



EV CHARGING INDEX: EXPERT INSIGHT FROM SOUTH KOREA

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Ambitious government targets and a rapidly growing charging network make for a dynamic EV ecosystem

EV sales penetration in South Korea is below the global average, but the government has set aggressive goals for strong growth. This will be fueled by regulations and incentives to promote EV adoption and charging infrastructure expansion. The charging ecosystem is particularly dynamic with increased involvement from the private sector.

- **What are the current key trends within EV adoption and charging in South Korea?**

The government is implementing regulations and incentives to encourage consumers to choose EVs. In tandem, carmakers are now offering more electric models, which gives consumers greater choice. Charging infrastructure is particularly important in South Korea – even more than in other major markets like Germany, China and the United States. Increased charger density is helping to alleviate range anxiety, which is another driver for EV adoption.

Strong customer needs for more EV charging infrastructure – even compared to other countries – will accelerate market growth even further

EVs: Share of potential buyers – reasons for not buying an EV

	average	South Korea	Japan	USA	Germany	China
Price is too high	56	45	51	45	59	23
Insufficient infrastructure/charging stations	41	65	53	43	52	59
Range is too low	33	28	34	34	50	68
It takes too long to charge	27	44	31	31	45	55
Residual value is uncertain	18	19	16	21	24	36

Source RB Automotive Disruption Radar online survey (Feb 2023)



The ratio of EVs to public chargers in Korea stands at 11.5, which is just below the global average of 15.9, and much higher than the three best performers (1.8). Despite rapid growth in the number of chargers, consumers remain frustrated, citing a lack of charging in busy areas, a lack of DC chargers and insufficient charger maintenance. Both the government and private charging companies are still exploring ways to alleviate these concerns.

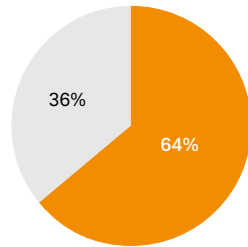
Overall, the charging sector is quite fragmented, with a lot of SMEs, although large firms like LG and Hyundai are becoming increasingly involved through investments and acquisitions. E-mobility service providers are also starting to play an important role as aggregators – offering access to multiple charging brands via a single app. EV charging was once mainly driven by the government, but it's now a very dynamic market: the number of companies in the Korean charging ecosystem almost doubled in 2022 to 350.

South Korean charging competitive landscape is quite fragmented, with more than 100 players involved

Share of chargers of major CPOs in Korea (as of January 2022)

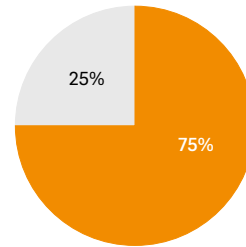
DC charging = more than 20k plugs

Over 90 remaining players
Top 10 players



AC charging = more than 172k plugs

Over 90 remaining players
Top 10 players



Source Korean Ministry of Environment, Media research



• What is the current make-up of EV charging infrastructure?

Currently, 87% of chargers installed are AC, and 13% DC, which can be used for fast charging. The government's aim is to install 1.23 million chargers by 2030, including 12,000 DC charging stations by 2025. It has raised its budget for charging infrastructure from USD 4 million to approximately USD 5 million. The government currently subsidizes up to half the installation fee for DC chargers, but to expedite growth it will increase this further in 2025.

• What else has the government been doing to develop EV charging?

Several recent legislations have been passed to support EV charging infrastructure. Developers of new apartment complexes must plan to install EV chargers at 7% of parking spaces, rising to 10% from 2025. However, special discounted rates for charging were stopped in June 2022 and electricity prices for charging have risen twice in the last year, going up 10-15% for both 50 kW and 100 kW chargers. Electricity is dominated by a state-owned utility, resulting in little potential for price competition.

• Are there any interesting technological innovations within the charging sector?

We're seeing some experimentation with both plug-and-charge (PnC) and wireless charging, although neither have become mainstream yet. Hyundai is also currently developing a robotic charging arm.

Further reading

- [EV CHARGING INDEX 2023](#)
- [INSIGHTS: SMART MOBILITY](#)
- [RIDING THE EV WAVE IN SOUTHEAST ASIA](#)

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