



1412 - An Enhanced Virtual Power Plant for Flexibility Services into a Local Area (including EV's)

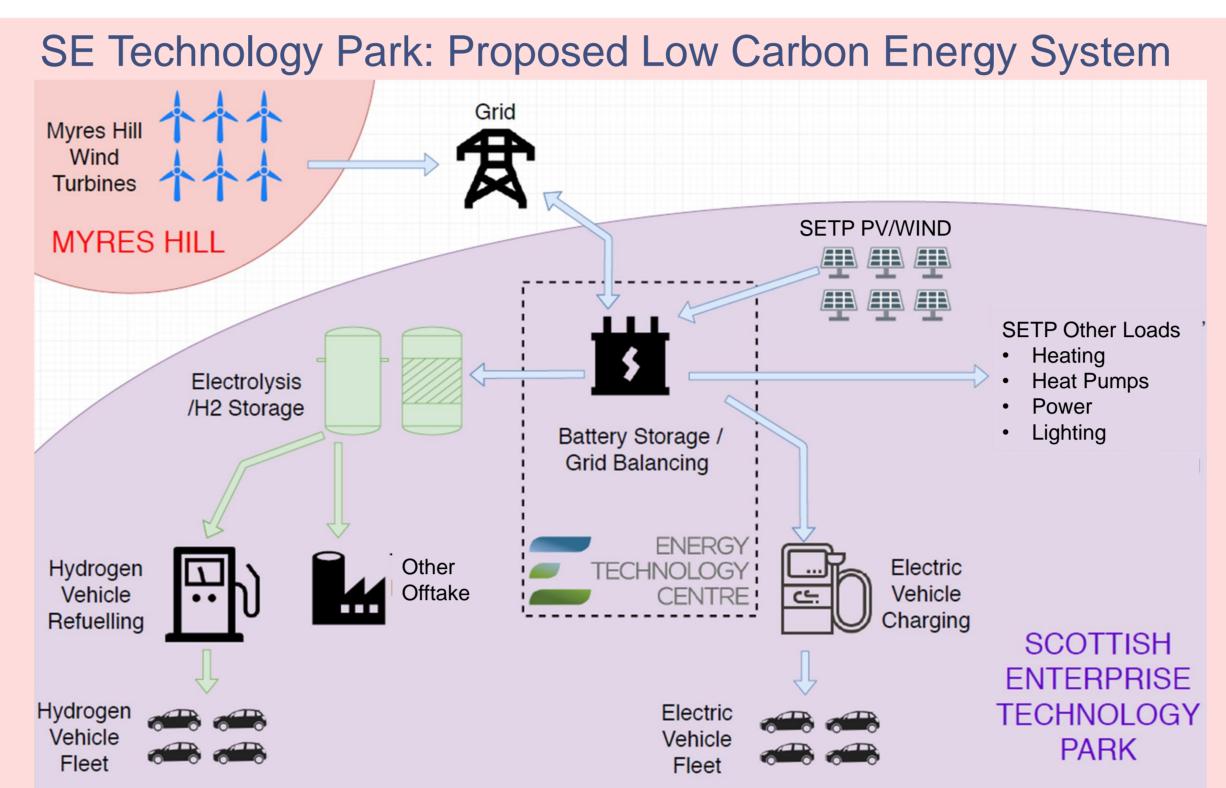
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- ERA Learn/EU Horizon 2020 Project (SIES 2020)
- "Learning by Doing"
- Enhanced VPP+ Design (using 3rd party commercial software) – using multiple vector energy pools
- Energy Pools (Flexibility, Thermal, DSR, electrolyser, EV's, Wind, PV)
- ETC Demo site
- Congested DSO Area
- Key Aim of Paper to understand the impact of decisions on Distribution/Transmission network
- Optimisation and control scheduling

