



Electrical and thermal storage optimisation in a Virtual Power Plant

(Innovate UK Ref: 132934)

Rushlight Summer Showcase
London, 14th June 2018



Electrical and thermal storage optimisation in a VPP (ref: 132934)

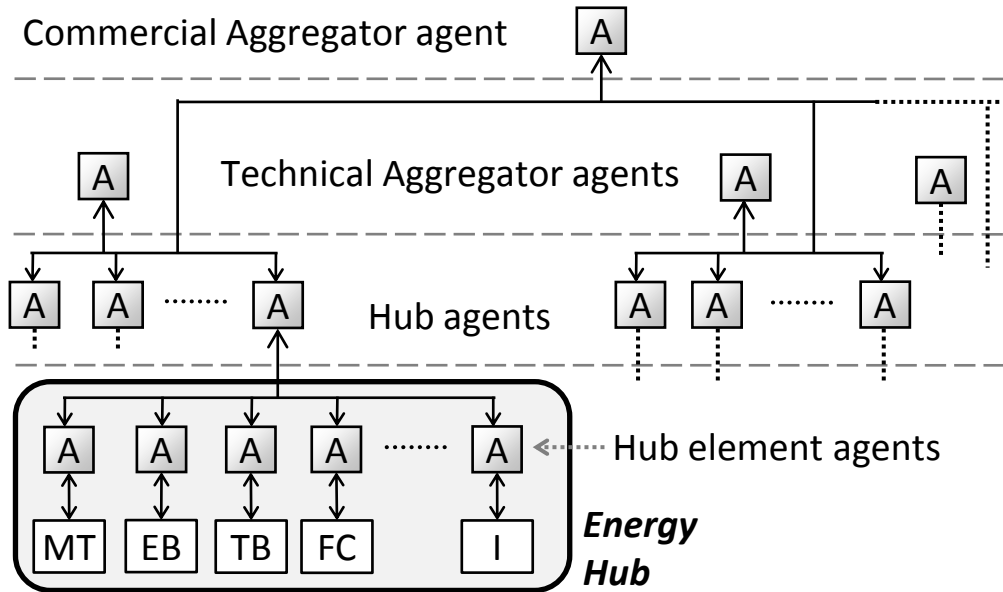
Overview

- Combined use of electrical and thermal energy storage for cost-effectively balancing energy supply and demand
- Electrical and thermal storage aggregation for service provision
- Objectives:
 1. Feasibility assessment of proposed storage control techniques
 2. Functional specifications of storage controller software & hardware
 3. Testing the feasibility of lab-based storage control implementations
- Benefits:
 1. Additional £400 revenue per battery owner over 15 years
 2. Deferred investment for network operators

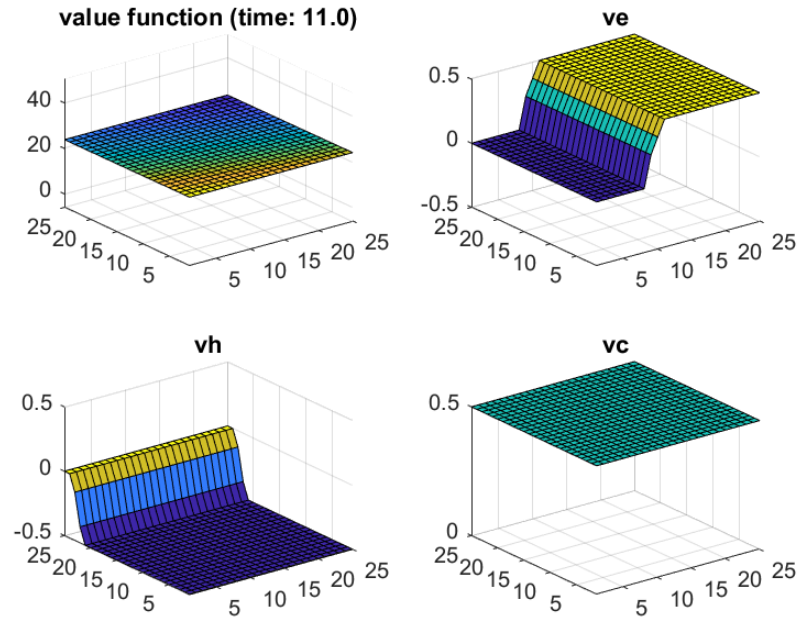


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Multiple energy carrier optimisation and control

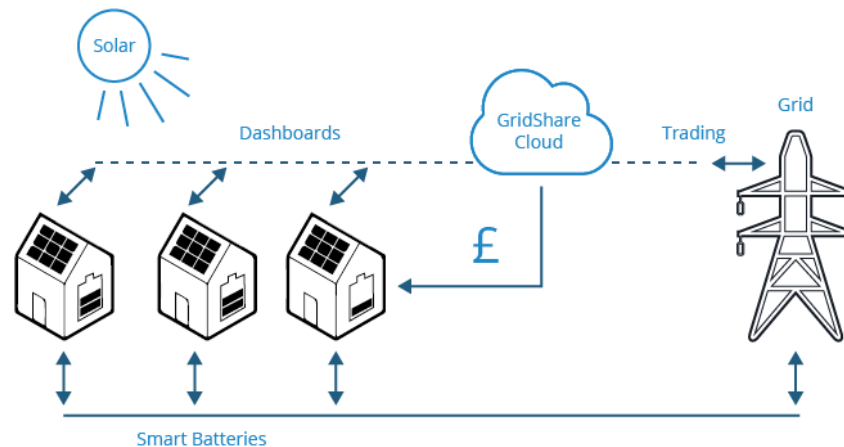


[A] Agent ↔ Interaction [I] Inverter [EB] Electrical Battery
 [MT] Microturbine (CHP) [FC] Fuel Cell (CHP) [TB] Thermal Battery



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System components



Moixa GridShare™ cloud-based aggregation



Moixa Smart Battery



Sussex/Durham controllers



Sunamp Heat Batteries



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Moixa / Sunamp integration – system architecture

