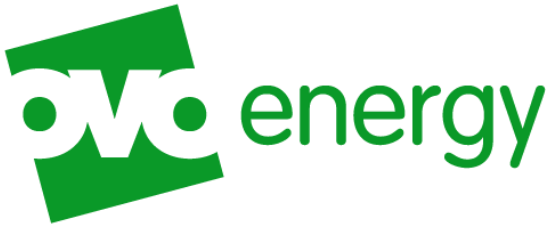
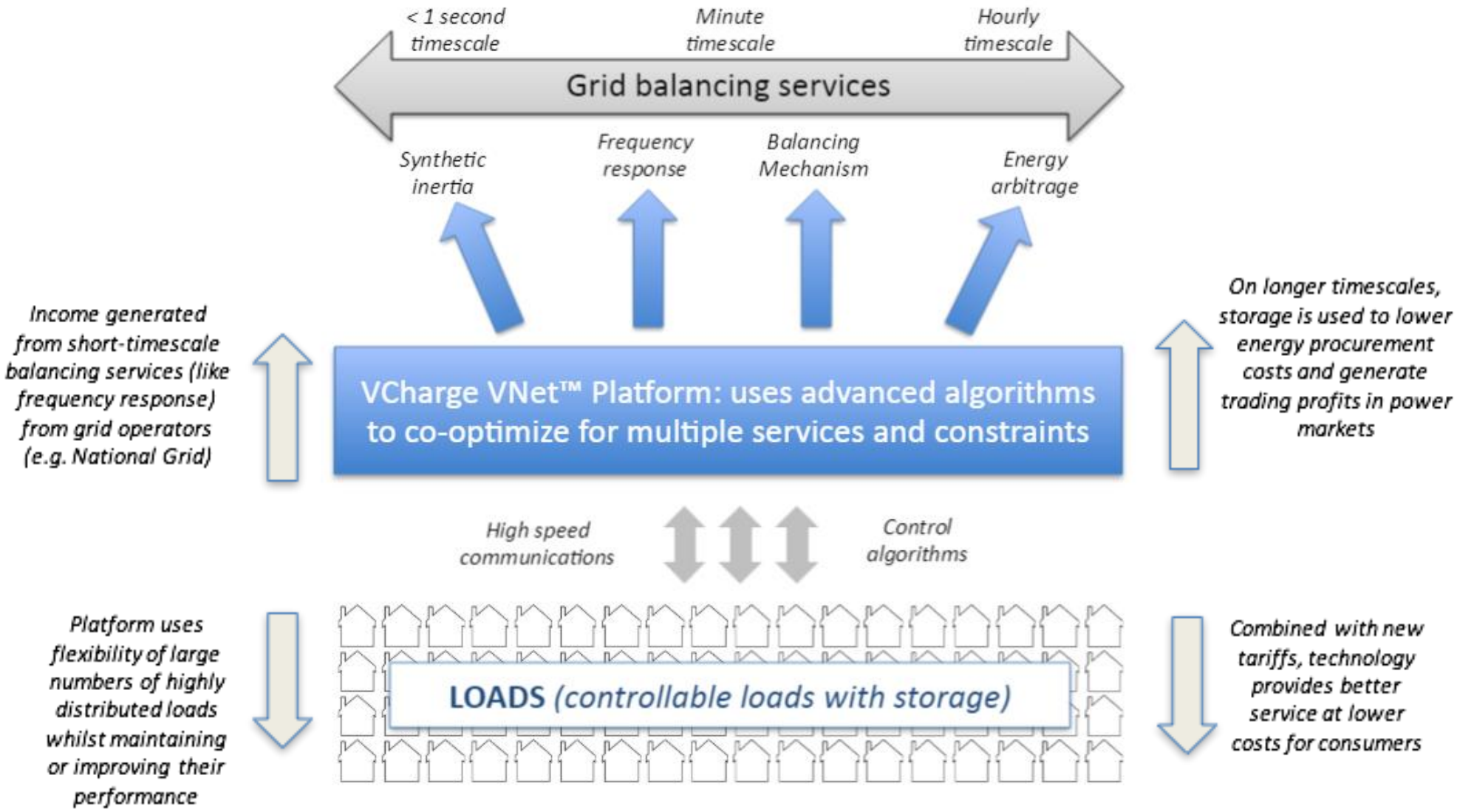


