

Electric mobility as a problem and a solution

Smart Charging in a nutshell

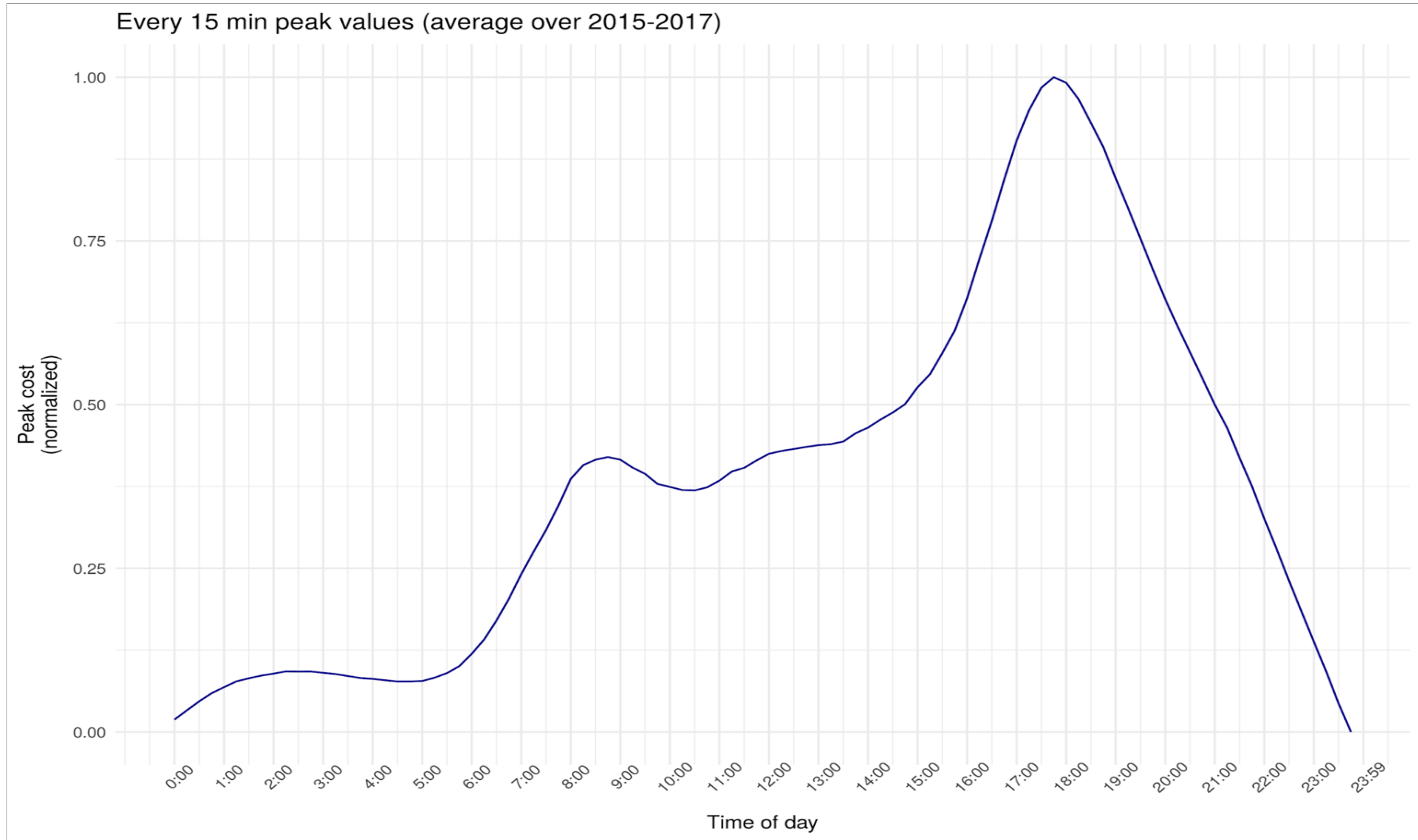


*“Leven van de wind
rijden op de zon*

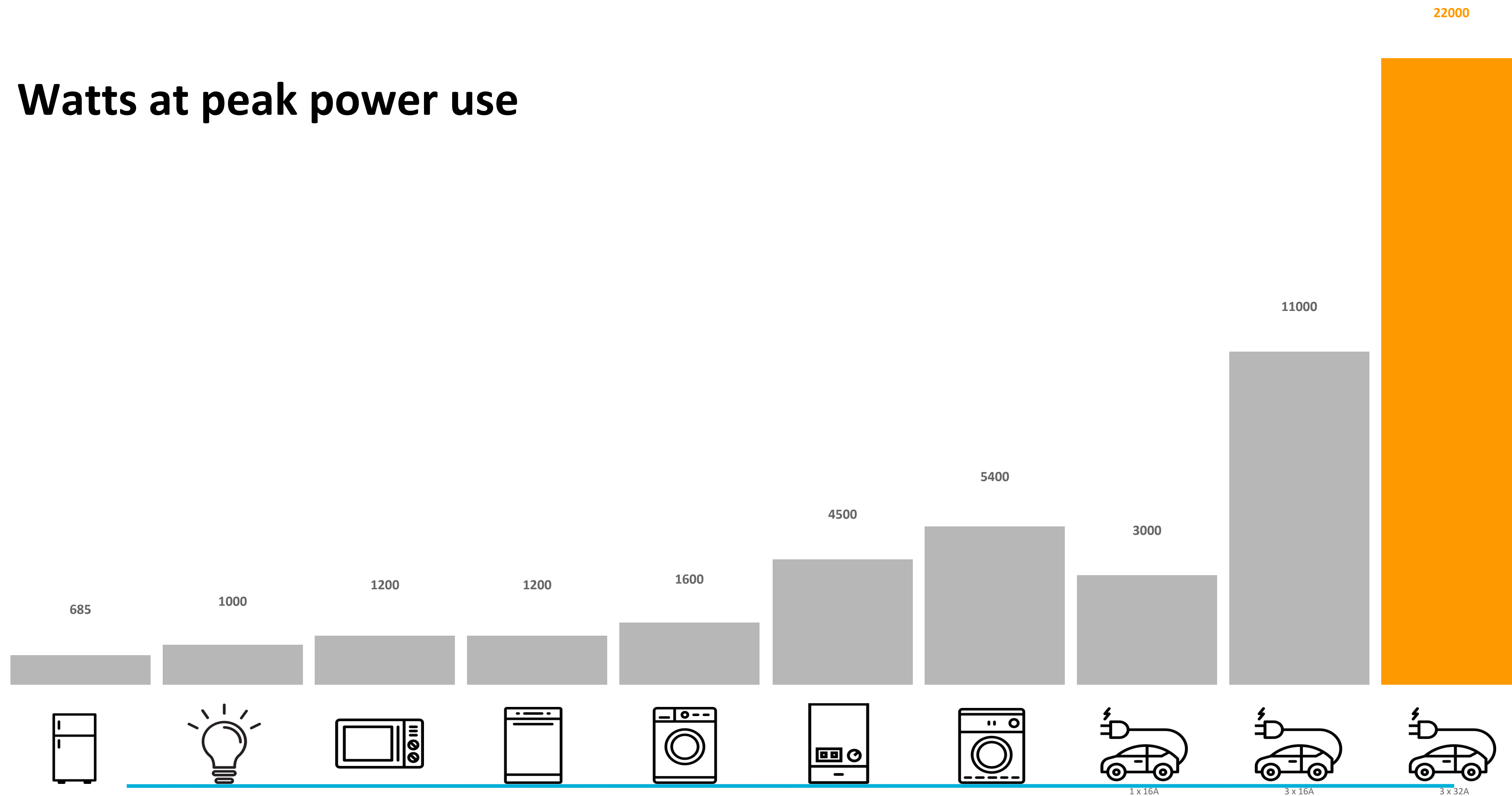
Paris
10-10-2018

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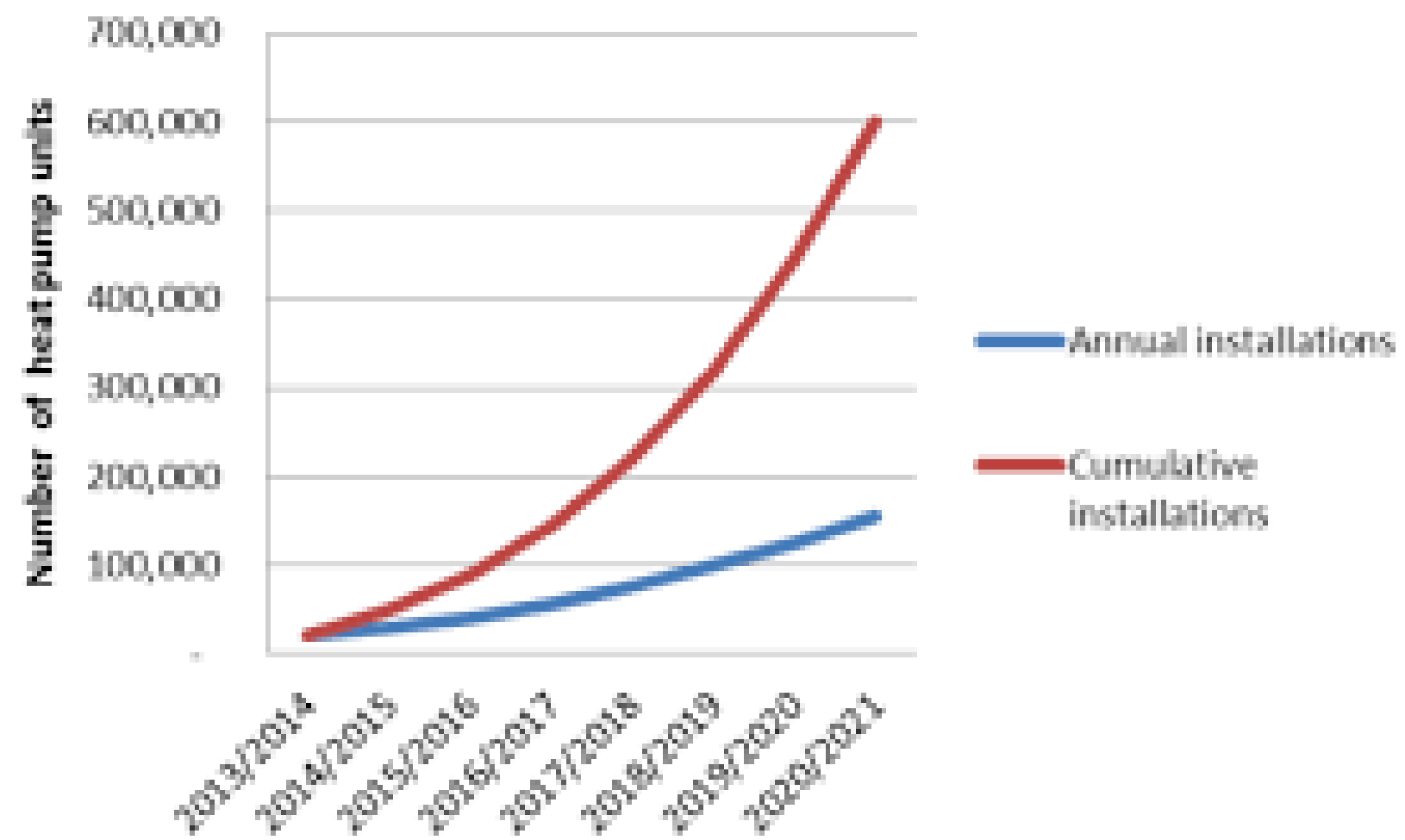
