

Charging close to an individual's place of residence is argued to be an important factor for purchasing an EV and thus could constitute an important enabler for further adoption of EVs. This might be difficult for those living in an apartment building whom thereby to a lesser extent can install a charger but instead needs to rely on public charging infrastructure.

Aim: This paper intends to describe a method for estimating future demand of public charging situated close to vehicle buyers' homes. The paper intends to describe the basis for a strategy including a model useful for smaller municipalities to expand public charging infrastructure in a cost-effective and proactive way.

Indicators for long term demand	Housing type:	1956 was when national legislation first mandated that parking should be included. Apartment buildings built pre 1956 is thus assumed to not have designated parking space for its inhabitants.
	Vehicle fleet	Vehicles, including fuel type, registered per primary area
	Permits for street parking	A proxy variable for the minimum number of households that do not have access to a designated parking spot.
Indicators for short term demand	Number of public parking spots	Gives further proxy to the degree of street parking in an area.
	Public chargers, and usage rate	Location and usage rate. Especially usage rate during the night is of interest. Additional charging during the day increases profitability.
	Household income	Indicate purchase power and possibly the speed of transition to EVs in each primary area.

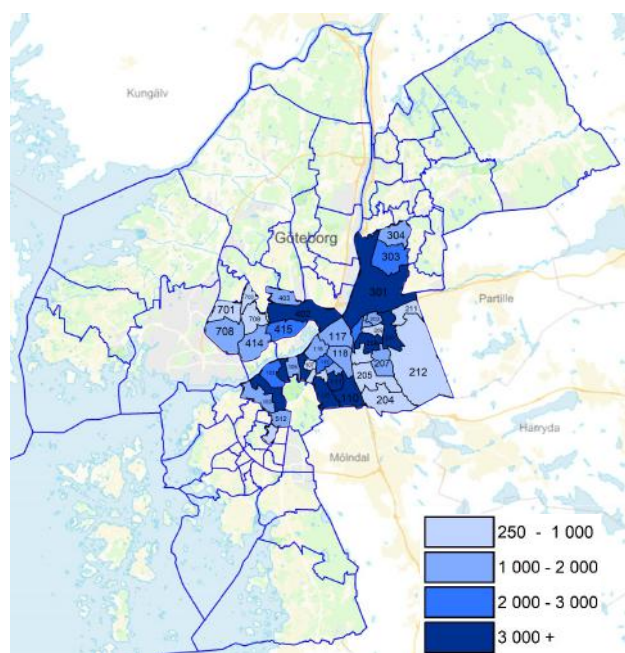


Figure: Apartments built prior to 1956 in the 96 primary areas in the city of Gothenburg.

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Discussion topics for smaller municipalities:

How to investigate and prepare suitable places for chargers in order to attract charging point operators?

Give the municipal housing company mandate to investigate the possibilities and costs to give concrete offers on how, when and to what cost the residents can access charging.

Are wealthy areas with high EV adoption rates good indicators for imminent need for charger buildout?

With only few or no chargers built, could number of residential parkings be a better indicator than today's charger utilization for anticipating the future need of chargers?

Are there places in the municipality where chargers can be used for night charging but also close to points of interest to enable further charging during the day? By not building in the most attractive places, the risk of the charger being occupied by ICE vehicles is reduced.