Final Programme

Day one – Tuesday 15 January 2019

Basics of solid biomass combustion
08.30  Registration and coffee
09.00  Prospects and developments in bioenergy
       Bilaal Hussain, Consultant Insights and Evidence, Energy Systems Catapult (ESC)
       This presentation will include insights from the Energy Technologies Institute’s (ETI’s)
       bioenergy programme, an overview of future work within the ESC and the prospects for
       bioenergy in the UK.

Solid biomass sustainability
10.00  Life cycle analysis and sustainability
       Dr. Rob Holland, Senior Research Fellow, University of Southampton and Systems Topic
       Representative for the SuperGEN Bioenergy hub
       Wood can be a renewable, low-carbon energy source, but different types of feedstocks and
       technologies present different sustainability challenges. This talk will examine some of the
       key ecological, economic and social costs and benefits of typical bioenergy systems. It will
       show how life cycle assessment can be used to evaluate the environmental impact (including
       greenhouse gas savings) associated with bioenergy systems and how these can be affected by
       different choices and options.

11.00  Coffee

11.15  Sustainable biomass – understanding and meeting the UK, EU and global requirements
       on sustainability
       Paul Willman, Department for Business, Energy and Industrial Strategy
       The UK has become a world leader in developing sustainable biomass combustion
       technologies and supply chains. This session provides an introduction to UK and EU biomass
       policy; the role of government in subsidising different bioenergy technologies; and follows the
       development of the UK sustainability approach. The talk will identify some of the pros and
       cons of bioenergy more widely and will explain the importance of sustainability.

12.15  Supply chain economics and risk management
       Rachel Lee, 350 Strategy Limited
       This presentation will review the key stages in biomass supply chains from source to end user
       and compare three different forms of biomass: chip, pellet and torrefied fuel. The focus will be
       on North American sources (although some comparisons with other sources may be presented)
       and will include analysis of key sensitivities such as shipping distances, product bulk density
       etc. An analysis of embodied carbon contributed by the processing and logistics elements of
       the supply chain will also be presented.

13.15  Lunch

Introduction to biomass, bioenergy and combustion
14.00  Solid biomass resources, properties and characteristics
       Professor Jenny Jones, SUPERGEN 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
16.05  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 two – Wednesday 16 January 2019

Combustion and emissions continued
08.45  Registration
09.00  Biomass boilers and furnaces – domestic FB and stoker grates
       Neil Harrison, re:heat

10.00  Domestic biomass and air quality
       Dr Gary Fuller, 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
Day two – Wednesday 16 January 2019 continued

Biomass Installations – Industry perspective
12.00 UK Biomass installation case study – overcoming the challenges
Stephen Chilton, Sembcorp Utilities (UK) Limited
13.00 Lunch
13.45 Gasification - A view from industry
Chris Manson-Whitton, Progressive Energy
14.45 The conversion of Lynemouth power plant from coal-fired to biomass-fired
Davey Wharrier, Lynemouth Power Ltd
15.45 Tea

Challenges in combustion
16.00 Boiler design considerations when converting to biomass firing
Dr David Waldron, previously GE Power
17.00 End of day two

Day three – Thursday 17 January 2019

Challenges in combustion continued
08.45 Registration
09.00 The problem of metals in biofuels – combustion and ash influences
Professor Jenny Jones, SUPERGEN and School of Chemical and Process Engineering,
University of Leeds
10.00 Corrosion, 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 Pretreatment of solid biomass for heat and power
Dr Leilani Darvell, 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
Stewart Davies, Viridor Waste Management
14.00 Biomethane – gas to grid
Tina Hawke, Cadent Gas Ltd
15.00 The highs and lows of renewable energy
Mark Paulson, Coppice Resouces Ltd
16.00 End of day three and course