

REPORT ON WP5 - RTD FOCUSED MEASURES

“Advanced Thermal Treatment of Waste”

An event approved by the Chartered Institution of Wastes Management (CIWM), this conference provides one day towards the Institution’s Graduate Structured Learning & Development Programme (or 6 hours of Continuing Professional Development)

Date and venue:

Tuesday 11th October 2011 – The Advanced Manufacturing Park, Rotherham, South Yorkshire (Yorkshire and Humber region)

Scope/Aim:

This one-day seminar was specifically designed to provide an introduction for all those considering the Advanced Thermal Treatment option for the disposal of waste. The day provided an insight into the various pyrolysis/gasification technologies, key legislative drivers, planning permitting and finance, and the important issue of public acceptability of such projects.

The Advanced Thermal Treatment of Waste event is Deliverable 5.3 - “a workshop on technological innovation in waste” including relevant tasks T5.1, T5.2, T5.3 and T5.5 from the FP7 Regions of Knowledge funded WasteKIT project.

Participants and focus groups:

Research was carried out to identify the regional actors that would most benefit from the proposed Advanced Thermal Treatment (ATT) of waste event. These individuals were then targeted through a focussed marketing campaign.

The event succeeded in securing a wide range and influential group of delegates from Environmental Consultancies, Engineering Companies, the Environment Agency, and Waste Officers from Local Authorities. The combined marketing efforts of the partners attracted, in total, 38 external (Regional) delegates and 15 WasteKIT (International) project partners. Yorkshire Forward successfully secured event accreditation from the Chartered Institute of Waste Management (CIWM) and this assisted in publicising the event and attracted delegates to attend.



Speakers:

An assessment of the current expertise in the regional cluster was carried out and used to identify the most appropriate speakers for the event. WasteKIT's existing Y&H academic partner, the University of Leeds, provided the services of Professor Paul Williams whose expertise lies in the field of thermal process



research. The experience and technological expertise in establishing gasification technology of ITI Energy, and in particular Tony Fordham, was well received and considered by many to be the key to the event. In addition, the practical experience of John Sinclair, gained during his 9 years as a Waste & Minerals Planning Officer, was considered to provide the ideal insight when discussing Planning, permitting and public perception of waste facilities. A full breakdown of topics and speakers can be seen below.

Topics Discussed:

Yorkshire Forward with CO2Sense, a wholly owned subsidiary of Yorkshire Forward, chaired the day with presentations and question panels in the morning and afternoon.

Importantly, the science behind ATT and the barriers preventing existing projects from becoming operational gasification and pyrolysis plants in the UK needed to be addressed. A copy of the programme is attached but has been reduced for inclusion in the table below:

Welcome	Jason Stoyel, CO2Sense
<i>An overview of the waste management sector in the Yorkshire and Humber region</i> - An introduction to the broad English waste policy, context and the drivers that sit within the current Waste Policy review. Focus will be placed on the trends in municipal and non-municipal waste arisings, the current recovery levels and treatment capacity within the region. Attention will be drawn to some of the key barriers and opportunities that face the region's waste management sector in the immediate future.	Ashley Robb, CO2Sense
<i>Advanced thermal treatment overview</i> - An overview of the various Advanced Thermal Treatment (ATT) technologies available in the market today. This will include gasification in all its configurations, pyrolysis and their comparison with incineration. In addition, there will be a detailed look at gas cleanup from in a fixed bed gasifier.	Tony Fordham, ITI Energy Ltd
<i>Academic review of advanced thermal treatment Technologies</i> - An academic review of the open literature in relation to ATT technologies for waste. Influences of process conditions such as temperature, particles size of raw materials and gasification agent will be discussed. In addition, bio-oil production from pyrolysis of various hydrocarbon materials is reviewed. Current key players and plants in the field of pyrolysis / gasification will also be identified.	Chunfei Wu / Paul Williams, University of Leeds
Questions panel – questions from the morning session	
Lunch (onsite visit to innovative energy system)	
<i>Planning, permitting and public perception of waste</i> - A review of the existing framework for public engagement with the planning and permitting process in waste	John Sinclair, Yorwaste

development. The perspectives of the public, planners, developers and consultants have been canvassed and these views will be discussed along with ideas for developing better understanding and involvement of the public in determining waste related matters.	
<i>What do funders want to see?</i> - A short overview of what funders in the region are looking for when deciding whether or not to support a project.	James Richardson, Yorkshire Forward
<i>Funding projects in a difficult market</i> - Actual case study in raising funds for ATT projects in the UK.	Tony Fordham, ITI Energy Ltd
Questions panel – questions from the afternoon session	
Conclusions and close	