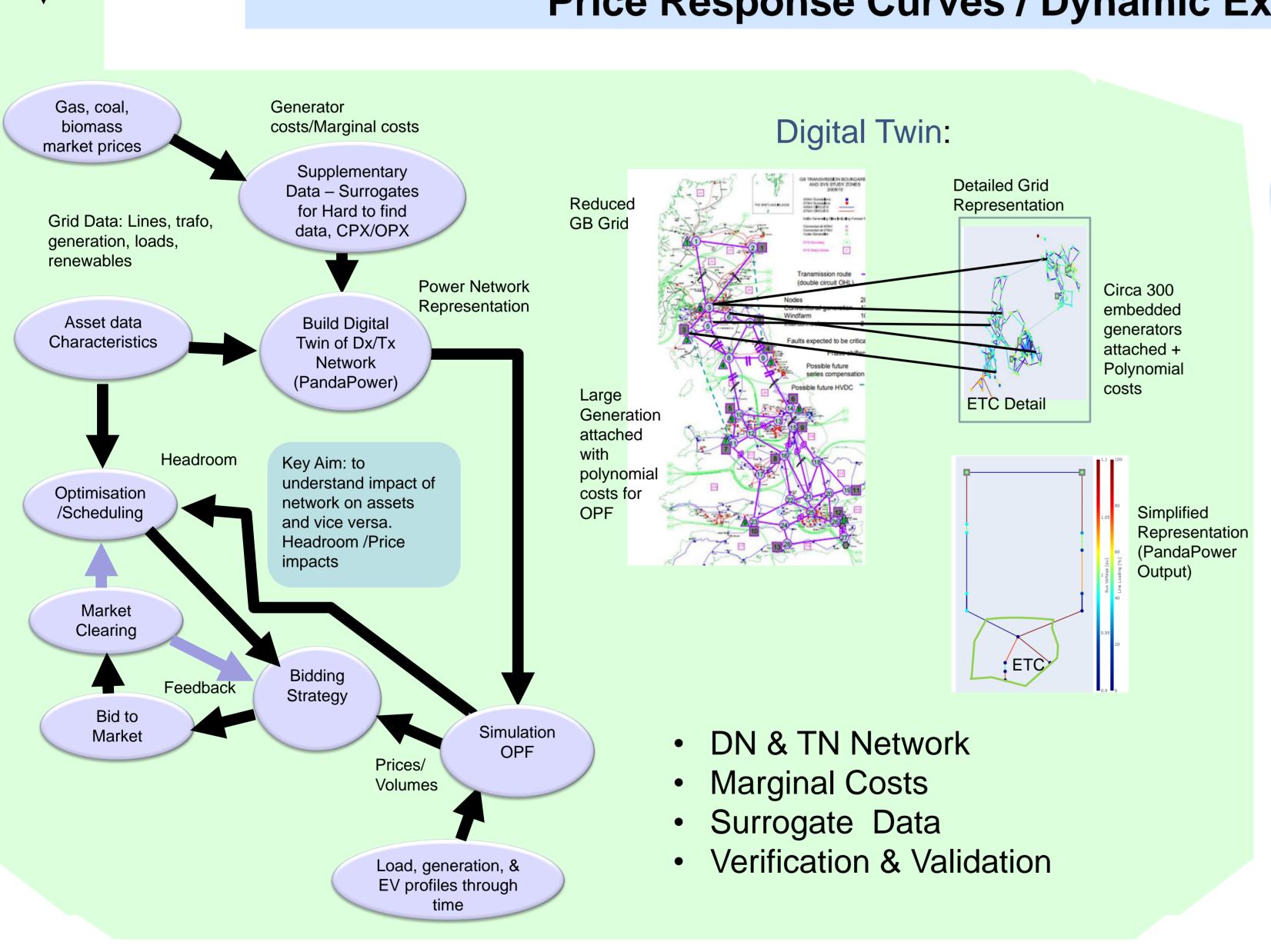


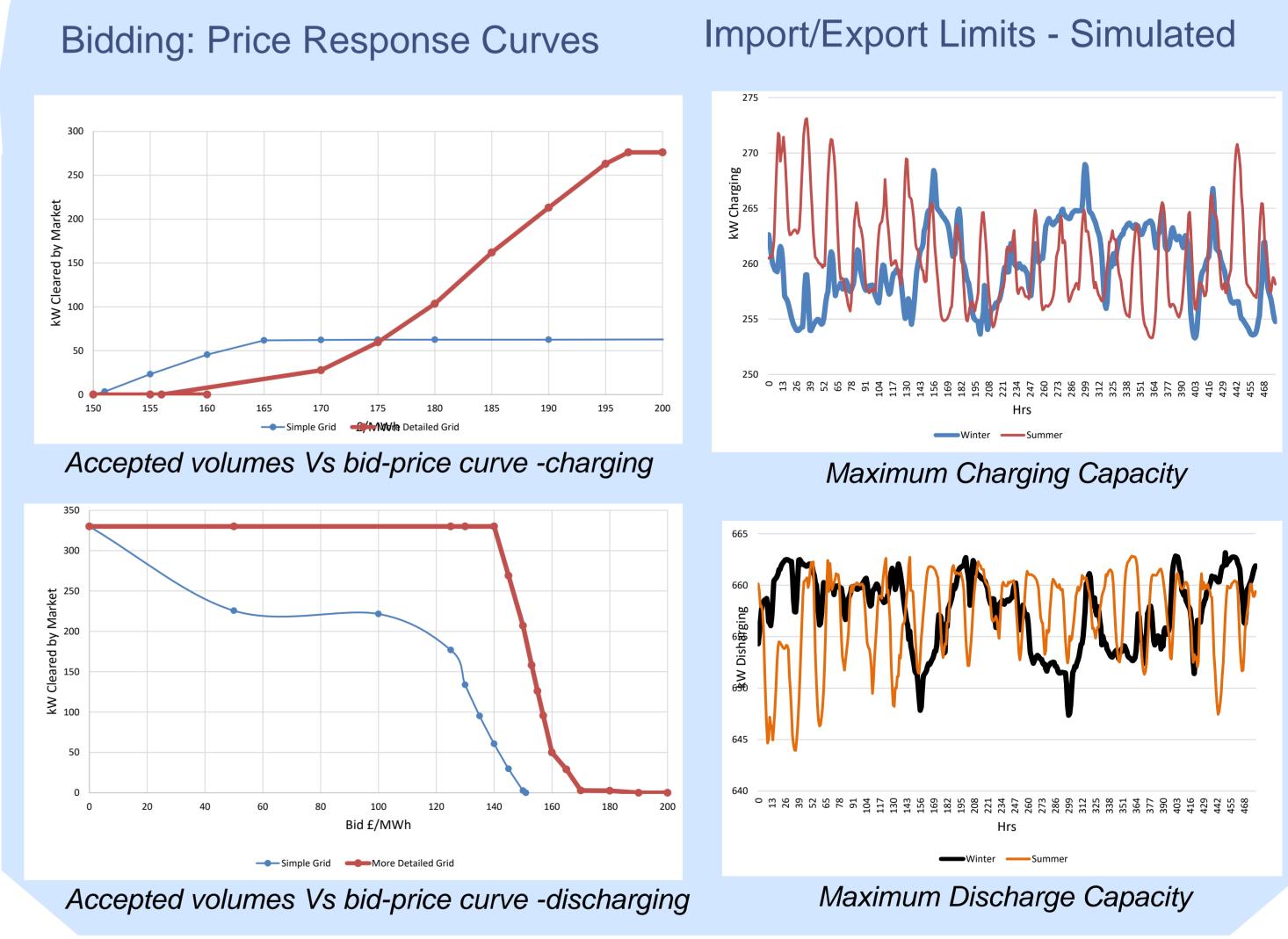


Introduction

Process/Methodology

Price Response Curves / Dynamic Export Import Limits for EV Use





Future Work

EV forecasts/

Simulation

- Optimization/scheduling algorithms
- System Performance vs Schedule (Feedback)
