



Work Programme

July 2016

Background

Process

Small group of members met to consider programme last Monday

- Programme should be driven by need to transform energy system in response to climate change mitigation
- Take account of members suggestions

Triple Condition:

- Is it needed?
- Can we do it?
- Is nobody else doing it?

Outcome

- Heat as a broad topic area met both objectives

Drivers

Climate Change

2008 CC Act: Carbon Budgets to 2050

-57% ... -80%

International Agreements to 2100

1.5° C

Transformation of the Energy System (starting now)

ERP work programme

Necessity for Energy Security

Threat to Affordability

The Need to Innovate and Adapt

Heat - Background

Domestic and commercial heat sector is going to need a complete transformation to decarbonise

Three big technology options:

- Repurposing LP gas system to hydrogen
- District Heating with low carbon heat source
- Electrification with heat pumps

Niche technologies: E.g. biomass & solar thermal

Demand Reduction and management: Insulation & thermal storage

Aspects of each have been examined but there are significant gaps and holistic picture has not been addressed

The 5th Carbon Budget

“requires important contributions from ... low-carbon heat (providing heat supply for around one in seven homes and over half of business demand), solid wall insulation (in around a quarter of suitable homes) ...”

Heat - Plan

Bottom-up

What heating appliances and storage is in each home?

What insulation measures will be needed/ are cost effective?

How effective will measures be?

Top-down

What are the infrastructure requirements?

What are the implications for primary energy demand?

What is the reach of each? What are the constraints? Will they work together?

Engineering

What are the logistics for households and utilities?

What resources are required? How long will it take?

Inputs

- ETI/ESC Smart Systems and Heat
- Leeds H21
- DECC Heat Strategy
- European Climate Foundation
- ERP Projects:
 - Buildings
 - Cities
 - Community Energy
 - Hydrogen
 - Storage



Next Step

This is a big project!

A-Team will resource with 2 people
Need members to volunteer to help shape
Present PID at October plenary