

CHDU launch conference

Event report

The CHDU launch conference was held on 12th October 2023 from 10.30am to 4pm at The Pump House, Shrewsbury. The event was attended by 19 people from renewable energy businesses and organisations across the UK, as well as 4 Shareenergy employees.

Objectives

The purpose of the conference was to gather people with a range of relevant expertise and experience to help set the parameters for the Community Heat Network unit project.

Summary

The context to the project was outlined with a description of an existing heat network project (Woolhope Woodheat), and some of the lessons learned from that which might be used to inform future community energy projects.

The CHDU project aim was described as ‘the right tech in the right place with the right partners’, aiming to produce a business model that can be used by potential and existing community energy groups wanting to work on heat network projects, with a number of case studies illustrating how the model can be used in particular locations. Shareenergy’s partners for the project are Community Energy England and the Marches Energy Agency.

A detailed case study of the community heat network proposed in Bishop’s Castle was given, with the opportunity for questions. Subsequently, participants shared their experience of other heat network projects at various stages from feasibility studies (Brassington) to remediation of an existing heat network (Rocks Green).

Attendees then joined discussion groups looking at 3 key areas:

- Heat sources and storage for heat networks
- Fabric upgrades

- Community engagement

looking at barriers to and opportunities for community heat networks in these areas.

The afternoon concluded with a presentation on potential opportunities for addressing smaller parts of a district heating network, utilising existing structures and systems.

The event was generally well received, with feedback indicating that the event was useful to participants and most indicating that they felt the CHDU project and proposal were relevant to their local area or activities.

Detailed report

Jon Hallé, Shareenergy's CEO, started by giving some context to the project, explaining how the co-operative group model is a good match to the kind of long-term stable organisation that is needed to run community heat projects. The Woolhope Woodheat Co-operative provides one example of this, though the Woolhope project is unlikely to be replicable at other locations, in light of the decline in policy support (including the loss of the Renewable Heat Incentive). He talked about wanting to increase scale and what is needed for successful community heat projects, including:

- leadership
- community support
- suitable housing stock
- geological conditions

and about how many types of communities and topographies are not represented or considered for community heat projects. He concluded by discussing the need to look at what works and match it up with the right communities, and the current lack of knowledge or tools to make that happen.

Dave Green, Shareenergy's Development Manager, explained that the CHDU project aim of "the right tech in the right place with the right partners" is to produce a business model that can be used by community energy groups who are interested in building a heat network, supported by a number of case studies illustrating how the model can be used in particular locations. The focus will be on looking for where heat networks work rather than on technical innovation, and the purpose of the event was to find examples of existing projects and to

begin to identify community heat network ‘niches’ and barriers. Dave introduced Shareenergy’s partners for the project, Community Energy England and Marches Energy Agency, explaining the importance of integrating thinking about fabric upgrades to buildings when you consider a heat network, and noting that it is important not to replicate existing work done by other organisations.

Dave Green and Martin Crane then gave a presentation on the Bishop’s Castle Heat & Wind project which proposes building a community-owned heat network in a small rural town, outlining some of the barriers they have faced with planning and with support from local authorities, and how they have begun to overcome these. Martin described some of the tools, such as THERMOS, which were used to investigate where the heat demand is and any potential providers of heat, such waste heat, to the network, and there was discussion of other available datasets such as Ordnance Survey and OpenStreetMap, as well as LiDAR.

Martin suggested viewing the installation of a heat network as the start of a journey, describing heat networks in Denmark where there is still enthusiasm for heat networks years after installing them. He pointed out that the top priority of a heat network is providing heat, and that therefore consideration needs to be made of backup boilers and thermal storage.

Following this, attendees were encouraged to describe other heat network projects they were involved with, such as Brassington, where the hope is to build a heat network in a small rural off-gas community. There was some discussion about lack of local authority support for planning applications for heat networks that included wind turbines, and how that might be changing given recent changes to the National Planning Policy Framework. It was mentioned that one of the barriers is the ability to get a suitable grid connection (where a heat network needs to be connected to the grid).

