significantly more expensive than comparable ICE vehicles. Shorter ranges and a more limited selection of models continue to make BEVs unattractive for the mass market.

Note: Index calculated as the weighted sum of several normalized scores for each dimension.

Germany | Demand analysis

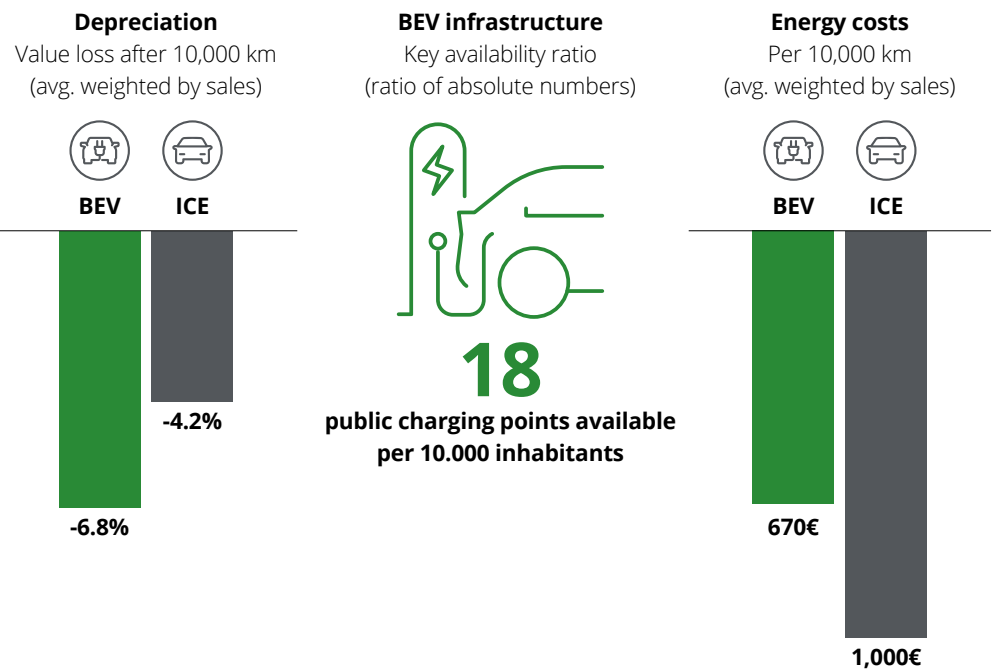**Percentage of German consumers...**
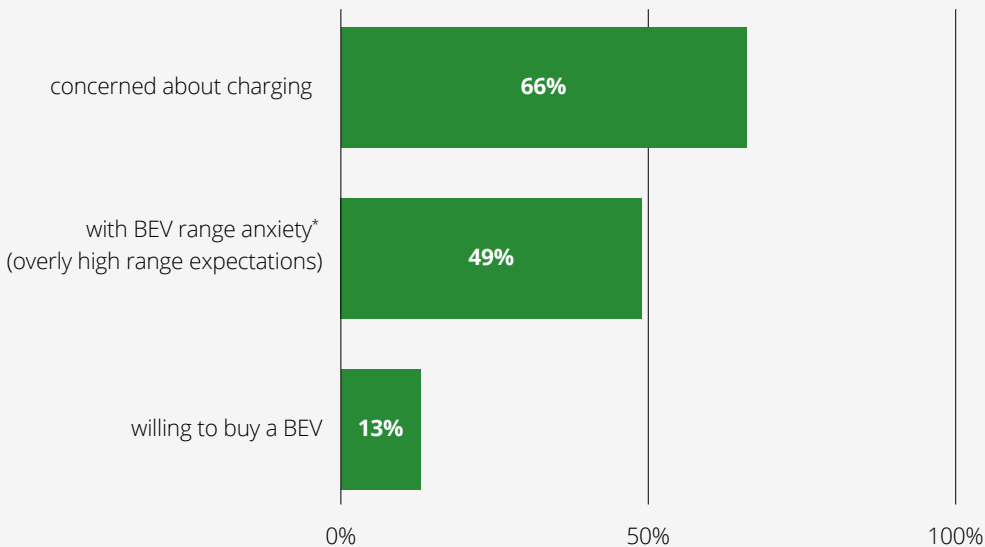
The demand for electric vehicles (EVs) in Germany is significantly influenced by consumer concerns and expectations.