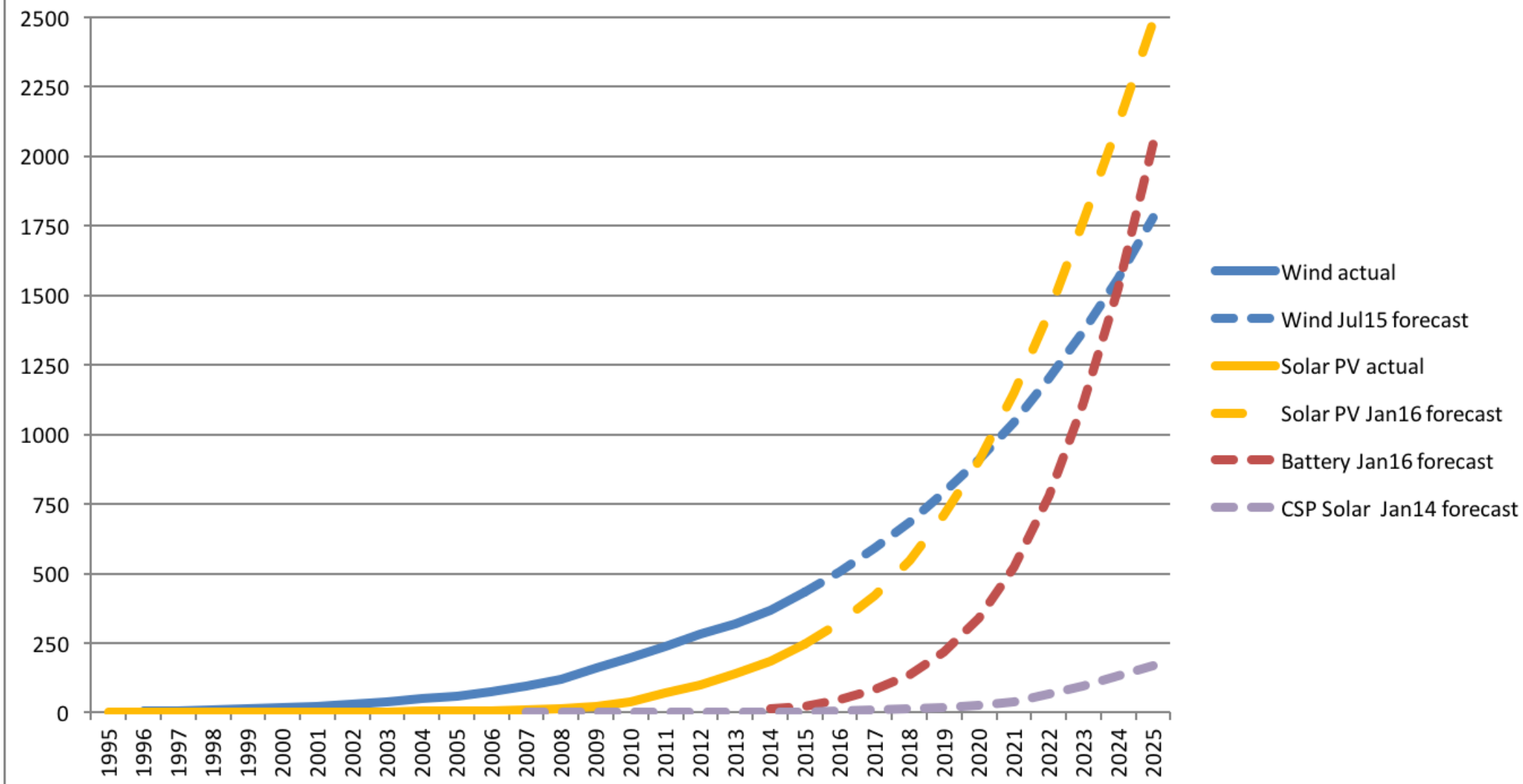


Watts at peak power use



Global capacity growth 2015 and forecast to 2025

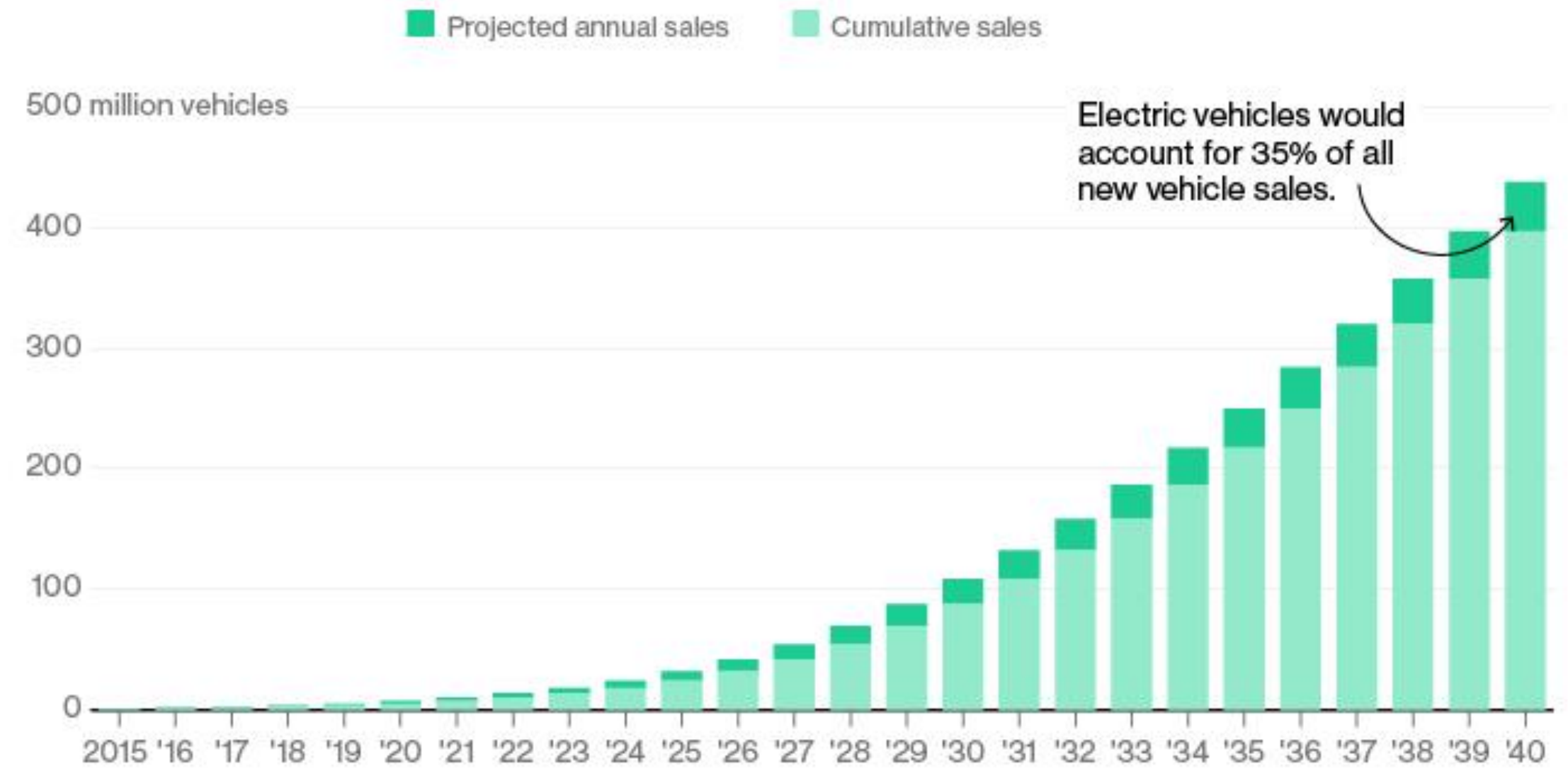
wind, PV, CSP (GW) battery (GWh) actual; forecast @ProfRayWills Data update 15Mar16



