Marriott Hotel, Glasgow, Scotland
Wednesday 20 – Friday 22 September 2006

Meeting Report

ThermalNet

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Wednesday 20 – Friday 22 September 2006

PROGRAMME

Tuesday 19 September 2006	
09.00 -18.00	**IEA Bioenergy Task 32 meeting** **at Jury's Inn Hotel**
Wednesday 20 September 2006	
09.00 -18.00	**PyNe Meeting (with IEA Task 34)**
09.00 -18.00	**Combustion Site Visits** Longannet Power Station and Mitsui Babcock
20.00	**PyNe Dinner** Other members make their own arrangements
Thursday 21 September 2006	
09.00	**Welcome** Conference, Newsletter, Website, Task Reports, Next Meeting
09.10	**Technology Challenges** **Combustion Workshop on Corrosion and Ash in Boilers** B Livingston and invited speakers
13.00	Lunch
14.00	**Workshop: Feedstocks and Standards** M Doran
15.30	Break
16.00	**Workshop: Environment, Health & Safety** P Girard
17.30-19.00	**ThermalNet Steering Committee Meeting**
19.30	**ThermalNet Group Dinner**
Friday 22 September 2006	
09.00	**Workshop: Transport Fuels** H den Uil
10.30	Break
11.00	**Workshop: Barriers** P Thornley
13.00	Lunch
14.30	**Workshop: Dissemination and Interaction**
16.00	**Close of ThermalNet Meeting** Date and Place of Next Meeting

Combustion Workshop on Corrosion and Ash in Boilers

Bill Livingston, MBEL

A full report of the complete workshop is available as a separate file.

Summary of the Workshop on WP 2C Feedstocks and Standards

Michael Doran

Workshop on Environment, Health & Safety

P Girard

Environment, health and safety workshop – Glasgow, September 21, 2006

EHS issues were addressed for two technologies during this meting, small scale combustion and gasification. T Nussbaumer presented a communication on particulate emissions of wood combustion and their potential toxicity effects. This work shows that wood combustion, if not well controlled might be responsible for large emissions with a toxicity effect superior to diesel soot emissions from cars. This is particularly true for small scale boiler for domestic uses as medium to large scale boiler are better controlled.

This meeting was also the opportunity to discuss and present the proceeding of the former joint IEA/ThermalNet seminar on EHS organised in Innsbruck, 2005. Some copies of the proceeding were distributed.

H Knoef (BTG) and H. Hofbauer (TUV) presented the work programme of a newly accepted project “Guideline for safe and eco friendly biomass gasification”. This project was initiated within ThermalNet when, during the first HES workshop, several members mentioned their interest and highlight the need for setting up such guideline particularly for small scale plants. As a product from thermal net, the collaboration between ThermalNet members and this project was discussed in order to avoid duplicates and facilitate the dissemination of the project. It has been agreed that ThermalNet Case study would be carried out with the guideline draft and be used by the Guide project as case study. Members from the Gasification guide advisory board have been suggested.

Workshop: Transport Fuels

H den Uil

In the Thermalnet meeting in Glasgow Stefan Fürnsinn (Vienna University of Technology) addressed the issue of scale for Fischer-Tropsch (=FT) synthesis from biomass. Harold Boerrigter showed in preceding meetings that the lowest costs are obtained at large-scale, i.e. above 1 GW_{th} biomass input. The current state-of-the-art is that biomass gasification for synthesis gas production is available at much smaller scales only, e.g. the Güssing gasifier in Austria has a thermal input of 8 MW_{th}. Conversion at GW-scale might be possible in the future but growth will take time.

For a plant with a biomass input of 50 MW_{th} Fürnsinn presented the designs for FT fuels production from biomass. Relatively small-scale offers a number of advantages: higher overall efficiencies (due to use of residual heat), reduced risks (smaller investments) and socio-politically (local production, employment, regional development). Small-scale FT allows for smart and efficient systems that can become available soon. The disadvantage is that FT-fuels production costs will be higher.