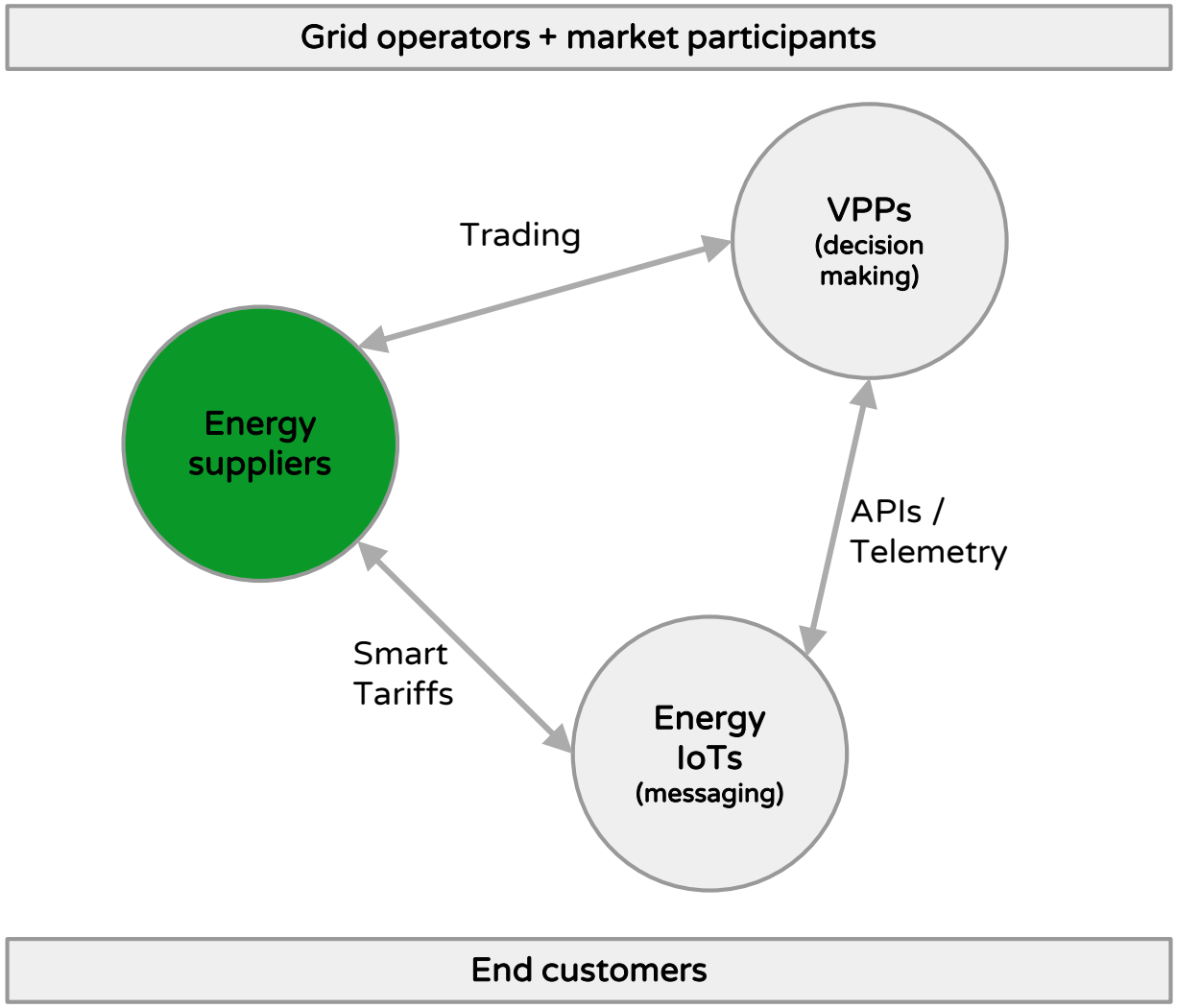
VCharge Introduction

Our mission is to enable 100% renewable energy by changing the control architecture of the electric grid

The VCharge platform aggregates energy storage assets to provide multiple grid balancing services