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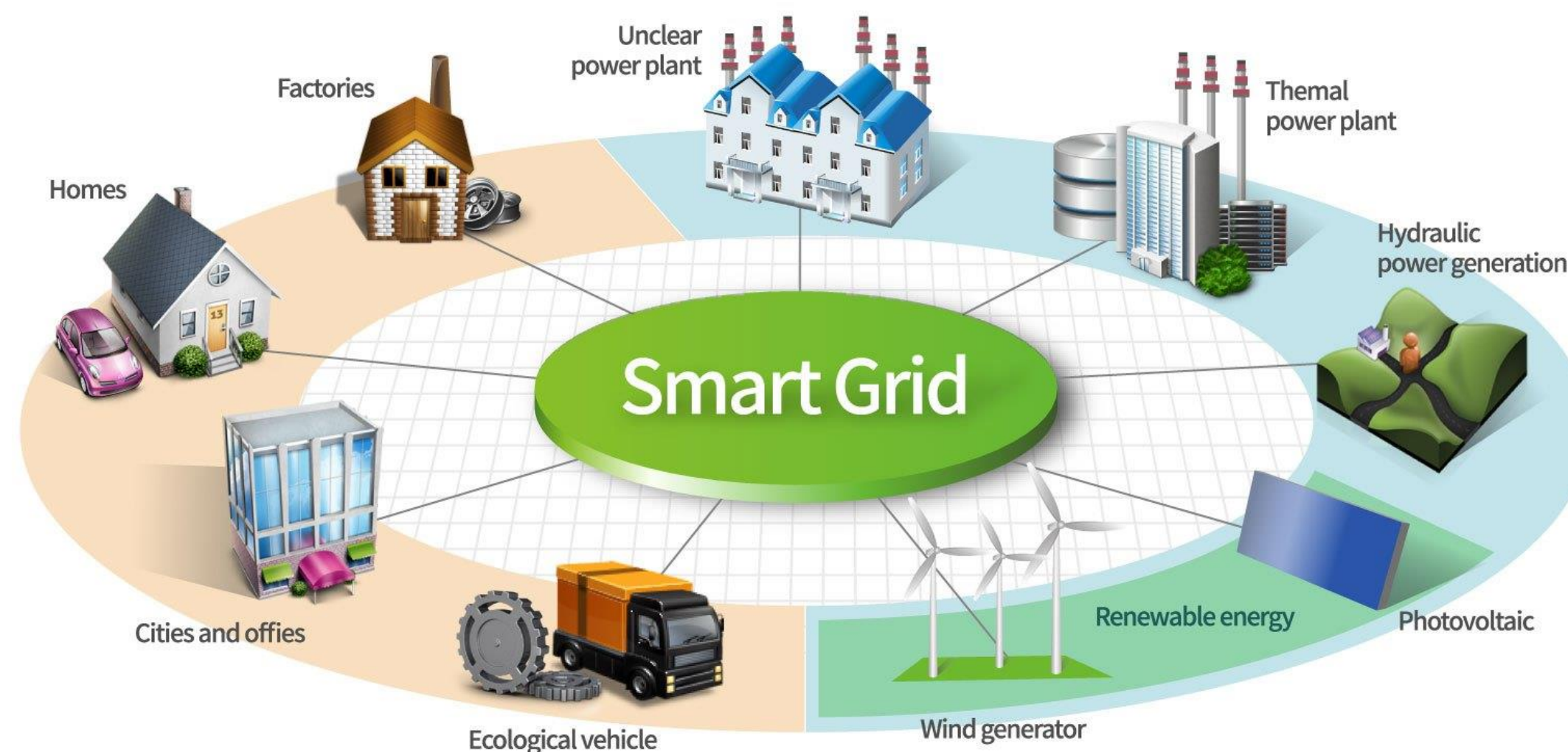
The Rise of Electric Cars

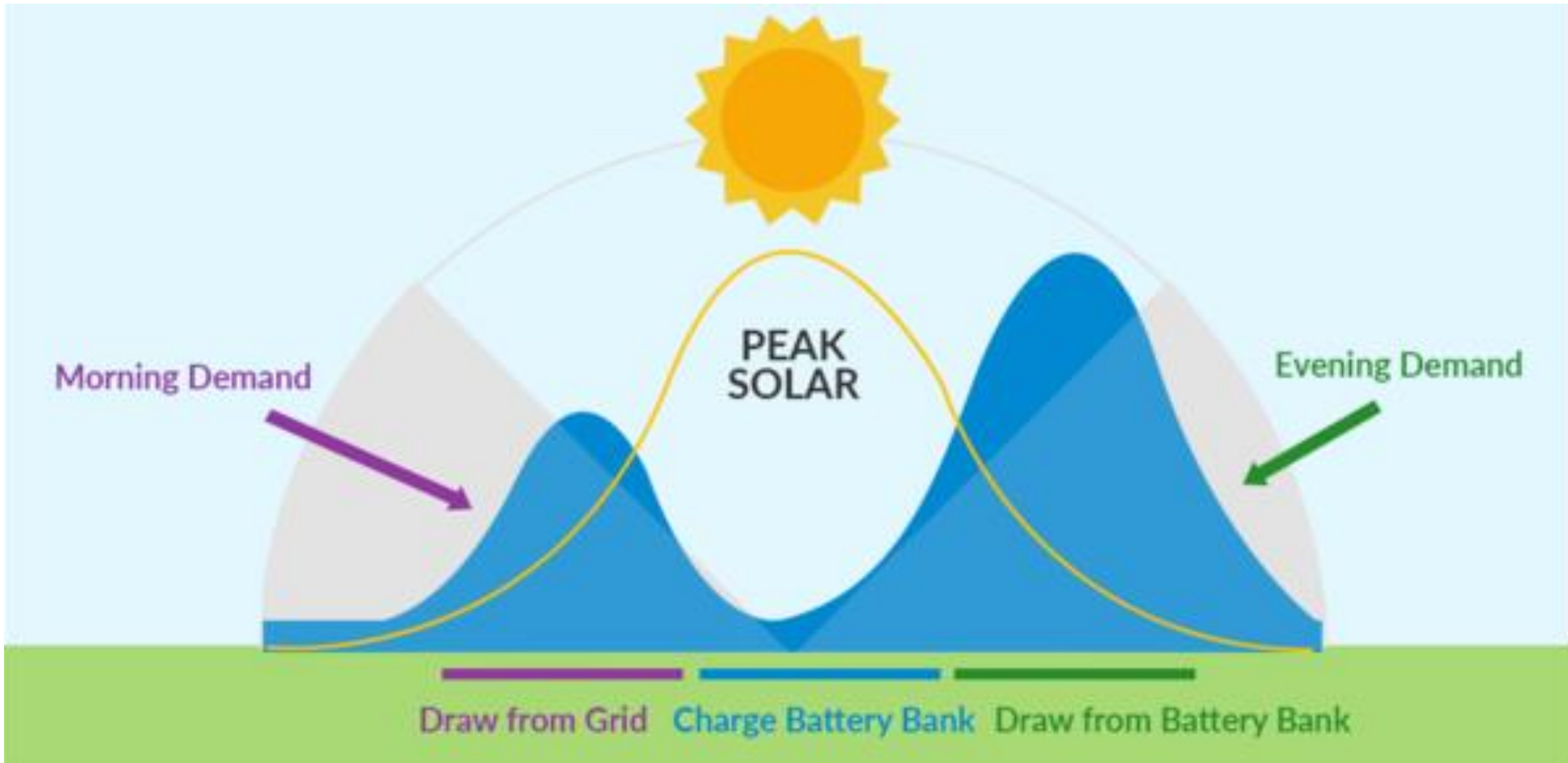
By 2022 electric vehicles will cost the same as their internal-combustion counterparts. That's the point of liftoff for sales.



