Energy from Biomass Combustion

Tuesday 9 – Thursday 11 January 2018

Faculty of Engineering

Please pass this leaflet to a colleague if this course is not relevant to you.
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What will I learn?
This course will provide delegates with a comprehensive overview of the status and developments in energy delivery from biomass combustion. The focus will mainly be on biomass for electricity and heat. The course will also explore fuel supply options as well as the emissions and plant performance implications. Delegates will gain a sound understanding of the fundamentals and practicalities of:
- basics of solid biomass combustion
- dedicated biomass installations
- solid biomass for electricity generation
- biogas and landfill gas for process heat and power generation
- and sustainability of biomass supply chains

Who should attend?
- process engineers and chemists new to the bioenergy field
- regional developers wanting to obtain a technical perspective on biomass energy and Environmental managers interested in utilising bioenergy
- process heat system designers interested in biomass as a heat source

Course aims
Biomass is a key element in government plans to increase renewable energy sources and reduce greenhouse gases. Bioenergy has environmental and economic impacts, and is unique as a renewable fuel since it can contribute to all three energy sectors – electricity, heat and transport fuels. In the UK, imported white wood pellets are a major fuel, but energy crops, such as short rotation willow coppice and miscanthus as well as forestry residues, agricultural residue and waste woods, all find use in the production of electricity and heat.

Programme

Day 1: Tuesday 9 January 2018
Basics of solid biomass combustion
08.30 Registration and coffee
09.00 Prospects and developments in bioenergy
Bilal Hussain, Strategy Analyst – Bioenergy, Energy Systems Catapult (ESC)
11.00 Coffee
11.15 Sustainable biomass – understanding and meeting the challenges of sustainability
Peter Coleman, Department for Business, Energy and Industrial Strategy
12.15 Lunch
Introduction to biomass, bioenergy and combustion
14.00 Solid biomass resources, properties and characteristics
Professor Jenny Jones, SUPERGEEN and School of Chemical and Process Engineering, University of Leeds
15.00 Traded biomass and standards
Susan Weatherstone, Fuel Technology, Uniper Technology Centre
15.50 Tea
Combustion and emissions continued
16.00 Combustion stoichiometry – influence on performance and emissions
Professor Gordon Andrews, School of Chemical and Process Engineering, University of Leeds
17.00 End of day one
19.00 Course Dinner

Day 2: Wednesday 10 January 2018
Combustion and emissions continued
08.45 Registration
09.00 Biomass boilers and furnaces – domestic FB and stoker grates
Neil Honeysett, re:heat
10.00 Domestic biomass and air quality
Dr Gary Fuker, Environmental Research Group, King’s College London
11.00 Coffee
11.15 Emissions standards and regulations for biomass heat and power
Steve Griffiths, Uniper Technologies Ltd
Biomass Installations – Industry perspective
12.00 UK Biomass Installation case study – overcoming the challenges
Stephen Chilton, Sembcorp Utilities (UK) Limited
13.00 Lunch
14.00 Gasification – A view from industry
Chris Manson-Whitton, Progressive Energy
15.00 Waste wood as biomass fuel and the waste to energy market
Jeremy Brough, Wood Energy Ltd
16.00 Tea
Challenges in combustion
16.15 Plant conversion – practical experience
David Waldron, previously GE Power
17.15 End of day two

Day 3: Thursday 11 January 2018
Challenges in combustion continued
08.45 Registration
09.00 The problem of metals in biofuels – combustion and ash influences
Professor Jenny Jones, SUPERGEEN and School of Chemical and Process Engineering, University of Leeds
10.00 Combustion, slagging and fouling – special issues relating to biomass firing
Professor Bernard Gibbs, School of Chemical and Process Engineering, University of Leeds
11.00 Coffee
11.15 Pre-treatment (washing/torrefaction/steam exploded)
Dr Lesen Darrell, School of Chemical and Process Engineering, University of Leeds
12.15 Lunch
Biogas
13.00 Biogas and landfill gas resources, current utilisation and future potentials
Stuart Davies, Viridor Waste Management
14.00 The highs and lows of renewable energy
Fred Walter, Coppice Resources Ltd
15.00 Biomethane – gas to grid
Cadent Gas Ltd, speaker to be confirmed
16.00 End of day three and course

Course accreditation
The Leeds Energy from Biomass Combustion course has been developed in conjunction with SUPERGEEN Bioenergy Hub.

