

EMS requirement at Nottingham City Council

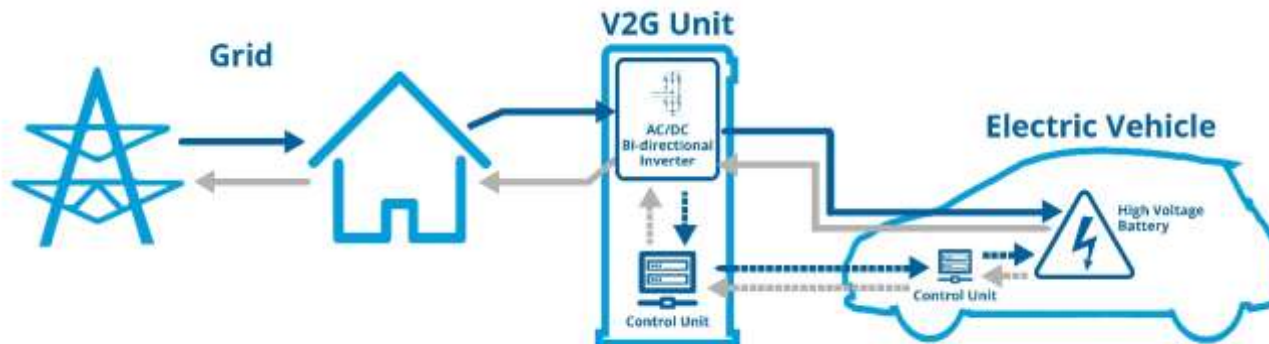


Laura Chippendale - Senior Energy Projects Officer

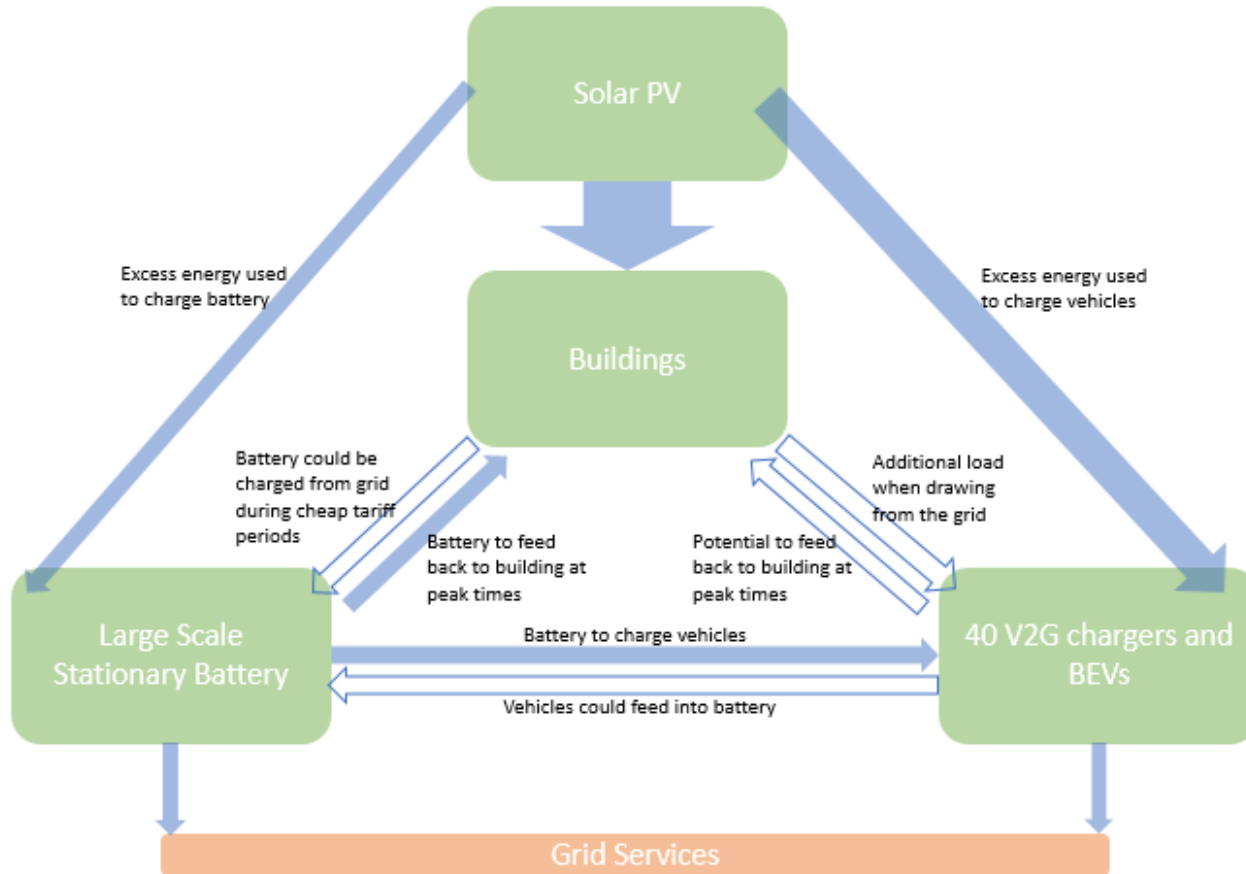
Nottingham City Pilot

“A Smart Energy Management System integrating Renewable Energy and Electric Vehicles”

- Installation and use of:
 - Minimum 88kW solar photovoltaics
 - 378kW/676kWh lithium Ion Battery (?)
 - 40 V2G bidirectional charging units.
 - Procurement of 40 battery electric V2G compatible vehicles
 - Purpose-built Energy Management System (iEMS)



Nottingham City Pilot