Sources: Data compiled by Bloomberg New Energy Finance, Marklines

Bloomberg

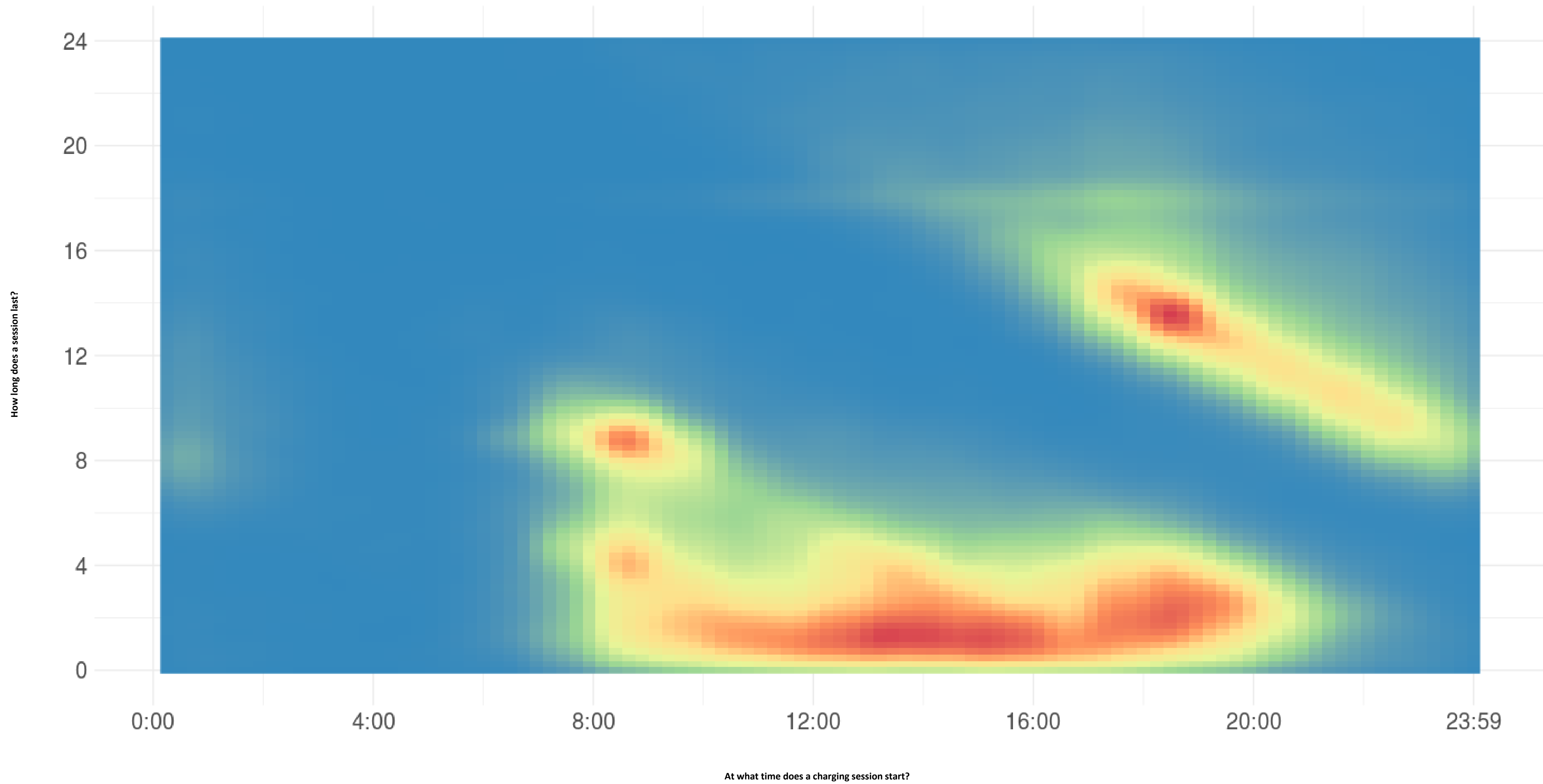




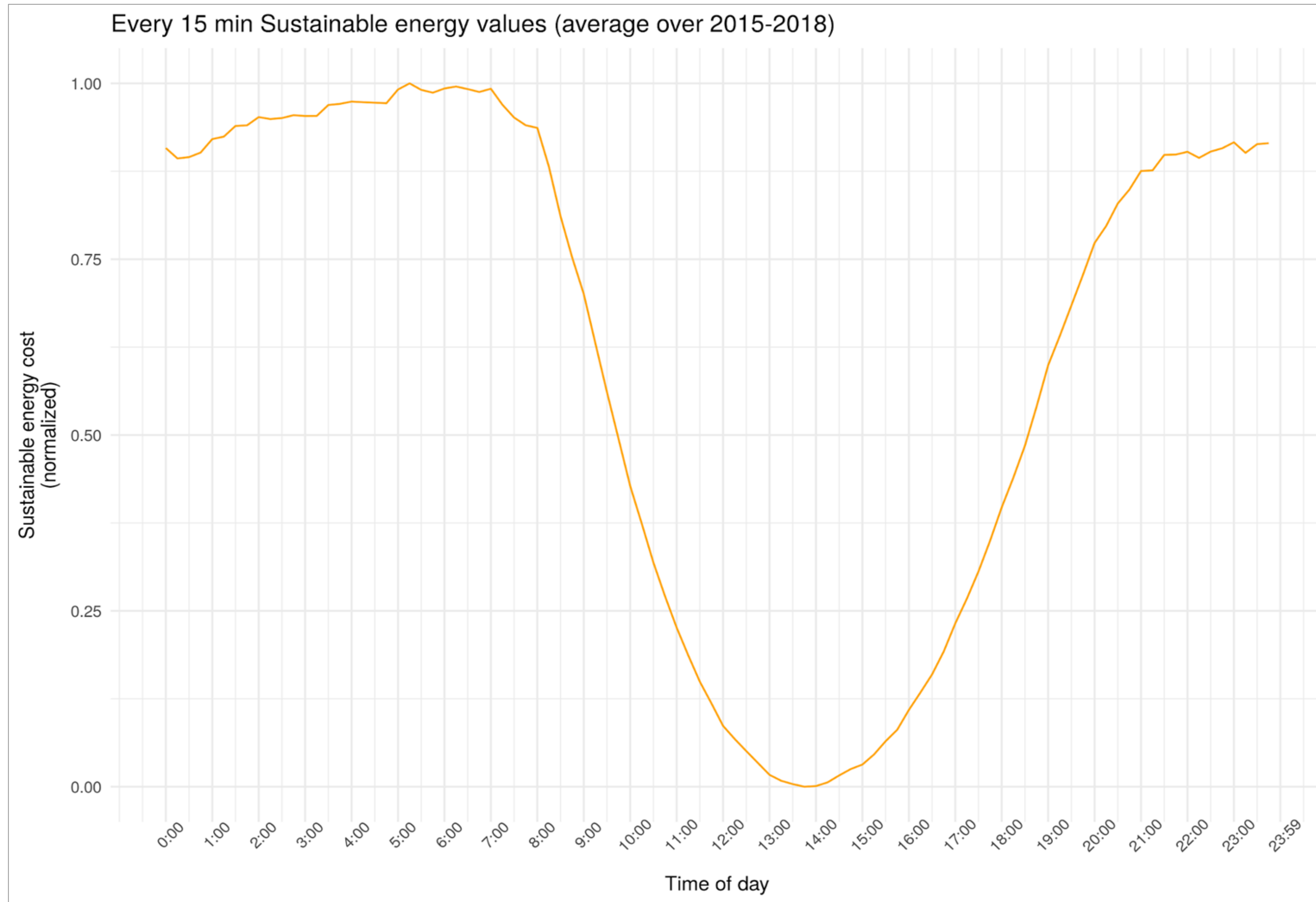
Smart Charging: To avoid electric cars to charge in the domestic peak

