

Minutes: National Consultation Platform (NCP) event:

Date: 25th November, 2015

Venue: 21 Dartmouth Street, London, SW1H 9BP

Present:

Sarah Ettliger (Eunomia)
Andrew Tolfts (West Sussex Local Authority)
Edward Thompson (ICAX)
Andrew Hopton (HETAS)
Sam Clarke (Cofely)
Brendan Murphy (Gemserv)
Chloe McLaren (National Housing Federation)
Andy Deacon (Future Climate)
Lorraine Haskell (RECC)
Amber Sharick (UK Energy Research Centre)
Nicola Darvill (Ofgem)
Karen Strandoo (EST)

Apologies:

Jeremy Martin (Southend-on-Sea Borough Council)
Dr Christos Markides (Imperial University)
Gaia Stigliani (Ecuity)
Isabella O'Dowd (Solar Trade Association)

Introduction: Andrew King (EST) provides introduction to the 'FRONt' project and outlines key project outputs achieved to date. Maria Baez (Creara) presents how the tool functions, including calculations behind the end-user inputs - with specific reference to biomass technology. Following the presentation by Creara, questions are invited from NCP project partners.

EST: If end-users used a secondary heating source within the house, e.g. back-up electric or oil - would the tool allow input for secondary heating systems to be included in the levelised cost of energy (LCoE) calculation?

Creara: explains that the tool only allows for one reference system, which uses one energy source. However, if this is the reality for some countries then the tool should consider this option.

NCP: questions who the tool is aimed at? Concern that the workings behind the tool are quite sophisticated – questions whether the tool is aimed at the general public, or users who have a sound understanding of heating technologies? NCP highlights a risk that if the general public are using a sophisticated tool, the outputs maybe inaccurate.

Creara: states that the tool is aimed as the broadest spectrum of the residential sector as possible. Aim is to have a very simple webpage with drop down options and guidance provided at each stage of the LCoE calculation.

NCP: concern that if the tool is reduced to a number of simple parameters, which are reliant on sophisticated calculations, there is a risk that the output will be inaccurate.

Creara: acknowledges that this is an area of concern - focus has to be ensuring that guidance is informative as possible. However, there should be an option to provide more knowledgeable users the chance to draw a more accurate conclusion based upon a greater number of specified parameters.

NCP: In reference to Ground Source Heat Pumps (GSHPs) – one of the key parameters will be the coefficient of performance (COP), which varies by the quality of design and installation. If based upon COP values published by EST – GSHP would not be an option. NCP highlights a concern that when tool is reliant open figures from third party sources, which may be inaccurate, there is a risk that the tool will produce false results.

Creara: states that the tool will be based upon parameters, which will be consulted not only from those directly involved in the project but the NCP as well – allowing for greater accuracy. Creara mentions that the Austrian Institute of Technology (AIT) is currently running a number of simulations, which will feed into the reference parameters for the tool.

NCP: suggests that from a design point of view, would it be more preferable to have a simple online tool and then excel calculation sheet for people that want to get into the assumptions? NCP highlights that there are other calculators in the public domain, which have a simple consumer facing version and then for users with a more technical understanding, there is an option to download an excel version of the tool. NCP highlights concern that even with explanations there is a risk that people will become lost when using the tool.

NCP: highlights a need to not only simplify the inputs required by the tool but the produced outputs. NCP suggests not only graph format but worded statements. For example, which technology is the cheapest or provides the best environmental performance etc.

NCP: raises a concern that if the aim of the tool is to promote renewable heat and cooling (RHC) technologies - what happens if the tool reveals that a gas fired boiler is a more preferential option based upon lower initial investment costs?

NCP: highlights that whilst a fossil fuel alternative maybe a cheaper option - there would be a big difference in the amount of carbon emitted.

EST: states that the tool will provide a carbon saving and as well as LCoE outputs.

Creara: agrees there is a concern that fossil fuel alternatives may appear to be a more attractive financial option. However, the tool will provide a range of outputs, including reduced carbon emissions.