Other projects mentioned included Rocks Green, a formerly problematic heat network in Ludlow that is now operating well following remediation, Swaffham Prior in Cambridgeshire (a local Authority run village heat network under construction) and the Isle of Eigg, where a community owned and managed company provides electricity for island residents from renewable sources.

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Discussions

In the afternoon, the group divided into ‘breakout’ groups to discuss ‘barriers to and opportunities for’:

- Heat sources and storage for heat networks.
- Fabric upgrades.
- Community engagement.

Heat sources and storage

Discussion of heat sources included:

- deep geothermal e.g., mine water.
- radiant heat.
- combustion, both from biomass and the incineration of rubbish.

It was noted that the geology of an area can be both a barrier to building a heat network (e.g., drilling boreholes through hard rock) but also an opportunity in some locations, such as Cornwall where granite close to the surface has geothermal potential.

Heat storage was also discussed, noting that it can give energy security, with the main barriers being cost and space needed. Different methods of heat storage were discussed including water, rock and phase change materials.

Fabric upgrades

Some of the barriers discussed in reference to fabric upgrades included:

- contractor and skills shortages
- how fabric upgrades should be financed, with a need for improvements to buildings to be equitable across a scheme, especially as some areas with high social capital may also have areas of deprivation.
- the suggestion that credit union-backed loans at reasonable interest rates might play a part.

Opportunities for fabric upgrades were also discussed, with the suggestion that heat networks can drive retrofit schemes and help to provide credibility for future efficiency improvements. Other opportunities mentioned were:

- the possibility of a better ‘New Green Deal’ from the Government.
- the existing Social Housing Decarbonisation Fund (for which there may already be suitable buildings).

- an opportunity to recast comfort as a service instead of heat, with improvements to comfort being seen as an aspirational goal similar to fitting a new kitchen.

Community engagement

Discussion of community engagement included the agreement that public trust in the energy sector is low, and that it was crucial for members of local communities to be involved from the very start of projects. Among the barriers discussed were:

- Lack of technical understanding in the community (for which it was suggested that training might be provided to community members).
- Lack of awareness of the benefits that community heat networks might bring to the community.
- An unwillingness of individual members of a community to take risk particularly at the start of a project.

Opportunities included:

- The potential to involve a large proportion of the community if the benefits to a project are presented up front.
- The potential for meaningful community engagement following on from projects such as Totnes' Transitions Streets and the Future Energy Landscapes tools developed by CSE.

It was agreed that strong local project leadership is very important both to getting projects off the ground, and to their longer-term continuance (essential for heat networks on which people might be relying to get their heat for many years).

The day concluded with some thoughts from Martin Crane on looking for opportunities to reduce the risk or number of barriers to heat network development, including new connections to an existing heat network, improving or upgrading existing communal heat systems and heat network zoning (included in the Energy Bill now going through Parliament, with the emphasis on urban heat networks). Other opportunities mentioned included:

- DESNZ's 'heat networks pipeline' document (detailing prospective networks at various stages of development).
- Heat from mines.
- Mapping of off gas grid areas.

He also noted the work that DESNZ have put into heat network.

Feedback

Feedback was received (via Google Forms) from 10 out of 19 participants. The feedback on the content of the event was generally very positive, with participants indicating that they found the event useful for their own information and projects and that they felt able to contribute to the discussions. A couple of commenters felt that the discussion was a little too technical, and while one or two participants felt that they hadn't learnt much about the specifics of the project or that a group discussion hadn't been well documented, most indicated that they thought the project would be relevant to their local area or activities and wanted to be kept up to date.

Comments were positive about the size of the venue, its proximity to the railway station and the quality of the catering.

Conclusion

Despite a couple of last-minute changes to the agenda due to unexpected absences, the event was well received, with attendees generally seeming very positive about the event and keen to be kept up to date or to be involved. While differing opinions were voiced on some points, the consensus appeared to be that the event had produced useful discussion and that the project was relevant to most attendees' local area or activities.