



THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION



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Charging infrastructure in France must grow rapidly to match electric vehicle sales.

Berlin, Tuesday, November 2, 2021 - The number of public charging stations for electric vehicles in France must increase from about 31,000 at the end of 2020 to 350,000 by 2030 to meet demand from the 8.5 million electric vehicles expected to be on metropolitan France's roads by then, according to a comprehensive new study by the International Council on Clean Transportation (ICCT). Privately built charging infrastructure must be significantly expanded as well, increasing fifteenfold between 2020 and 2030, if France is to reach its national goal of 100% zero-emission new vehicle sales in 2040.

The study details charging needs for 6 categories of chargers (private homes, depots, and workplaces, and public normal, fast urban, and fast highway chargers), and for 4 categories of vehicles (private passenger cars, taxis, private hire vehicles, and light commercial vehicles).

Results are presented for each of the 96 departments in metropolitan France up to 2035. The study's insights can help policy makers to ensure that sufficient public charging is built to achieve a rapid transition to electric vehicles.

The number of public normal chargers installed in France at the end of 2020 represents 8.6% of the projected need in 2030; for public fast chargers, the number is only slightly better: 12.7%. Only an intensive approach to expanding the charging network can close the gap between the number of current charging sites and the number needed.

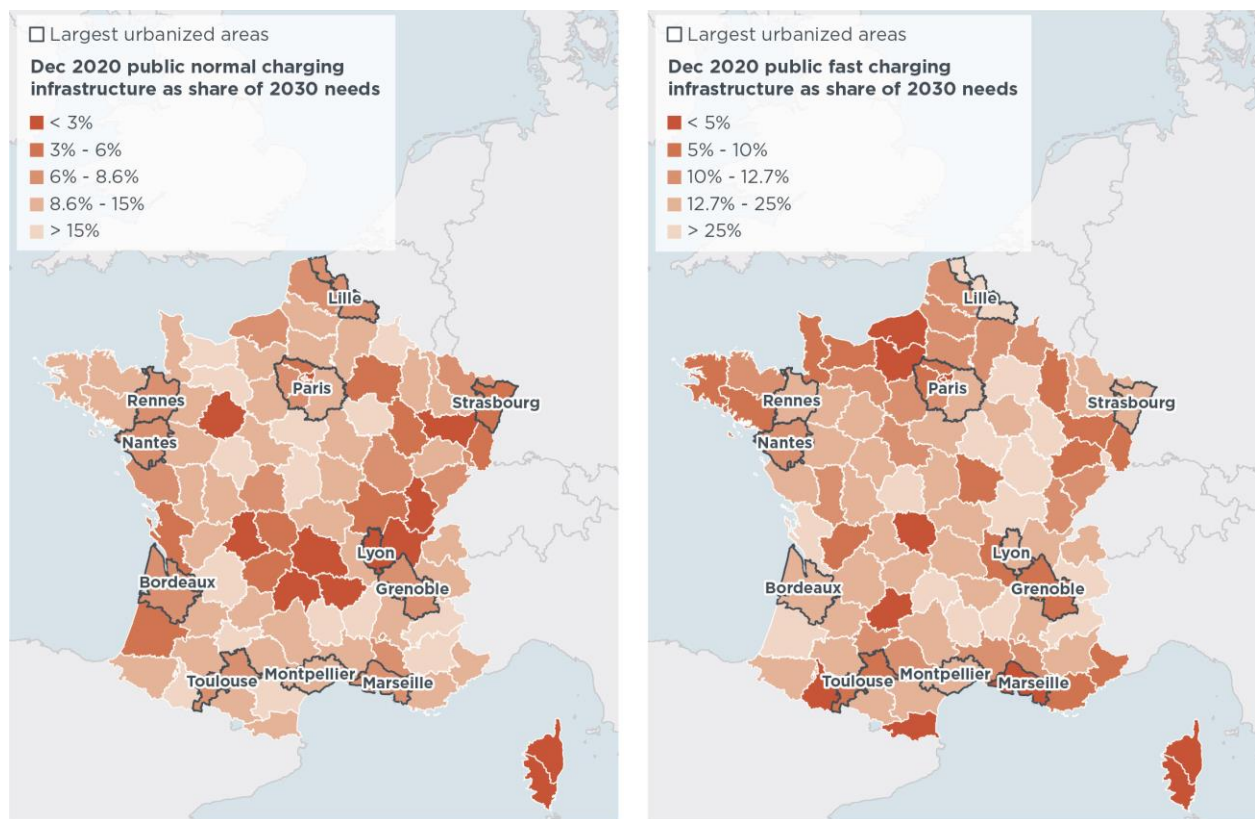


Figure ES1. Percentage of public normal (left) and fast (right) 2030 charging needs in place through 2020.

A total of 5.7 to 6 million chargers, publicly and privately supplied, will be needed in 2030 to meet projected demand. That estimate is lower than the French government goal of 7 million chargers by 2030, but the government's goal is worth pursuing. "Reaching the French government's goal of 7 million chargers in 2030 would put the country within sight of the 7.3

million needed, including close to 450,000 public chargers, to support 100% electric new vehicle sales by 2035,” noted ICCT Associate Researcher Marie Rajon Bernard, one of the study’s authors. “Achieving this would align with the European Commission’s ‘Fit for 55’ proposal which strengthened the European Union’s climate goals,” she added.

Additionally, the study analyzes the growth in electricity demand that will be spurred by the growth in the electric vehicle fleet. The projected electricity demand for electric vehicles in 2030 amounts to just 4% of France’s overall 2020 electricity demand from all sectors, 439 terawatt-hours. This additional demand could be offset until 2026 by savings in the building sector spurred by the Energy and Climate Law. “Growth in electricity demand is manageable and within the scope of utilities’ general grid upgrades, provided it is planned for by utilities, especially at the distribution level,” said Rajon Bernard.

The analysis also views charging needs through an equity lens, by considering the variation across departments in financial resources available to meet future charging infrastructure needs. A primary finding is that urban areas, which tend to lead in electric vehicle uptake, require the largest increase in public charging sites due to their lower-than-average home charging access. But a significant increase in both public and private charging sites will also be needed across France’s rural areas, which will see the steepest proportional increase in electric vehicles on the roads in the years to come.

“For France to efficiently and quickly decarbonize its light-duty vehicle sector, comprehensive national and local policies, actions, and guidance will be needed. Every government level of government can play a part in bridging the charging infrastructure gap,” said Rajon Bernard.

The study outlines policies and actions needed to put France on a path toward 100% electric new vehicle sales. Based on developments in France and elsewhere, a promising approach is to implement a coordinated charging installation process that identifies charging demand based on drivers’ inputs, gives clear guidance to ensure equitable access, and streamlines permitting to encourage the private sector to provide chargers.

Finally, the paper highlights the importance of revising regulations and building codes governing parking garages, because they will be critically important as charging locations. The study identifies key concerns that have deterred charging deployments in parking garages in France, including high costs and difficulties with permitting and standards. Fire safety standards have presented a particular challenge. The paper recommends a re-assessment, by the national government, of the safety of charging in these settings. Depending on the findings and resulting safety recommendations, the authors suggest that it may be appropriate to provide financial support to make the necessary modifications such as installing water sprinkler systems.

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