Dissemination:

Yorkshire Forward/CO2Sense, working in collaboration with the University of Leeds, ITI Energy and Yorwaste endeavoured to attract delegates to the ATT of Waste event through a number of differing methods. The University of Leeds used their Events Database contacting approximately 12,000 parties by email advertisement and direct mailshots. CO2Sense included an article on the ATT of waste event in the CO2Sense newsletter which went out to over 10,000 companies prominently across the Yorkshire and Humber region. Leaflets contained a summary of the key aims and objectives of the EU funded WasteKIT project and this led to publicity of the WasteKIT project to a wide range of stakeholders throughout the UK. CO2Sense also circulated the event details to all major waste management networks including the Waste Improvement Network. Yorwaste wrote a press release and circulated to a number of local radio stations. The article was covered by the South Yorkshire Times.

All presentations were collected and distributed (via Dropbox) to WasteKIT partners. They will be uploaded on WasteKIT web page along with the presentations from the other workshops.

Feedback from participants:

Included in each delegate pack for the Advanced Thermal Treatment of Waste Event was a feedback form that the University of Leeds and Yorkshire Forward co-produced. The University of Leeds conducted analysis based on all feedback forms collected at the end of the event. This analysis with further reporting on Work Package 5 forms the basis for quantifying the success of the event.

The Yorkshire and Humber WP5 ATT of Waste event met the expectations and aims of 70% of the delegates that attended. 95% of delegates ranked the overall event as 'good' to 'excellent'. Below are a number of quotes provided by delegates: -

- “Excellent coverage of the subject and very well presented”
- “Excellent value, good choice of presenters”
- “An excellent seminar that informed and enriched the audience, building upon their existing knowledge”.
- “Excellent seminar in which detailed and complex information was presented concisely, clearly, and in a way that genuinely informs the delegate. Over an excellent seminar!”

A major success of the event was captured by individual feedback points provided by delegates. A large



number of industrial partners (delegates) appreciated the opportunity to learn from Professor Paul Williams.

- Region internal: The event successfully transferred knowledge between academic institutions and the private (industrial) sector. Opportunities for potential programmes and placements will be explored for the remainder of Work Package 5.
- Between regions: The event encouraged WasteKIT partners to participate in both a well organised technical and educational day on advanced thermal treatment of waste and a knowledge transfer match-making session in the morning of the second day (the Progress Meeting). This session isolated a number of topics under the synergy potentials identified in Work Package 3.

Special Mentions:

WasteKIT Yorkshire and Humber partners worked collaboratively on organising both days (the Advanced Thermal Treatment of Waste event, and the WasteKIT Progress Meeting) with the organisational tasks being split between Yorkshire Forward, ITI Energy Ltd and the University of Leeds.

Yorkshire Forward coordinated the schedule (programme) for the day, whilst ITI Energy organised the event venue, hotel accommodation, food for both the external ATT of waste WP5 event and the internal Progress Meeting. ITI Energy also arranged the evening meal and entertainment following the Progress Meeting.

The University of Leeds hosted the booking system for the event, providing name badges, delegate packs and technical support in conjunction with ITI Energy on the day.

The efforts of both the University of Leeds and ITI Energy were exemplary, and without this input the event could never have taken place.

A special mention to all of the event speakers for making the event relevant, insightful and interesting for delegates.

The Yorkshire and Humber Partners agreed to host their allocated WasteKIT Progress Meeting (Consortium Meeting) the day after the Work Package 5 RTD event (ATT of Waste). Practically this reduced travel for WasteKIT partners that would be interested in attending the event as well as the compulsory Progress Meeting. We thank everyone for their attendance at this event.

Appendixes:

1. Event leaflet
2. Collected presentations
3. Press Release
4. Pictures from the event