- Measurement Calibration
- Focus on ETC site (multi energy vector flex)
- Install hardware and VPP system (ETC)
- Develop additional VPP code





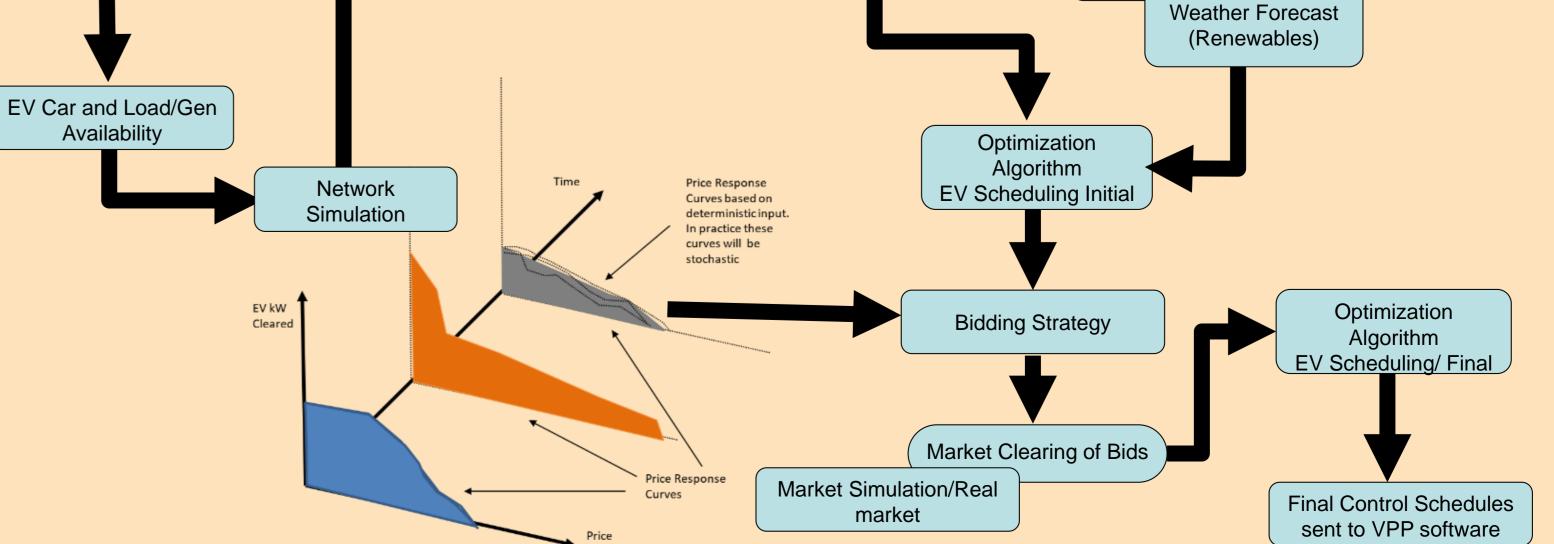
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Constraints

Flexibility Markets

Prices /Forecast