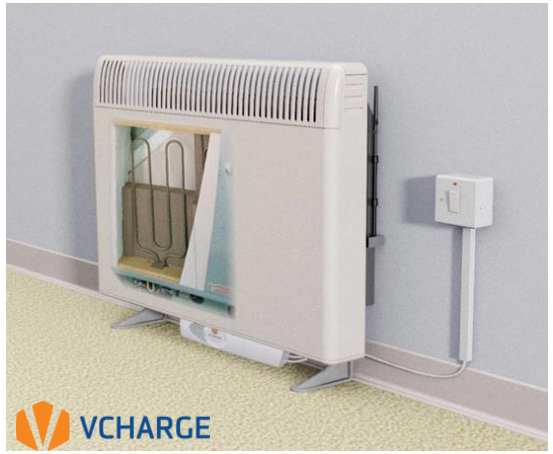
The role of energy suppliers in the Energy IoT landscape



We’re now leveraging these technologies to develop a suite of new propositions

Smart appliances

Electric vehicles



Home energy storage

OVO and VCharge have developed a solution for electric heat customers in the UK

- 1.5m homes in UK with electric storage heaters
- Each electric heater stores 12kWh of thermal energy
- Solution delivers key customer benefits of **control**, **comfort** and **savings**
- Unlocks grid balancing revenue streams such as frequency regulation, energy arbitrage + others.
- OVO's retrofit solution utilises the VCharge Dynamo retrofit, VNet VPP software platform, OVO smart metering program and a smart tariff

Hardware: Dynamo 2.0 controller can be retrofitted to any storage heater

User interfaces: Apps enable fast installation and user controls

Smart meter: Removes existing charging restrictions and enables half-hourly settlement