and we need data in order to do so

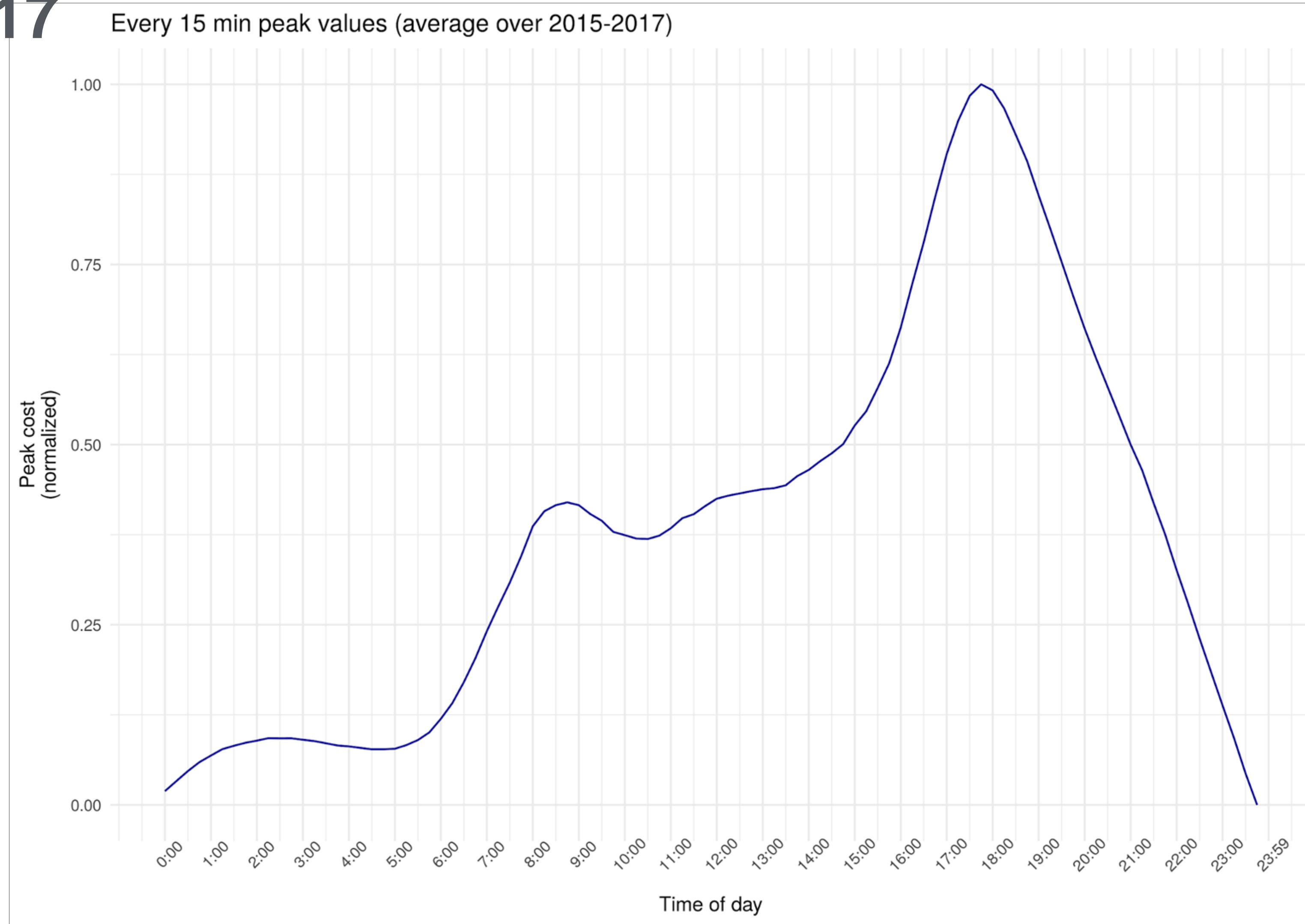




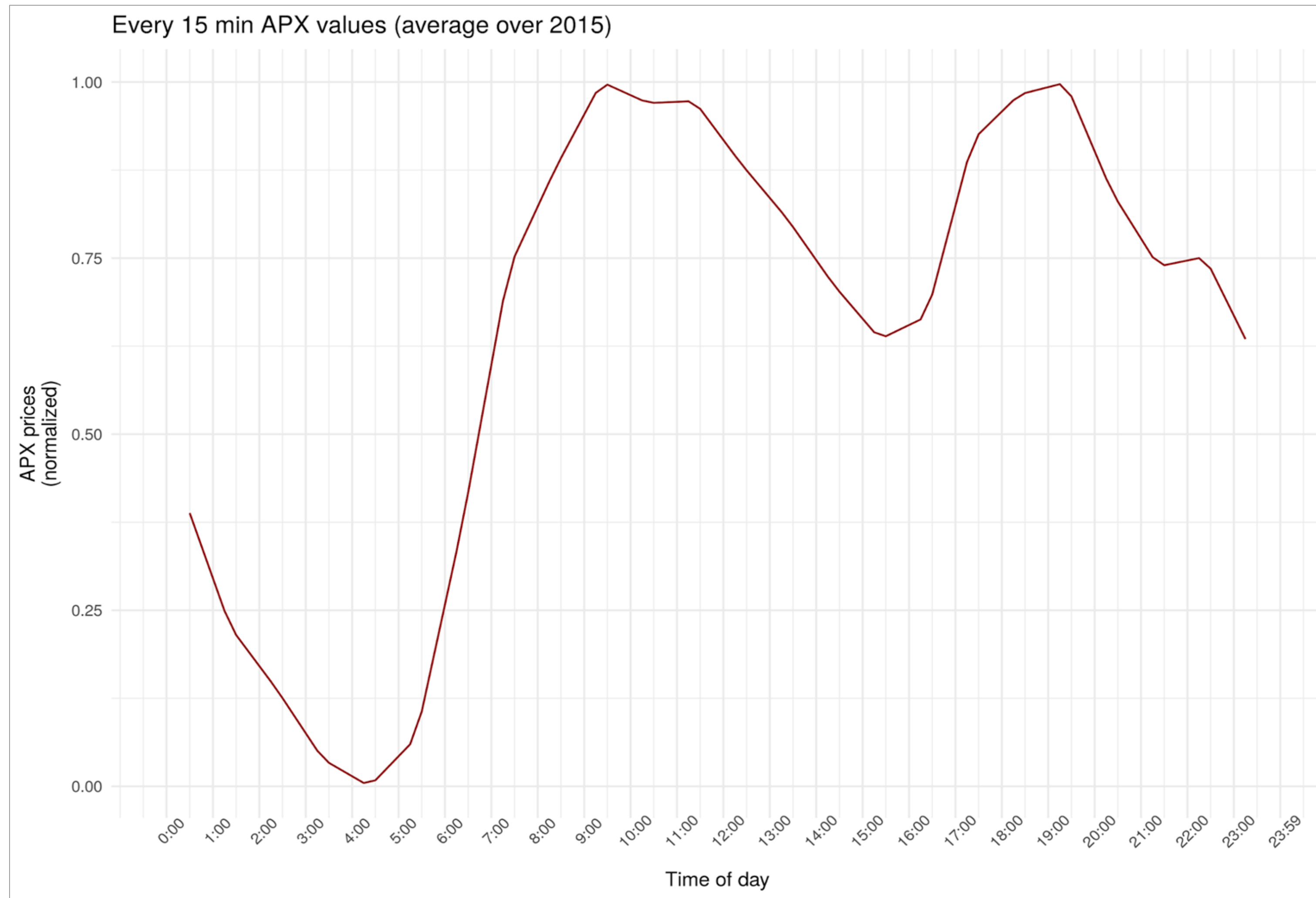
The cost function for sustainable energy. Average profile over the years 2015 - 2018