Aims and objectives

Objectives

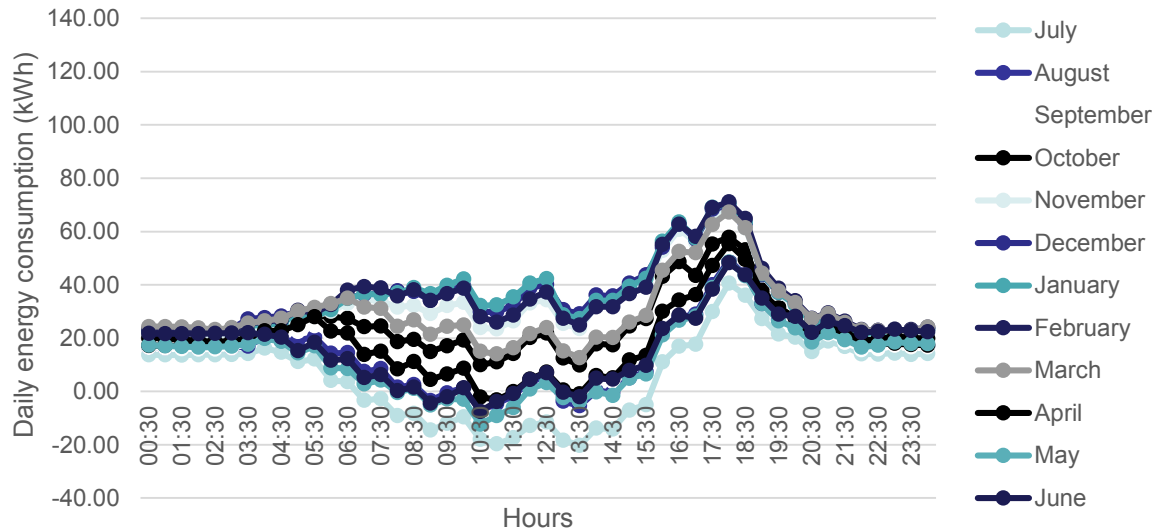
- 1. Maximise use of renewable energy generation, no export to grid**
 - Supply building with RE
 - Charge vehicles with RE
 - Store any excess RE in stationary battery for later use (least efficient option, 83%?)

- 2. Reduce energy bills**
 - Avoid DUoS, TNUoS, Capacity Mechanism charges (4-7pm)
 - If RE not available, make use of “cheap” night tariff

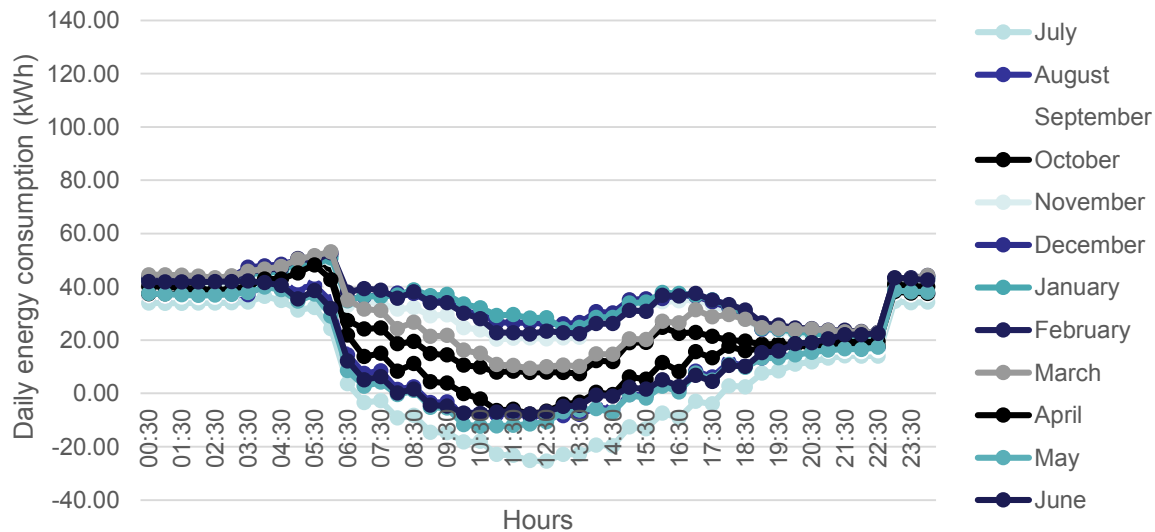
- 3. Generate revenue**
 - Use an aggregator to access Capacity Mechanism/STOR/FFR/Demand turn up contracts