Other energy, environmental and waste management short courses
- Industrial Air Pollution Monitoring 26 – 28 February 2018
- Thermal Treatment of Municipal Waste 17 – 18 September 2018

What our previous delegates say:
“Most enjoyable and very relevant course on this topic. All the guest speakers are very well informed and interacted with the audience.”
EDF Energy

“The course is very useful for learning more about biomass combustion and the challenges faced by the biomass market.”
Ofgem

“An excellent insight into the world of biomass and biomass combustion. Excellent technical content would recommend to any future delegates.”
Sembcorp
Further information

Venue
The course venue is the School of Electronic and Electrical Engineering, Faculty of Engineering, University of Leeds, Leeds, LS2 9JT.

The University campus is a 20 minute walk from Leeds city train station. Please note, car parking for visitors is unavailable at the University. The nearest public car park is Woodhouse Lane (multi storey) at LS1 3HQ.

Course fees
The following course fees include the cost of tuition, course materials, lunches and light refreshments for the day(s) of attendance:

Full three days £895 Any one day £360

Accommodation
Delegates are responsible for their own evening meals and accommodation, except on Tuesday evening when the course dinner is included. A list of hotels close to the University will be provided within the delegate joining instructions.

Course dinner
The course dinner will be held at a Leeds city centre restaurant and is included in the course fee. This will take place on Tuesday evening and delegates are responsible for making their own way to and from the restaurant. The dress code is smart casual. If you would like to attend please indicate when booking.

Accessibility
Please let us know if you have any specific requirements including any access or dietary requirements in relation to this course.

How to book
Booking for this course should be completed through our secure online store using debit or credit card. To complete your booking please follow the instructions below:

1. Log on to our Online Store at: https://store.leeds.ac.uk
2. Select Conferences and Events in the left-hand navigation bar.
3. Select CPD Faculty of Engineering
4. Select the course or event for which you wish to register and click on ‘Book’.
5. If you are a new user, please follow the instructions to register. If you already have an account log in as instructed.
6. Complete the application process as directed by the booking system.

You will receive an automatic confirmation email within 24 hours of your booking.

For online booking queries and for all other enquiries please contact:

Course Coordinator
CPD, Conference & Events Unit
Faculty of Engineering
School of Chemical and Process Engineering, 3.11
University of Leeds
LEEDS, LS2 9JT, UK

T: + 44 (0) 113 343 8104/2494
E: cpd@engineering.leeds.ac.uk
W: www.engineering.leeds.ac.uk/short-courses
@LeedsUniCPD

Terms and conditions for booking
Payment in full should accompany your booking. The course fee is exempt from VAT. Fees must be paid in full no later than 15 working days before the course commences. Failure to pay may result in attendance being refused. Registrations are accepted on the understanding that the printed programme is given in good faith but may have to be re-scheduled or the speakers changed for reasons outside our control. The University of Leeds reserves the right to cancel or postpone the course, in which case fees will be refunded in full. In the event of cancellation, the University will not be held liable for delegates travel or accommodation expenses.

Delegates will receive a full refund for cancellations made within 7 days of online booking, except where the booking has been made for an event commencing within the next 7 days. Where a delegate wishes to cancel a registration after this 7 day period, written cancellations received up to 15 working days before the course will be subject to an administrative charge of 20% of the total remittance. After this date the full fee is chargeable and no refunds will be made, this also applies for non-attendance but copies of the course documents will be sent. Substitutions may be made at any time.

If you are unable to complete your registration using the online booking system please contact the CPD, Conference & Events Unit to discuss alternative arrangements.