- **Purchase intentions:** The willingness to purchase a BEV as the next car is low, with only 13% of consumers expressing readiness, highlighting a substantial barrier to market penetration.
- **Charging issues:** Two-thirds of German consumers are concerned about charging infrastructure and related issues. These include charging times and the availability of charging stations.
- **Range anxiety** is a striking factor, with half of consumers expecting electric vehicles to have a relatively high range in order to consider them as viable options. The offers currently available do not meet consumer expectations.

Note: Consumers expecting over 600 km/400 miles (factor 1) or 500 km/300 miles (factor 0.5) were considered for the calculation.
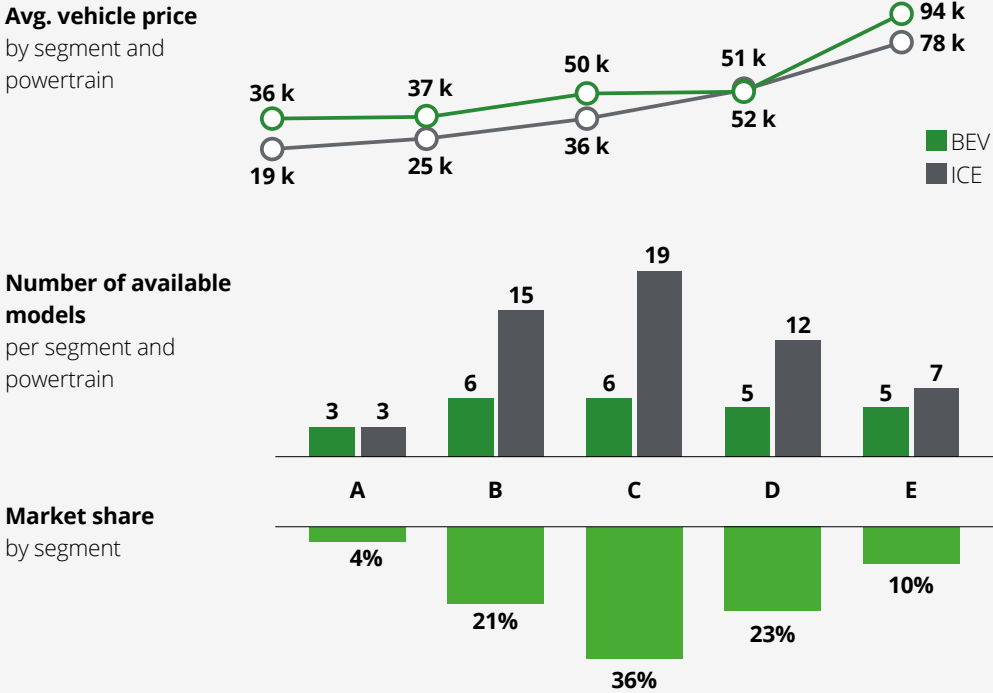
Germany | Landscape analysis

Depreciation
Value loss after 10,000 km
(avg. weighted by sales)

BEV infrastructure
Key availability ratio
(ratio of absolute numbers)

Energy costs
Per 10,000 km
(avg. weighted by sales)

BEV   ICE

18
**public charging points available
per 10.000 inhabitants**

BEV   ICE

BEV: -6.8%
ICE: -4.2%

BEV: 670€
ICE: 1,000€

The landscape for battery electric vehicles (BEVs) in Germany poses challenges that impact consumer perception and adoption rate.

- **Depreciation:** BEVs experience a 60% higher depreciation compared to ICE vehicles, leading to consumer uncertainty about their long-term value and concerns about future depreciation trends.
- **Charging infrastructure:** Germany lags behind other European countries in the number of charging points per capita.
- **Running costs:** Charging costs (at home) for BEVs in Germany are approximately two-thirds of the fuel costs for ICE vehicles. Other European countries benefit from significantly lower electricity prices and thus lower operating costs. For example, charging at home in Spain costs ~40 per cent less than in Germany.