Potential Results

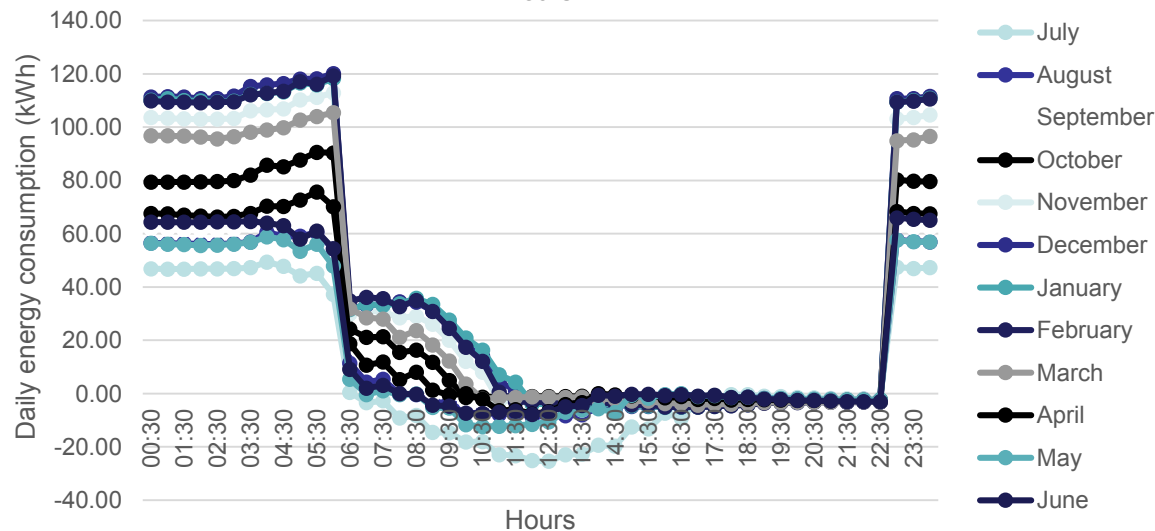
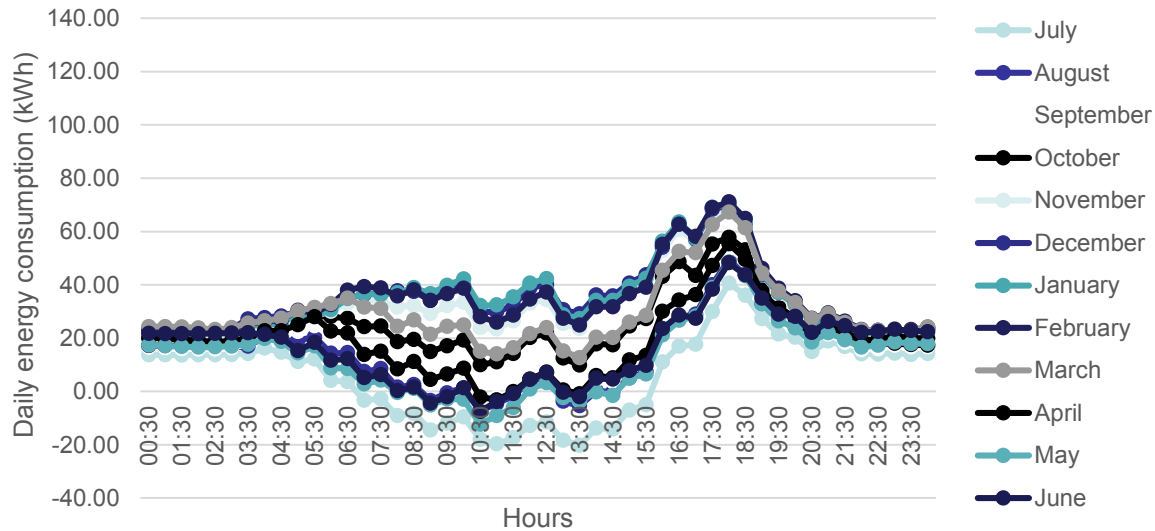