NCP: questions how the tool will estimate future costs of fuels and energy sources?

Creara: states that the tool will use guidance from secondary sources that are felt to be reliable. For example, the International Energy Agency produces figures on future electricity prices in Austria.

NCP: in reference to the tool outputs versus fossil fuel alternatives, NCP suggests providing information not only on the LCoE and initial investment cost but the pros and cons associated with each technology. For example, long term environmental performance versus initial costs. The NCP stresses that graphs will not be relevant to everyone.

Creara: agrees that the tool outputs may require revision and is currently not very user friendly. However, Creara urges caution that a tool which produces simple worded statements must include clear supporting caveats.

NCP: suggest FROnT partners research into the US National Renewable Energy Laboratory's 'JEDI' tool. The tool provides a good reference point on how to clarify assumptions that sit behind LCoE calculations.

NCP: highlights that with the current version of the tool, if the user increases the floor area, the demand estimation does not increase. NCP suggests input the number of people within the property, as a precursor to estimate daily hot water consumption.

NCP: suggests an initial 'weighting' exercise which will allow the end-user to weight calculations based upon whether the user is interested in environmental or financial parameters. This could then influence what steps are required by the end-user and how final outputs are communicated.

Creara: suggests discussing this at the next internal project meeting. However, if it simplifies the user inputs who, for example, are just interested in the environmental reasons then this could work.

NCP: If there is no reference system how would tool work?

Creara: there will always be a reference system to calculate financial parameters. This is necessary for NPV, savings and payback.

NCP: questions what would happen if the end-user wanted to compare two or three technologies against each other?

Creara: suggests repeating the process with different renewable energy technologies against same reference system.

NCP: concerned that this would be a difficult comparison given RHC technologies vary in their ability to provide space heating or hot water at different times of the year.

Creara: explain this is why the 'Energy Services Situation' section is so important.

NCP: queries whether the tool will work for community systems, or only individual households?

Creara: focused on individual homes only.

NCP: asks if there is any opportunity to include additional costs that might be associated with community based systems such as linking up to heat networks, or upgrades to existing heating system e.g. under-floor heating.

Creara: explains that additional infrastructure costs could be included in the tool - either as a direct calculation or scripted guidance.

NCP: questions whether tool guidance is country specific e.g. reference parameters such as insulation are stated as being either 'low' 'medium' or 'high' levels. However, insulation standards will vary between different countries.

NCP: (cont.) – in reference to third category of 'regulatory bodies' – NCP questions whether this refers to regulatory bodies or publicly funded institutions e.g. schools

Creara: explains that all reference values are country specific. Re: question on regulatory bodies - it is not yet decided whether this option will be included on the tool. However, the tool is referring to organisations, which are not reliant upon external aid but are only interested in the competitiveness of each technology.

NCP: asks whether a housing association would fit into the current tool? Would they need to run multiple simulations of the same technology?

Creara: concerned that the tool would be too simplistic for Housing Associations, which normally consider large-scale roll out of RHC technologies.

NCP: raises concern that once the tool is in the public domain there is no control on who uses it. Therefore if the tool includes the additional category of a 'regulatory body' – it might be used beyond its intended purpose and therefore pose a long-term risk for the tool.

NCP: stresses that the terminology needs to be adjusted and move away from terms such as 'levelised costs', 'Net Present Value' and 'Residual Value'

NCP: questions how the tool will function when for example, different parts of a GSHP have different operational life expectancies.

Creara: proposes two options: 1) If one part of the equipment's life expectancy is longer than another then the overall operational lifetime will be equivalent to the part with the smallest life expectancy. 2) For GSHP in particular, the option will be given to fill in the replacement cost borne in the future (e.g. year 20)

NCP: suggest testing the tool for general user testing within the NCP project consortium.

Creara: agrees that this would be a good idea.

EST: concludes discussion and thanks partners for their input.