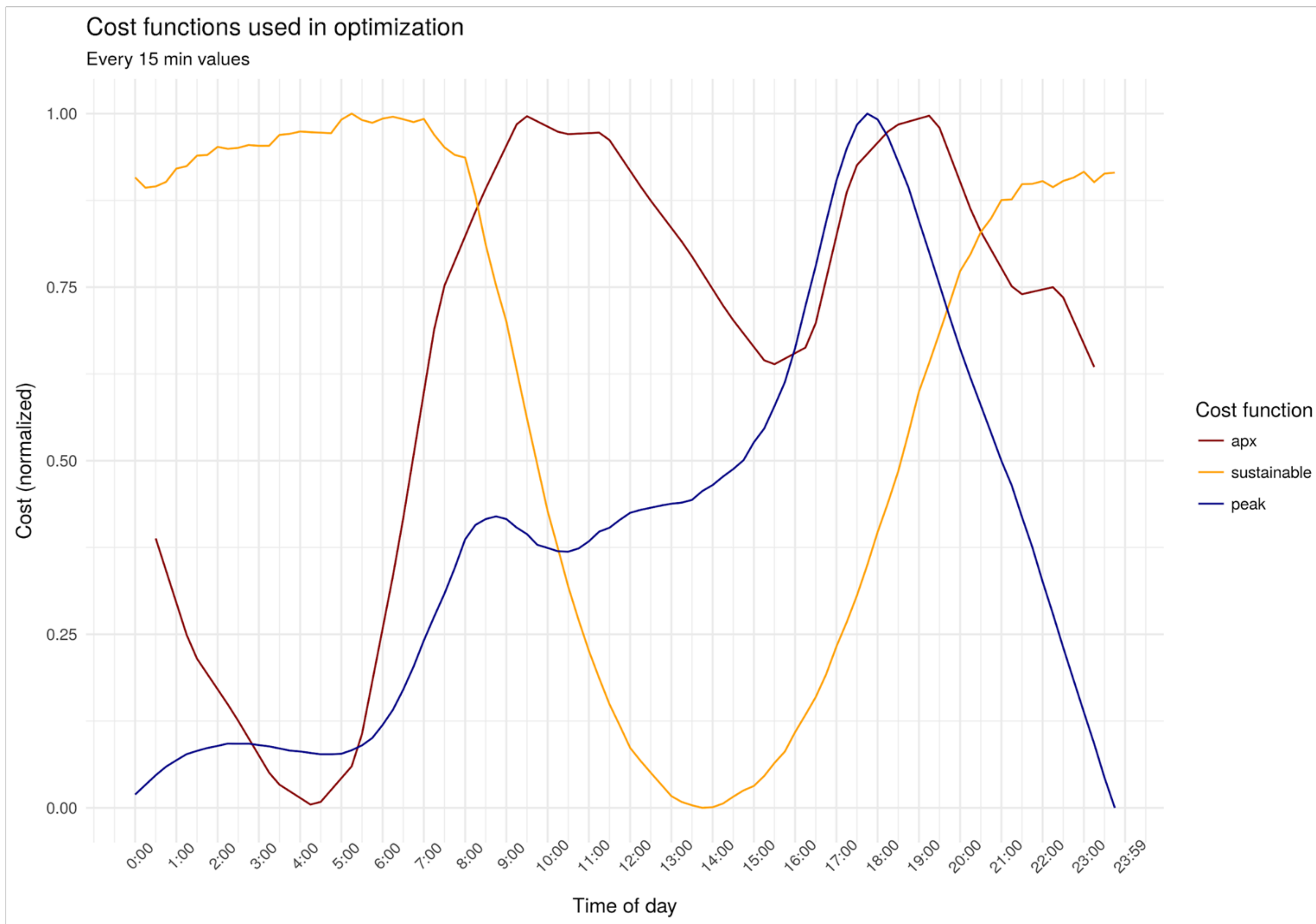


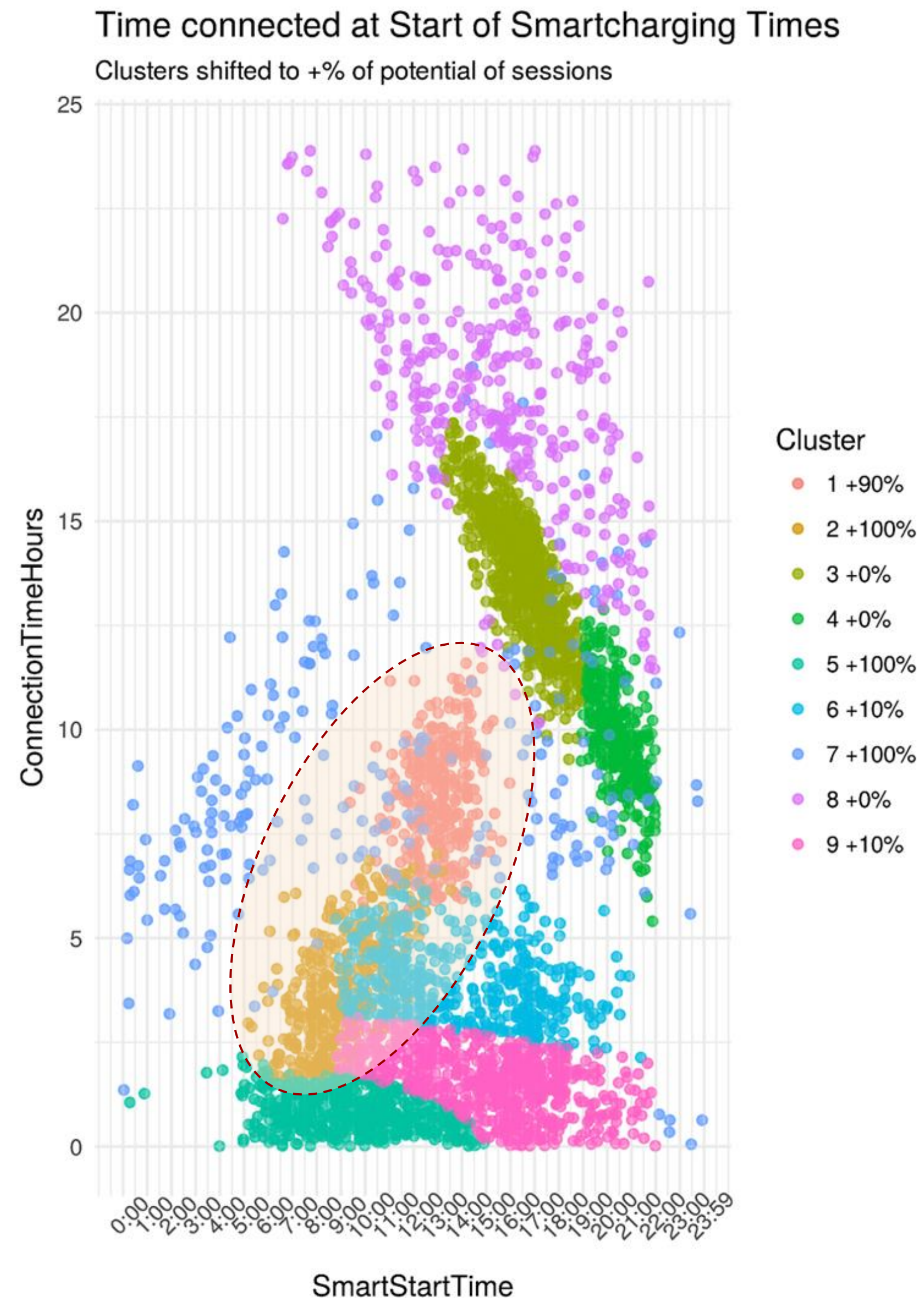
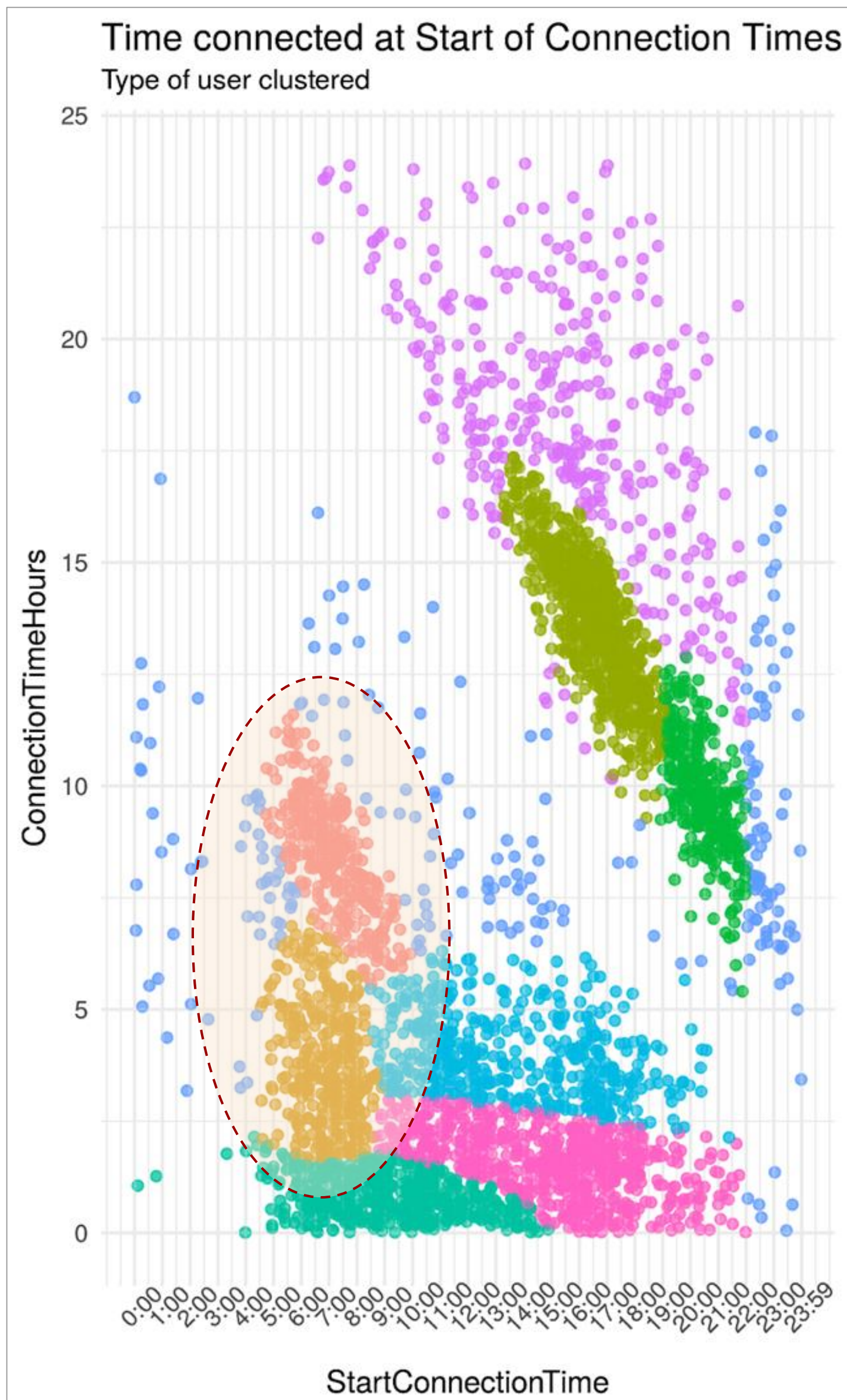
The cost function for charging power demand. Averaged over 2015 - 2017

