

CHOICES

Dedicated website – No

Organisation webpage – Yes

Centralised portal – No

Objectives/Success Criteria – Yes

Closedown/final report – Yes

Open-source data – No

Peer-reviewed academic output (Primary Subject / Referenced) - 1 / 0

Brochures/Case Studies – No

On-line major conference/event presentations - 1

Dissemination Event / Output available – 0 / 0

Follow-on project – No

Consumer Engagement

Consumer Participation – Yes

Consumer Feedback – No

Output Summary

Progress reports – No

Detailed and objective final report – Yes

Project method detailed – Yes

Performance to objectives detailed – Yes

Lessons learned identified – Yes

Policy/Regulation implications reviewed – No

Detailed closedown report available with balanced assessment of project, performance to objectives and lessons learned.

Outcomes vs. Objectives/Targets

Performance to objectives – All achieved

System deployment proceeded generally to plan with a slight overspend. Project demonstrated via modelling and system monitoring the potential benefits and risks of ground heat recharging using PV-sourced summer heat replenishment. The project successfully completed a borehole system in a dense urban environment.

Key Findings

- Support from landowner and local stakeholders for drilling in an urban park was critical.
- Borehole thermal storage has the flexibility to adapt to specific site issues and obstructions.
- A detailed ground survey with cable detection, test digs and interaction with underground service providers is essential.

- A private wire grid is effective is parallel with a heat network to avoid grid charges, particularly in parallel with demand response measures.
- The capital costs for this pilot project were high.
- Active recharging of the borehole during summer had a potential efficiency between 2 and 1, with optimal charging at c.50% of winter heat demand.
- Recharging using integrated PV generation allows for a price differential between summer and equivalent winter input costs.
- Current grid charging arrangements do not support seasonal shifting for small-scale consumers.