

From: [Geoff Smyth](#)
To: [Hutchinson, Peter](#)
Subject: RE: DETI Renewable Heat Oversight Group - Study Assumptions and date of next meeting
Date: 23 February 2010 17:39:38

Peter – sorry for the delay in replying (swamped as usual so only getting a chance to review this now). I've had a speed-read & have some initial queries/observations:

- **Existing heating technologies:** quoted thermal eff's appear low & limited (e.g. should include condensing/non-condensing options): suggest they model using SEDBUK bands and/or change to using 'seasonal system efficiency' instead. Additionally, EST/NIHE may have some data on number of domestic boilers in NI within A-G bands;
- Load factor needs to be defined: where stated, they appear too low (assuming its 'annual operating hours)/8760');
- O&M costs look high; what the basis/reference for quoted numbers?
- **Building scale technologies:** thermal eff: note comments above re move to seasonal system efficiency (will lead to better analysis)
- Load factor: ditto above
- Fraction of capital for replacement: what does this mean? Needs to be defined..
- Capital costs: source for prices & define what price covers i.e. purchase/installed price? boiler only/boiler & system modifications/controls etc?
- **Non domestic scale technologies:** ditto queries/comments above re thermal eff/system eff, costs, load factor
- Lifetimes: source for 20-year life of AS/GSHPs & SWH?
- **Community and large commercial / industrial scale technologies:** unusual for biomass CHP to serve such high percentage heat & DHW requirements
- Need to define: small; medium; large
- Geothermal heat: parasitic loads?
- **Biogas technologies:** source for capital costs (look a bit low)?
- Biogas injection: I'll check with London-based colleagues if they've any data
- **CO2 emission factors:** ref source (DEFRA/DECC etc?)
- **Energy costs:** suggest NI figures be used.

In terms of issues not covered in the paper, an early view on their assessment of current heat demand across sectors and how they expect this to change over the coming years (through improvements in EE, building regs etc) would be useful. It may be helpful for Andrew Turton to speak with my colleague Keiran Allen who is managing CT's biomass heat technology accelerator; I'll drop him a line to offer this.

Regrettably, I'm unable to attend the 11 Mar meeting as I'll be in London on business, however a colleague may be able to attend if this would be acceptable?

Kind regards, Geoff

Geoff Smyth

Manager - Northern Ireland

Tel: 02890 734392

The Carbon Trust - Making Business Sense of Climate Change

Northern Ireland Science Park

The Concourse

Queen's Road

Belfast, BT3 9DT

www.carbontrust.co.uk

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From: Hutchinson, Peter [mailto:Peter.Hutchinson@detini.gov.uk]

Sent: 18 February 2010 16:14