Herman den Uil (ECN) presented the developments in the liquid biofuel field in EU. Although currently biofuel use in the EU is still limited, the EU biofuels directive clearly stimulated biofuel production, use and initiatives. Based on current and possible future targets and on visions for the future, an enormous increase in biofuels consumption can be expected in the coming decades. It is important to realise that are a lot of variables in selecting biofuel production systems:

- The location of the plant; inland or at the coast, close to biomass source or close to the end user
- The scale of the plant; small or large scale
- The biomass feedstock used; residues or cultivated crops
- The biofuel produced; ethanol, FT-diesel, DME, methanol …
- Etc.

All these variables will continuously change in the coming decades with the development of the biofuel market. Instead of detailed guidelines for selection of biofuel production systems only rough guidelines are possible having a general character and describing a development path. Work in this activity will focus on further definition of the development path for the production of 2nd generation liquid biofuels.

Workshop: Barriers

P Thornley

Barriers workshop at Thermalnet meeting in Glasgow, 22 September 2006-09-26

Patricia Thornley started off by reminding participants of the background to the task and the key areas of focus that had previously been identified: policy, economics and social perceptions. This workshop was to focus specifically on policy.

Patricia Thornley then gave a brief update on European policy relating to bioenergy since 1996 and described how this impacted upon national level policies and how it had gradually become more significant and technology specific during the past ten years.

During the past 2 years there has been particularly significant level of activity for biomass and biofuels, which are still ongoing.

Debroah Cooper then presented a substantial piece of policy analysis work that had been undertaken as part of the Thermalnet barriers task. This considered historical policies implemented to promote bioenergy and their impacts in 4 European member states (Germany, Italy, Sweden and UK), .

5 separate discussion groups were formed to focus on what could be inferred from the case study data from each country and for biofuels across the 4 countries.

Direct links were noted in Germany between the introduction of fixed tariffs for bioenergy and levels of deployment as well as between tariff revision and increased deployment. In the Italian market essential deregulation was later than in other countries and appeared to combine with other measures to have a substantial effect. Green certificates seemed to be working in Italy, but a longer time period will be needed to prove this. Sweden was considered to be fairly unique in the EU because of its established multiple layers of tax that have been successfully manipulated to assist bioenergy. Heat was very significant in Sweden, but it was also noted that the pool price was quite variable and so capacity trends were not always reliable indicators, as it often did not make economic sense to actually generate from existing plant. In the UK the long term stability of a policy regime appeared to be particularly important in encouraging developers. It was noted that the tendering processes and green certificates used there also seemed to favour lower cost bioenergy plants at the expense of others. Tax incentives for biofuels were generally effective in all countries, but it was noted that variations in incentive regimes meant fuel produced in some countries was sometimes being used elsewhere. Also, vehicle incentives were not considered effective as these cars did not have to be run on biofuels only. A need for a European level tax initiative was identified.

Workshop: Dissemination and Interaction

Current mechanisms for dissemination

Mechanism	Comments
● Newsletter	More contributions needed
● Monthly Electronic Newsletter	NEW starting Nov
● Website	TNet & rest needs updating
● Meetings	Attendance
● Experts	Appoint more. Money available
● Minutes of meetings	? Wider distribution
● Workshop Report from each meeting	Requested by EC
● Conference / Workshop	Planned in Salzburg
● PyNe Handbook Vol 4 Toxicity	In preparation
● Task Reports	To come
● Other Reports	To come
● Technology reports	To come
● Published Papers	Should we include any on web?
● Interaction with other networks	Needs to be increased. How?

- Distribution lists — Help needed
- Strategy for industry — Co-ordinators to do and publish

Ideas for dissemination

1. Master list of bioenergy contacts of key people and organisations with key words, searchable
2. Allow self registration
3. Publish bioenergy projects (particularly successful ones) and websites. Searchable. See Task32 Website.
4. Info on meeting attendees as part of registration form. Expert datasheets available.
5. Country reports? Done by IEA through country representatives. Or 10 minute overview of current activities. Agreed as useful.
6. Summary of useful Activities and Tasks on web from activity (5). Commentary on relevance.
7. Provide guidance, inputs to policy, strategy, opinion, conclusions, get consensus view for publication with view of ThermalNet. This may come from WP and meeting reports.
8. How can ThermalNet influence decision makers?
9. Have leading or major topic at each meeting as well as shorter workshops.
10. Not enough industry involvement
11. Length of meeting: 2 days OK. Maybe start lunchtime and finish lunchtime