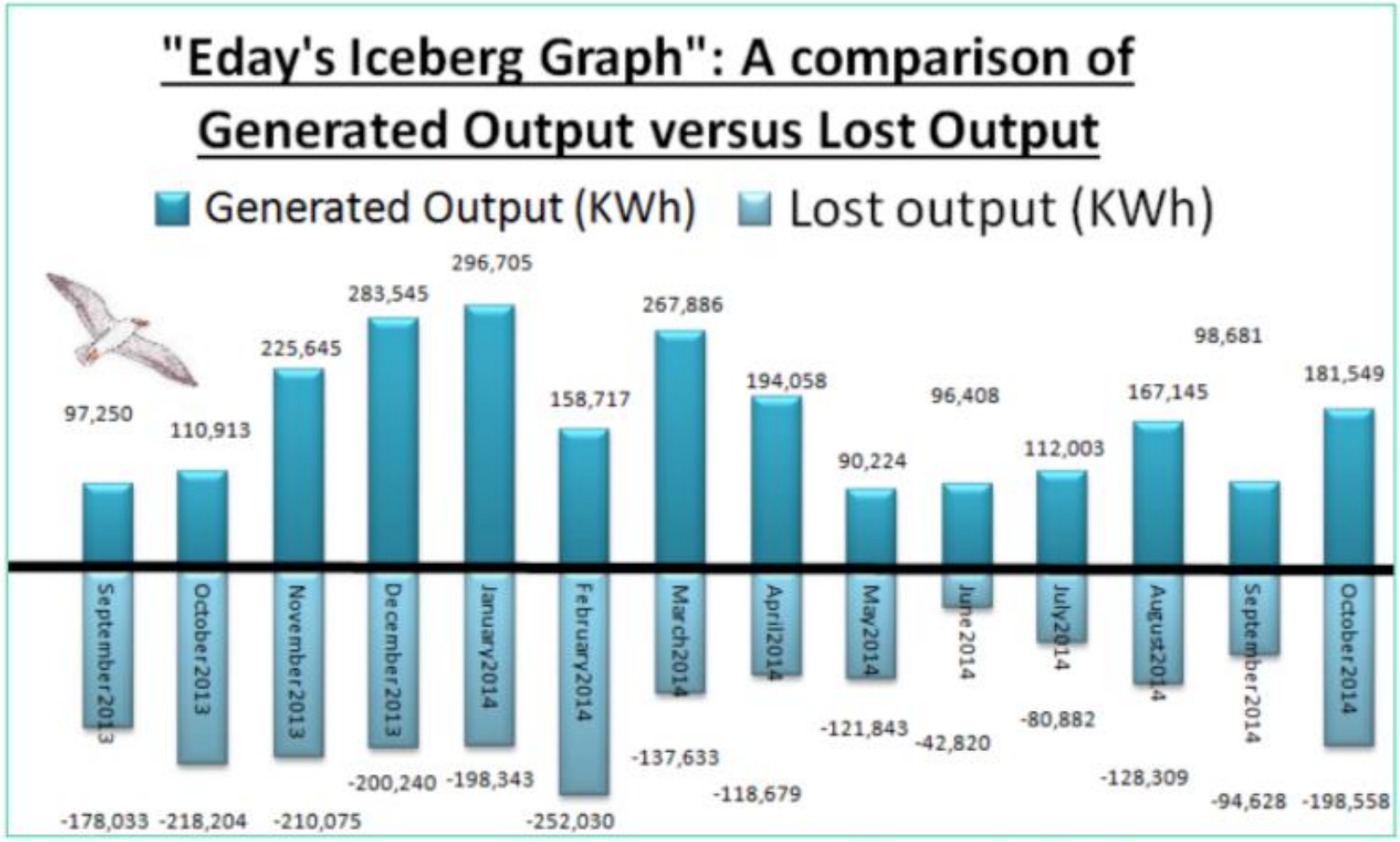
VCharge Island Projects

ACCESS Project: Assisting Communities to Connect to Electric Sustainable Resources