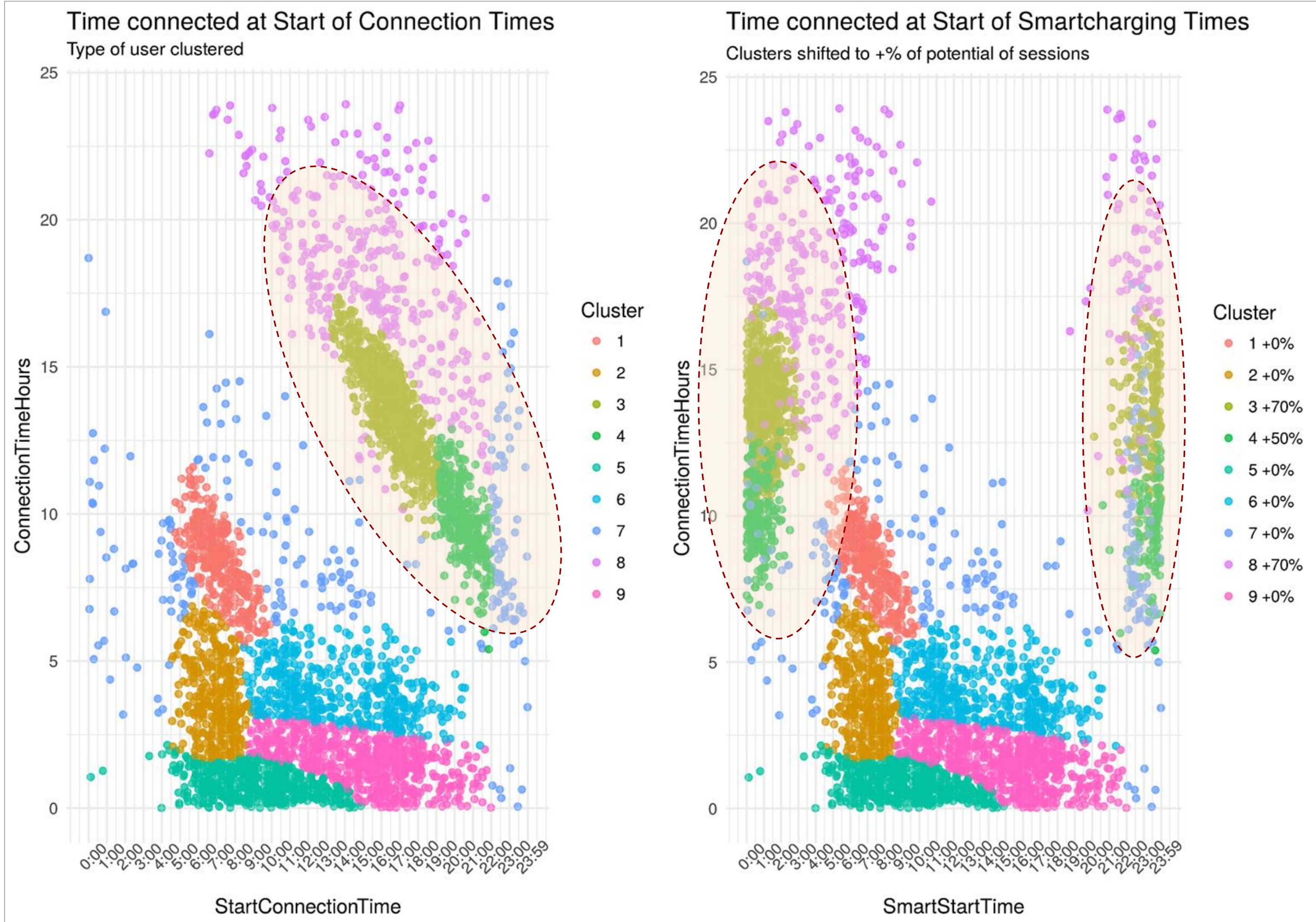


Cost function for APX prices. Averaged over the year 2015

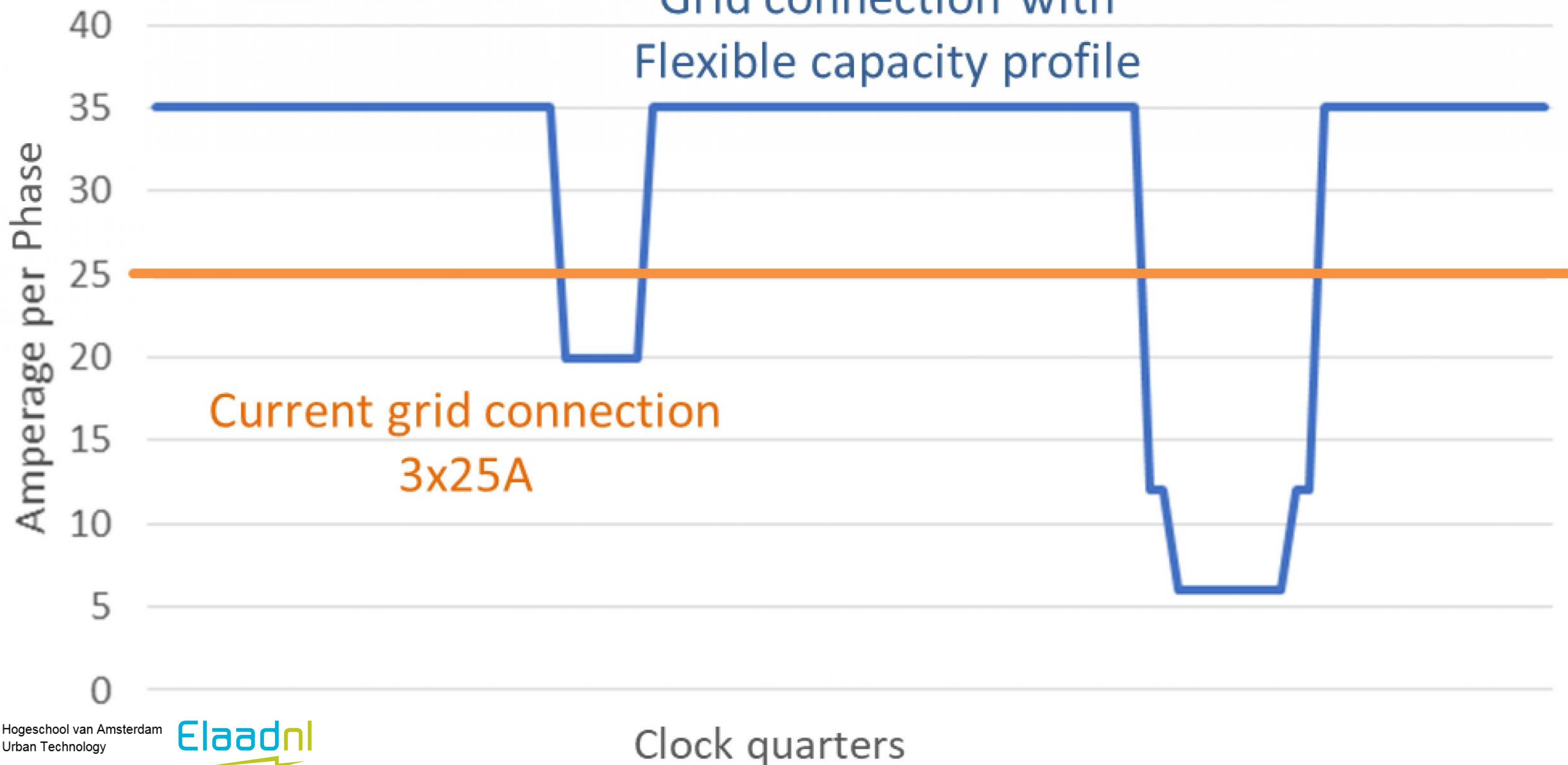




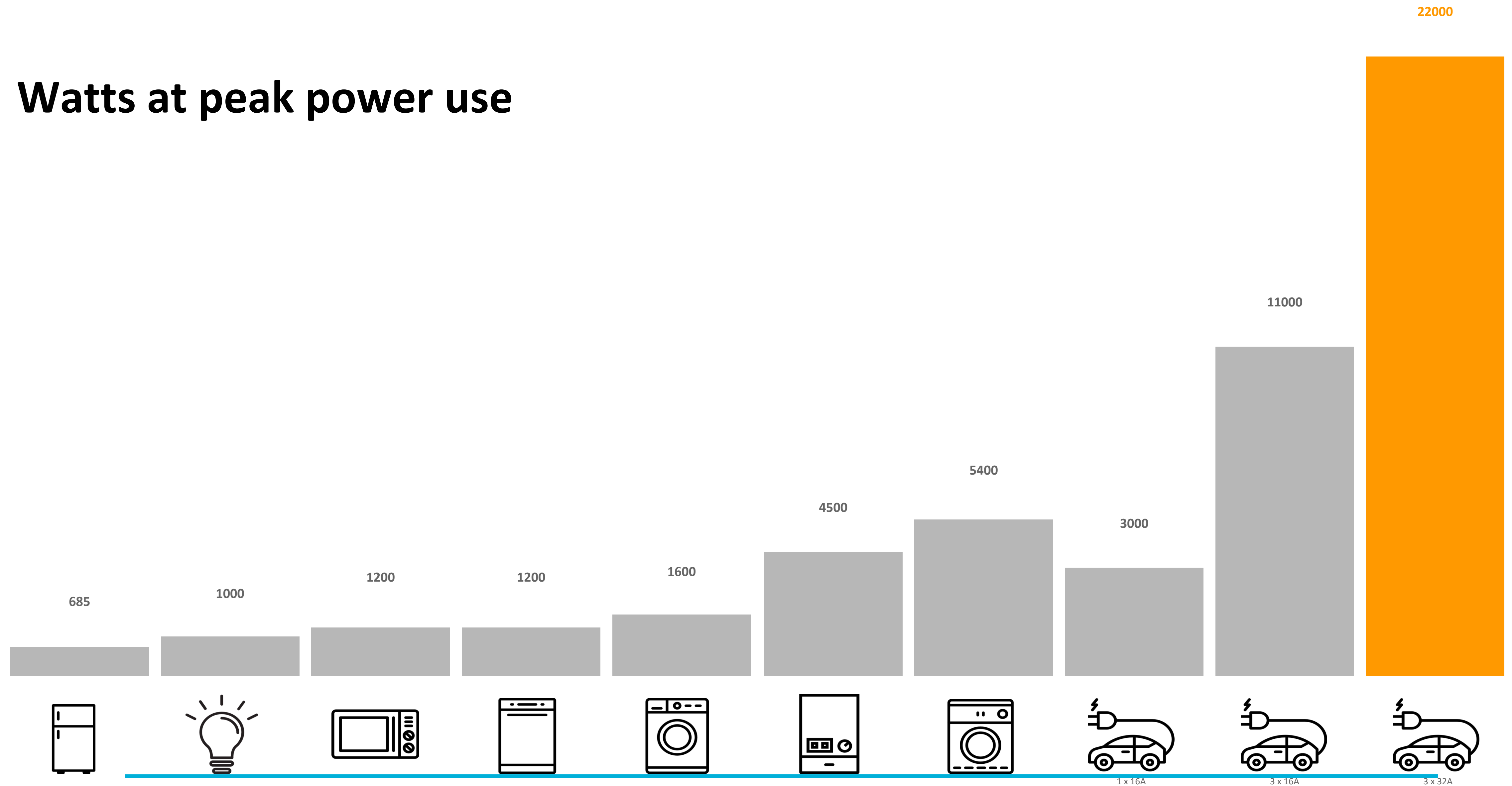




Grid connection with Flexible capacity profile

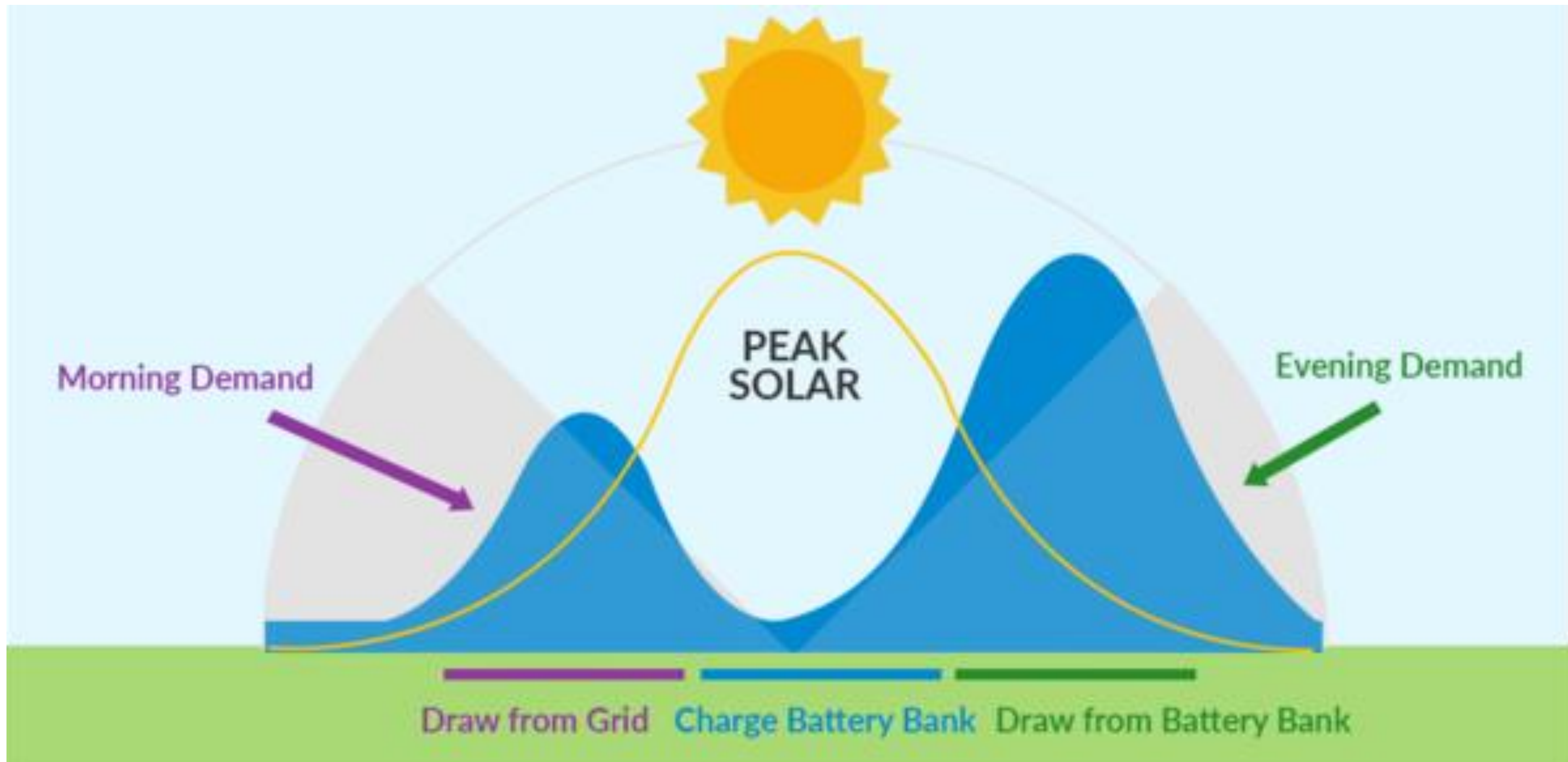


Watts at peak power use



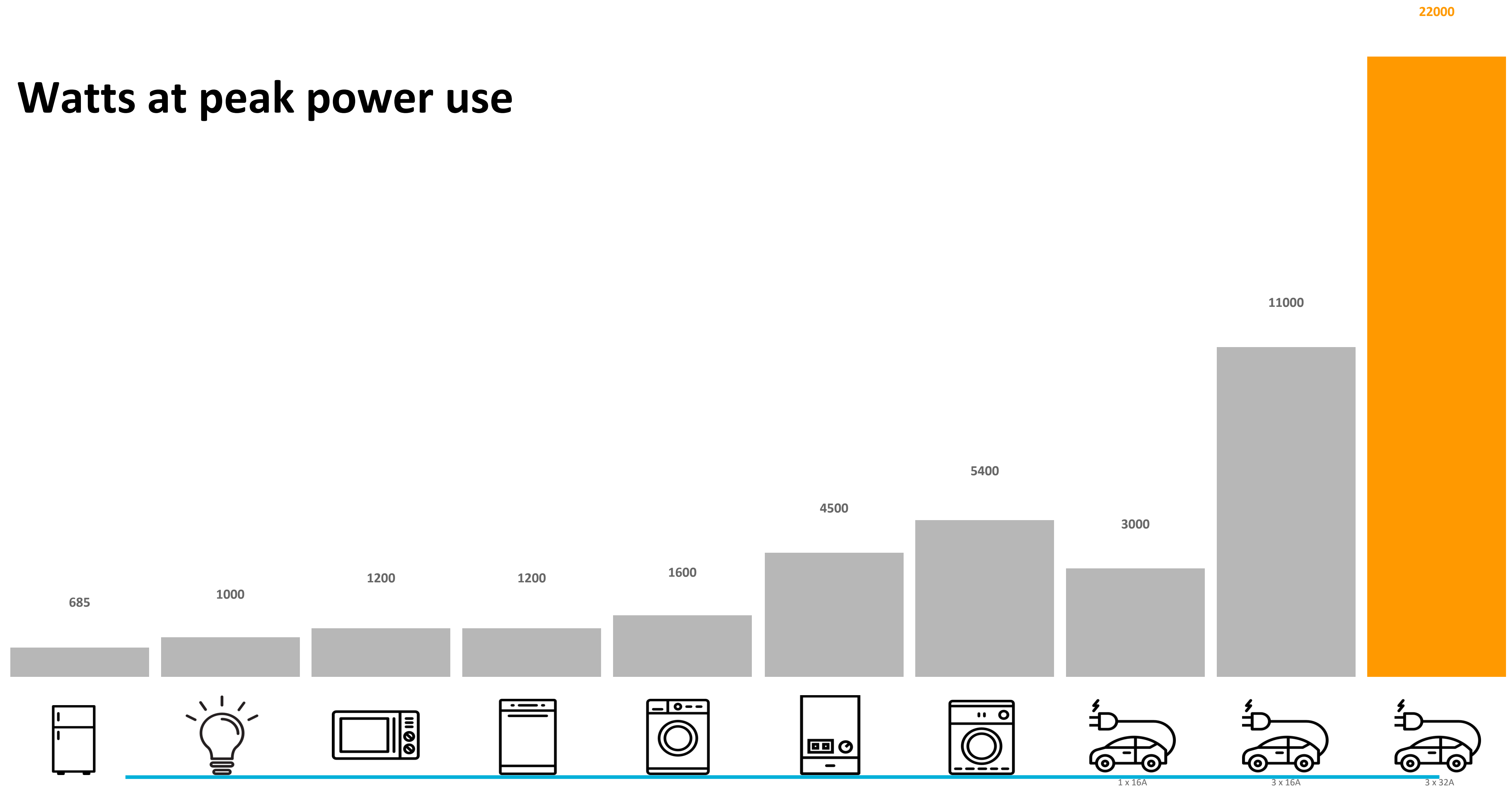
Smart Charging: To avoid electric cars to charge in the domestic peak and not at the same time!

and we need even more data in order to do so





Watts at peak power use



Smart Charging: To avoid electric cars to charge in the domestic peak and not at the same time!

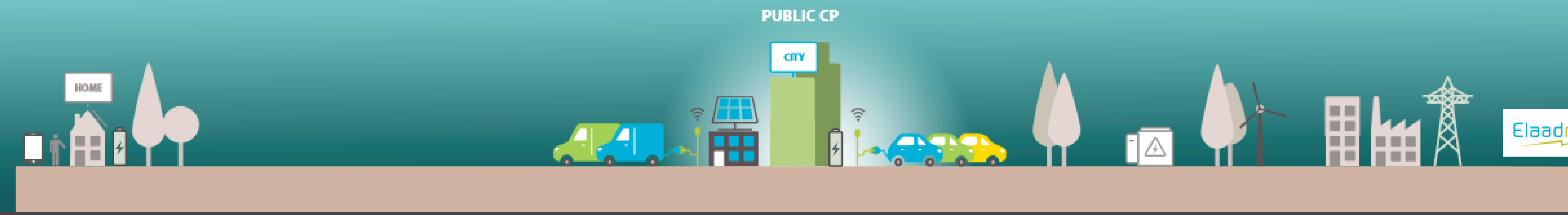
