



## **IEAGHG Information Paper 2015-07; IEA Industry Co-ordination Group webinar in waste heat recovery**

I reported at ExCo that the IEA had set up an Industry Coordination Group (ICG) of the IEA Energy Technology Network (ETN). The aim of the ICG is to provide a platform to share Industry related topics within the ETN, identify synergies and gaps, explore collaboration channels and provide advice to the different WPs when relevant. THE ICG will also be drawn upon by the IEA in the preparation of the now annual Energy Technology Perspectives (ETP) report. Of particular interest to this activity was ETP 2016 which will cover Urban Energy Systems

The first topical webinar of the Industry Coordination Group (ICG) was held on the 19th February 2015. The topic was Industrial Waste Heat Recovery (WHR). The objective of this webinar was to explore waste heat recovery energy potential savings in industry through discussion on related activities within the ICG participating IAs/Annexes. It will also allow for discussion on potential areas of common interest for analysis such as barriers for implementation of technology solutions and collaborations at the ICG level.

I attended this first topical webinar for reference purposes; there was a reference to CCS in one of the presentations, proposed future topical webinars include one on CCS and I had an interest in listening to issues pertaining to waste heat utilisation and was there anything we had missed in our own analyses.

The main speakers in the webinar were the IEA themselves, the IETS IA whom we have worked with on topics related to heat integration on CCS and another IA, the Energy Storage IA (ECES).

As a general observation from the workshop there was not general agreement between the parties on several key issues, notably:

- Terminology usage
- The definition of what is waste heat – which seems to vary from region to region

These points are quite fundamental really to ensure that everyone is talking on a common basis.

There was consensus on the need for global reporting of waste heat resources, which needs to be done on a consistent basis. The IEA are clearly looking for this data and the IETS IA is starting a new Annex to look at this issue, but will only cover their members countries (7 in total) and will not report for two years – probably too late for the IEA's needs.

Setting aside these issues, there is a strong case to use low grade waste and the IETS group provided a number of interesting cases studies. There are a number of technical barriers identified, amongst which is the cost. Large heat recovery projects are more economically favourable than smaller ones, which tend to require more expensive materials and the pay back times are longer which does not encourage investment. The best option going forward seems to be this inventory analysis, followed by awareness building and brokerage between different companies with respect to advantages of co-operation.

There are really no policy drivers for the uptake of this technology but there will be regulations, e.g. obligatory energy management in companies including waste heat measures, obligatory heat planning for large companies and obligatory waste heat utilisation under pre-conditions.



With regard to heat integration in CCS, the example used was in the steel sector, i.e. using waste heat from the furnace to help with solvent regeneration. This is an area we clearly understand. There was also reference to a new report coming out from IETS where they discuss novel heat pumps to upgrade waste heat for industrial applications. I will wait until the report comes out and review it to see if it adds any new thinking on waste heat utilisation for CCS applications in industry.

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**24<sup>th</sup> February 2015**