

Global EV Outlook 2017 Two million and counting

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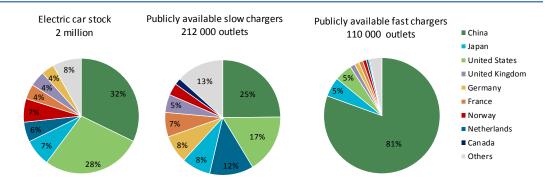
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chargers as a prerequisite for EV adoption and the nascent nature of most of the electric car markets.³⁰

Publicly accessible EVSE growth was primarily driven by the rapid increase in the number of fast chargers, largely attributable to China, where fast chargers grew sevenfold to nearly 90 thousand units.³¹ Even when China is not considered, the growth rate for publicly accessible fast chargers in 2016 was still greater than publicly available slow chargers.

Figure 12 • Electric car stock and publicly available EVSE outlets, by country and type of charger, 2016



Sources: IEA analysis based on EVI country submissions, complemented by EAFO (2017a).

Key point: Electric cars still outnumber public charging stations by more than six to one, indicating that most drivers rely primarily on private charging stations. Publicly available EVSE shares are not evenly distributed across markets. This is consistent with the early stage of electric car deployment.

Figure 12 shows the regional distribution of electric cars (left-hand chart), publicly accessible slow chargers (centre chart) and fast chargers (right-hand chart). Figure 12 indicates that the shares of publicly available EVSE are not evenly distributed across markets, reflecting large variations in EV/EVSE ratios across counties. This is consistent with the early stage of EV deployment in most markets. In the case of fast chargers, the large global share for China could be the result of the rapid growth of electric buses (significantly larger than in any global region so far) and significant uncertainty about the share of fast chargers actually dedicated to bus services. Japan, where 50-kW fast chargers were deployed early in order to address range anxiety (i.e. the fear that a vehicle has insufficient energy stored on board to reach the next available recharging point or its destination), but where EV sales have not experienced recent, significant year-on-year growth, also has high shares of fast chargers per EV compared with other countries.

EVSE policy support

Overview

Evidence from Norwegian BEV and PHEV users (Norway is the country with the highest electric car penetration) suggests that electric car charging does not match refuelling habits for internal combustion engines even when electrified powertrains substitute for ICEs of a similar category (Figure 13). Unlike ICE drivers, electric car owners most frequently charge their vehicles at home

³⁰ The case of Norway, which has a larger EV market and stock shares than any other country, suggests that markets that have already deployed a sizeable share of EVs in their stock tend to require a lower average number of chargers per EV, reflecting higher capacity utilisation rates for EVSE.

³¹ By the end of 2016, China accounted for 44% of publicly accessible chargers in the world and 80% of the world's publicly accessible fast chargers. It is unclear whether a part of these fast chargers could be dedicated to electric buses, the numbers of which are also increasing quickly in the country.