Baseline

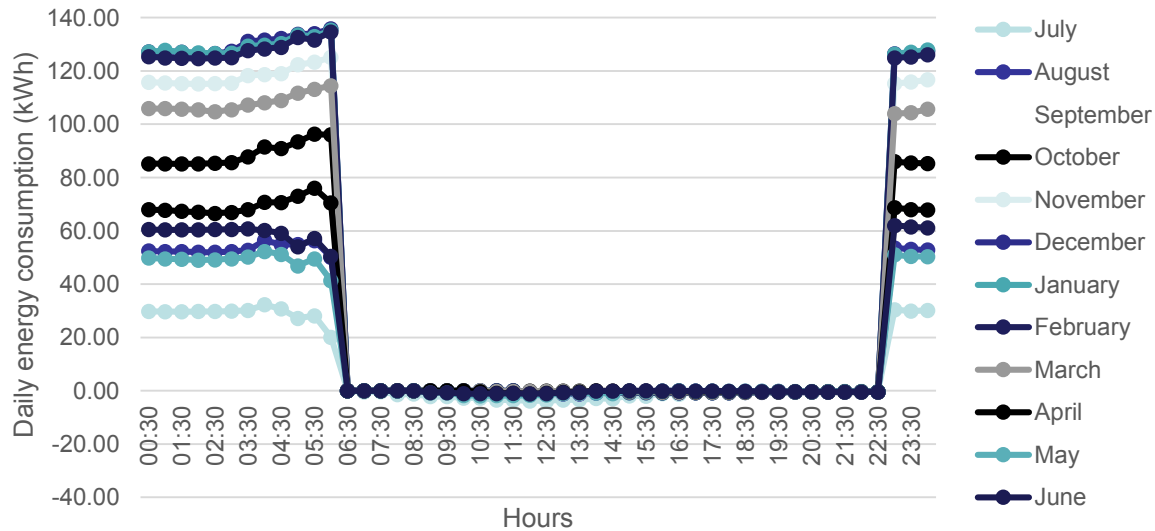
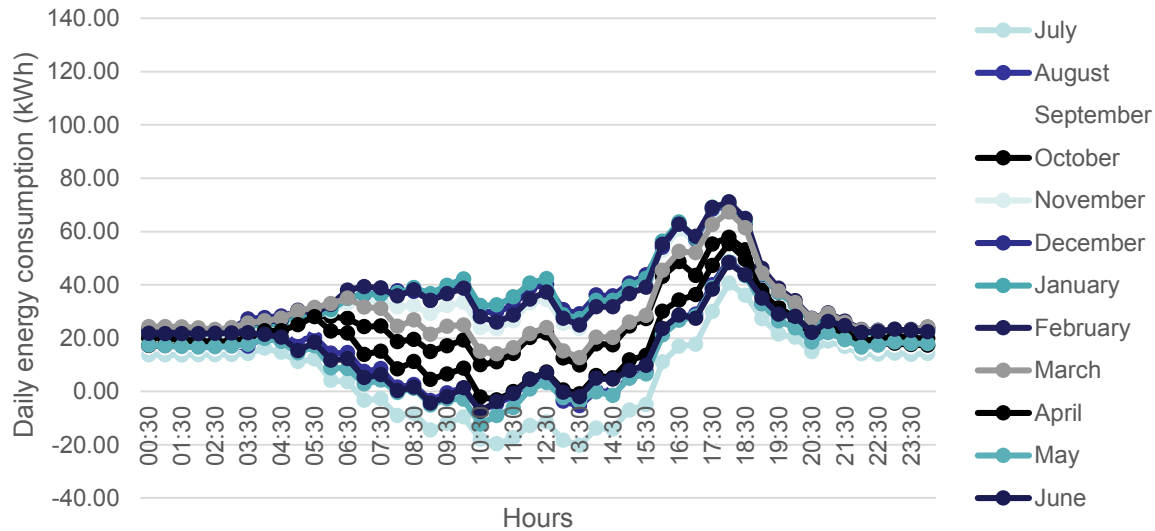


Smart charging

Potential Results



Potential Results





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