Heat Smart Orkney Project

SMILE Project: Smart IsLand Energy Systems

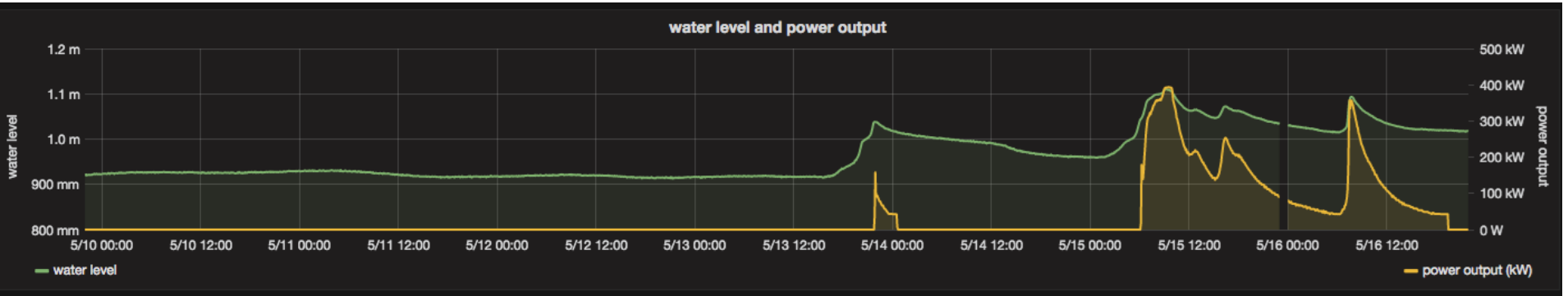
Curtailment Problem

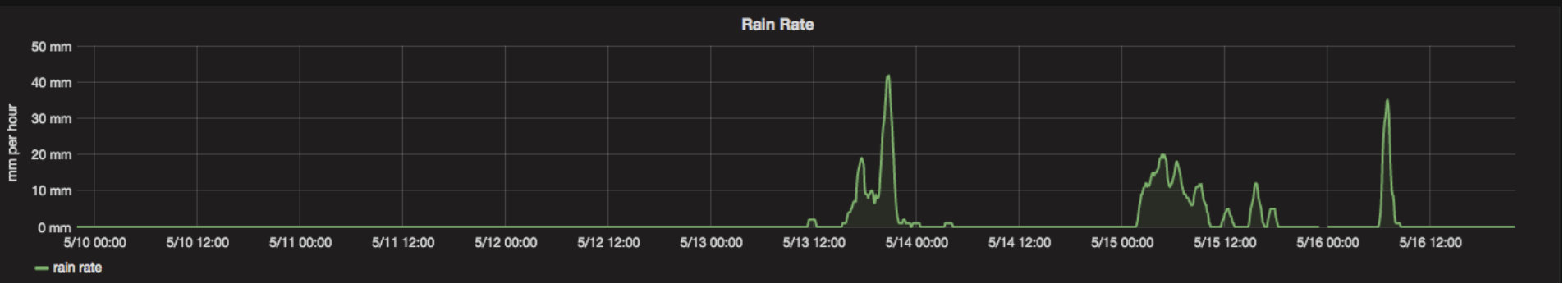


Courtesy Andrew Stennett, ERE

Mull: Managing Output Constraints

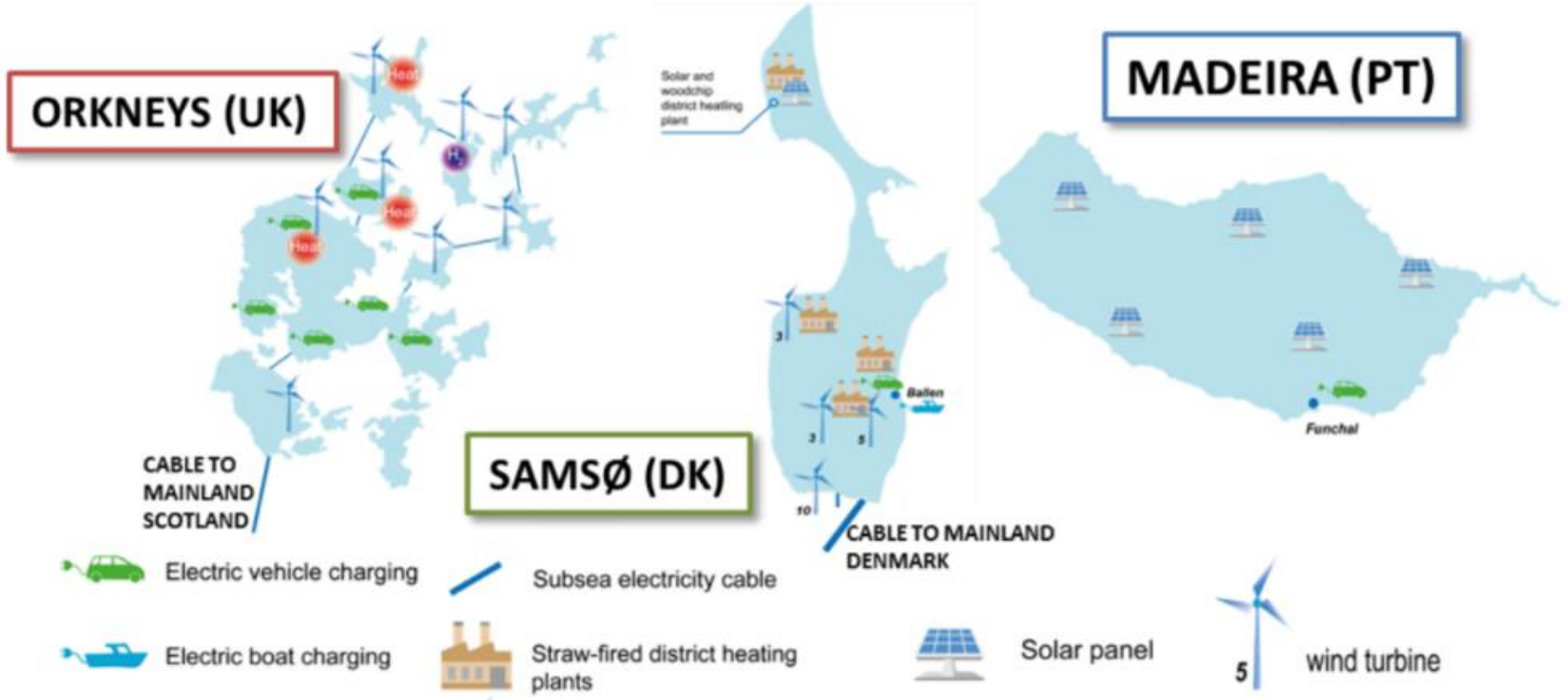
- SSE rule: non-firm generation connections cannot exceed 50 kW
- Garmony Hydro: 400 kW maximum output





VCHARGE
Turn It On

SMart IsLand Energy Systems



- A large-scale smart grid demonstration project in three European island locations addressing real issues with the local energy systems

(VScon) VCharge Supervisory CONtrol and data acquisition connect device

VNET

Telemetry

Dispatch

Lithium ION

Sunamp battery

Heat Pump

Dynamo

Thank you