Distribution grids in cities: A case study of smart mobility houses - FPS24

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Background

- The electrification of the transport sector is accelerating
- Collaboration with Uppsala Parkerings AB, UPAB
- The mobility house Dansmästaren
- Opened in November last year
Dansmästaren - Technical system

- 60 22kW charging points
- 137 kWh Li-ion battery (60kW inverter)
- 62 kW solar (50kW inverter)
- Energy Management System, EMS
Objectives

- Make Dansmästaren a flexible testbed for electro-mobility and EV-charging
- Reduce the negative impact of EV-charging on the city grid
  - Investigate charging strategies - Controlled and scheduled EV-charging
  - Utilizing the 137kWh BESS’s Peak Shaving capabilities
  - Utilize V2G technology to use the EVs to support the city grid by load balancing and FFR
Dansmästaren - Papers

- In the process of publishing
- Simulation model of the mobility house’s technical systems to investigate the battery systems peak shaving capabilities
Thanks for listening!