Low Carbon Heat for Universities and Colleges in Scotland

Event: Low Carbon Heat Workshop
Location: Queen Margaret University, Edinburgh
Date: Monday 26th March 2018

1. Agenda

Time	Item	Speaker
09:30	Registration	
10:00	Welcome	Rebecca Petford, EAUC Drew Murphy, ZWS
10:15	Expectations exercise	Chris Asensio, Carbon Change
10:30	Speaker 1: *Low carbon heat technology overview*	James Dickinson, Buro Happold
11:00	Speaker 2: *Developing a business case and accessing funding* Speaker 3: *Scottish Funding Council funding overview**	Paul Moseley, Scottish Futures Trust David Beards, Scottish Funding Council
11:45	Break	
12:00	Speaker 4: *Case study - Strathclyde University*	Robert Kilpatrick, Strathclyde University
12:30	Speaker 5: *Case study – South Lanarkshire College*	Angus Allan, South Lanarkshire College
13:00	Lunch	
13:30	Tour of Queen Margaret University biomass	Bruce Laing, Queen Margaret University
14:15	Clinic session *3 roundtable discussions on topics of finance, technologies, and case studies*	Facilitated by Chris Asensio, Carbon Change
15:00	Expectations round up	Chris Asensio, Carbon Change
15:15	Conclusion	Drew Murphy, ZWS
15:30	Close	

*David Beards was unable to attend the workshop

2. Questions

Questions were asked throughout the workshop which were answered by a range of presenters and attendees.

Q1. Centralised gas boilers compared with individual gas boilers?
A1. Very similar. Central plant provides greater diversity and can use large scale CHP for electricity generation. DH good for 'plugging in' low carbon heat in the future. Acknowledge that gas CHP carbon savings are reducing as the grid emission factors decrease. Low carbon heat sources to consider tapping into in the future include industrial waste heat and waste water (e.g. Sharc).

Q2. Did the University of Strathclyde consider connecting to other loads? (Question aimed at Robert Kilpatrick, University of Strathclyde).
A2. Yes, NHS, GCC (Glasgow City Chambers) and local housing. The University do not have an ESCO in place so there would be challenges in finding a delivery mechanism. There have been nine external organisations asking to connect but this is not a core service of the University. Expect GCC to be lead in developing a SPV to roll out low carbon heat and district heating across the city. The University could be a partner in this (up for discussion). There are four separate connectors left on the University n/w to allow for future expansion.

Q3. How did you manage to get value for money? (Question aimed at Robert Kilpatrick, University of Strathclyde).
A3. Transferred risk to the contractor (who would have made an allowance for this) which gave the University greater cost certainty. Contractor costs included 'abortive costs'.

Q4. What's the indoor air quality like at the South Lanarkshire College low energy teaching block? (Question aimed at Angus Allan, South Lanarkshire College).
A4. Air flow is manged with high level louvres in each classroom through which air is pulled via passive 'solar chimneys'. Temp and CO_2 set points in each room. Humidity not an issue. Student and teacher feedback is very positive. Point of use heaters used for DHW. Air tightness levels at $2m^3/m^2.hr$.

3. Clinic session notes

- £16.6m Scottish Funding Council funding. Rolling programme of loans covering demand side measures.
- Demand side measures and reducing neat network temperatures.
- FHE sector has a large back log of maintenance measures to attend to (such as poor fabric). Cladding at University of Glasgow library meant they could reduce flow temperatures to the building.
- Need a strategic approach which manages the whole process (refurb, energy efficiency and supply side measures).
- Interesting to see how LHEES shall be incorporated into FHE strategies going forward.
- Decouple activities e.g. instead of worrying about the setting up of an ESCO, try to pilot connection to one building as a starting point (try using a Memorandum of Understanding).
- Scottish Water have a huge asset with waste water which could supply heat. Don't need complex arrangements – one supplier (such as with SW at Borders College) will help keep it simple.
- How to improve building fabric? Should government get involved with legislative measures?
- Future low carbon heat and district heating events should focus on non-technical staff such as finance and senior management who need a better understanding of the technology and the benefits so they can promote internally.