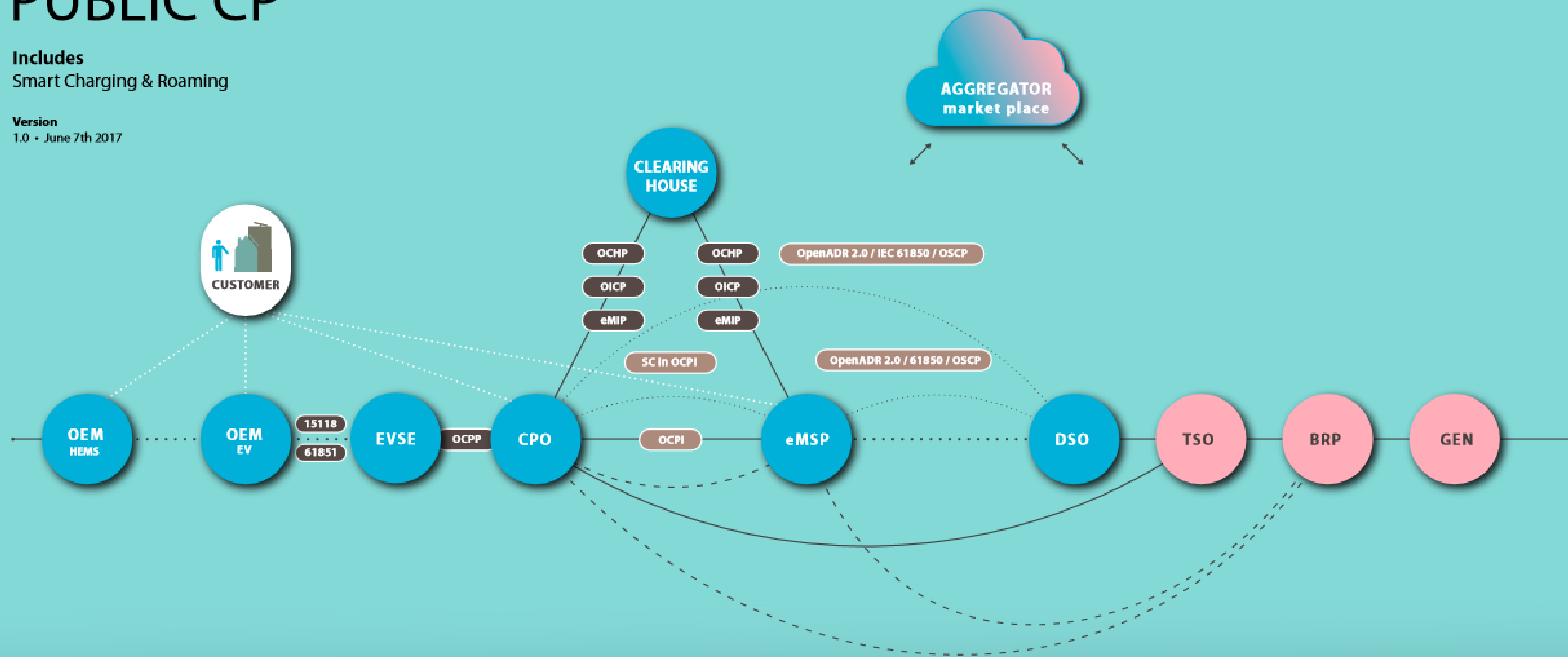
And preferably when the sun is shining at it's brightest!

and we need a shit tonne of data in order to do so (but there are others helping us)

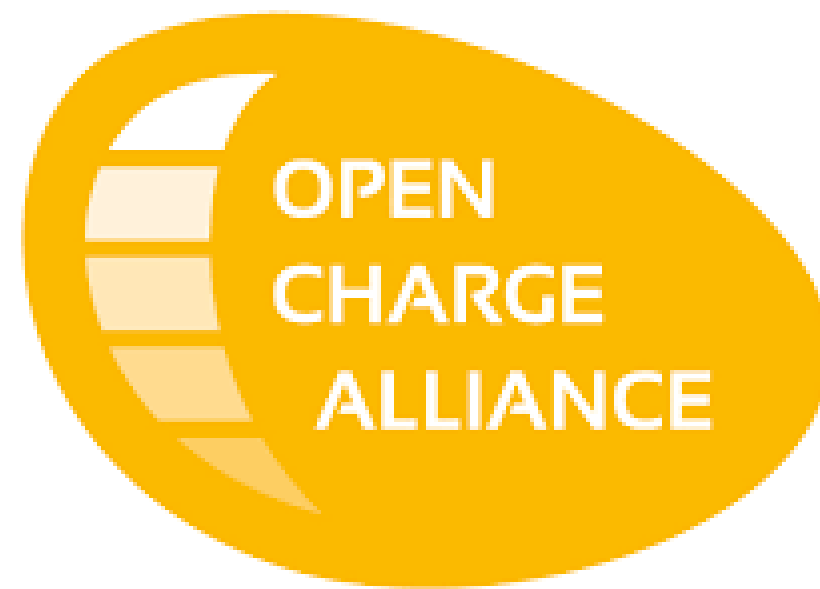
PUBLIC CP

Includes
Smart Charging & Roaming

Version
1.0 • June 7th 2017



International partnerships



Open Smart Charging Protocol





<https://www.testing-symposium.net/>

The logo for ElaadNL, featuring the text 'Elaadnl' in a blue sans-serif font with a yellow lightning bolt graphic underneath. The logo is set against a white background with a blue horizontal bar passing through it.

Elaadnl

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