Germany | Supply analysis

Avg. vehicle price
by segment and powertrain

BEV: 36 k, 37 k, 50 k, 51 k, 94 k
ICE: 19 k, 25 k, 36 k, 52 k, 78 k

Legend: BEV, ICE

Number of available models
per segment and powertrain

	A	B	C	D	E
BEV	3	6	6	5	5
ICE	3	15	19	12	7

Market share
by segment

A: 4%
B: 21%
C: 36%
D: 23%
E: 10%

- **Model availability:** The availability of BEVs is significantly lower than that of ICE vehicles in almost all segments. This difference is most pronounced in segments B, C and D, where market shares are highest, resulting in a more limited choice for consumers.
- **The price difference** across all segments lies at around €10,200. This difference plays a greater role at the lower end of the vehicle price scale, as buyers are significantly more price-sensitive.
- **BEV market gap:** Mass adoption of e-mobility will only be feasible if segments A–C are better served and overcome current limitations in availability and price sensitivity.

Note: F segment and further unclassified vehicles excluded, making up the remaining 5% of the market.

EV index explained – Example Germany

Dimension (score)	Subdimension (normalized score)	ICE value	BEV value	Explanation
Demand (0.30)	Purchase intentions (0.32)	–	13%	This considers the share of consumers willing to buy a BEV as next vehicle (13%). A normalized value (0.32) is used to compare countries to each other.
	Charging concerns (0.17)	–	66%	This considers the share of consumers with concerns about charging issues (66%). A normalized value (0.17) is used to compare countries to each other. The more concerns, the lower the normalized value.
	Range anxiety (0.18)	–	49%	This considers the share of consumers with very high expectations for BEV range (49%). A normalized value (0.18) is used to compare countries to each other. Consumers expecting over 600 km/400 miles (factor 1) or 500 km/300 miles (factor 0.5) were considered for the calculation. The higher the expectations, the lower the normalized value.
	Willingness to pay ratio (0.51)	1	1.42	Consumers were asked in which price range they would buy their next car. The data was analyzed by comparing powertrain (BEV vs. ICE) and a ratio calculated (1.42) to compare how much more people are willing to pay for BEVs. The higher the difference, the higher the score. A normalized value (0.51) is used to compare countries to each other.
Landscape (0.42)	Vehicle depreciation (0.68)	–	1.63	Pricing, age and mileage data for hundreds of vehicles was gathered online and the average values for value loss (weighted by sales) were calculated according to segment and powertrain. A ratio was then calculated to compare how much value BEVs lose compared to ICEs. The higher the difference, the lower the normalized score (0.68) used to compare countries to each other.
	Fuel costs per 10,000 km (0.49)	1	0.67	Data on fuel and electricity prices and on the annual mileage of vehicles was gathered online, and the average value for fuel costs per 10,000 km were calculated by powertrain. A ratio was then calculated to compare the costs of BEVs to ICEs. The higher the difference, the higher the normalized score (0.49) used to compare countries to each other.
	Charging points per BEV sold (0.16)	–	0.32	Data on the number of charging points available per country was gathered, and a ratio was created for comparison to the number of BEVs sold in the last year (0.32). A normalized value (0.16) was then used to compare countries to each other.
	Charging points per capita (0.18)	–	0.0018	Data on the number of charging points available per country was gathered, and a ratio was created for comparison to the population (0.0018). A normalized value (0.18) was then used to compare countries to each other.
Supply (0.48)	Model availability ratio (0.46)	1	0.57	Data on available vehicle models by powertrain and segment was used to create a ratio between available BEVs vs ICEs. The less BEV models per segment in a given market compared to ICE vehicles, the lower the score value. A normalized value was used to compare countries.
	Avg. vehicle price ratio (0.63)	1	1.37	Data on vehicle price by powertrain and segment was used to create a ratio between BEVs vs ICEs. The higher the price for BEV models per segment in a given market compared to ICE vehicles, the lower the score value. A normalized value was used to compare countries.
	Avg. vehicle range ratio (0.36)	1	0.62	Data on vehicle range by powertrain and segment was used to create a ratio between BEVs vs ICEs. The lower the range for BEV models per segment in a given market compared to ICE vehicles, the lower the score value. A normalized value was used to compare countries.

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