Smart Building Potential

Dedicated website – No

Organisation webpage – No

Centralised portal – ENA Smarter Networks

Objectives/Success Criteria – Yes

Closedown/final report – Yes

Open-source data – No

Peer-reviewed academic output (Primary Subject / Referenced) - 1 / 1

Brochures/Case Studies/Videos – No

On-line major conference/event presentations - 0

Dissemination Event / Output available – 0 / 0

Follow-on project – Yes (Ruggedised)

Consumer Engagement

Consumer Participation – Yes

Consumer Feedback – No

*Output Summary*

Progress reports – Yes

Detailed and objective final report – Yes

Project method detailed – Limited

Performance to objectives detailed – Yes

Lessons learned identified – Yes

Policy/Regulation implications reviewed – No

Simple closedown report using standard NIA template.

*Outcomes vs. Objectives/Targets*

Performance to objectives – Mostly achieved

*Key Findings*

- DSR was implemented in 10 buildings and found to be successful in 6. Poor comms (4G) resulted in issues being masked and data being lost. For the buildings that DSR was successfully implemented, grid-relevant load reductions (20% of controllable load) were seen.
- Cost benefit analysis, which merged network modelling of typical city centre circuits with the DSR trial results, demonstrated that DSR as a standalone network intervention was cost effective if a small load reduction is needed to avoid network peaks, but as the level of reduction increases, traditional network reinforcement is the most cost effective.
- The procurement of DSR as a service, with the cost of DSR implementation borne by the building operator or an aggregator, considerably improves its cost-effectiveness and could rival the cost of traditional reinforcement. There is likely to be a limit – both financial and technical – beyond which DSR will not be effective and traditional

reinforcement must be implemented. DSR, however, could defer that investment for many years.

- As more buildings have controllable BMS installed, the cost of DSR as a network support tool should decrease.
- Combining STOR-type mechanism for supply constraints with network-related incentives to keep load within agreed parameters, could be model for DSO: DSR could play a significant role, allowing localised control of loads.