

# BIOMASS FUELLED POWER GENERATION WITH CO<sub>2</sub> CAPTURE



**IOP** Institute of Physics



## WITH PRESENTATIONS FROM:

Alstom, RWE npower, Drax, E.ON, NNFCC,  
E4tech, cmcl innovations, Imperial College,  
Cambridge University, and Leeds University



# THE PROGRAMME

9:30	Registration and refreshments	
10:00	Welcome and introduction	Prof. Markus Kraft, Cambridge University
10:15	Bioenergy market and how the bioenergy policy fits	Dr Jeremy Tomkinson, NNFCC
10:40	Bio-CCS: The way forward for Europe	Greg Kelsall, Alstom
11:05	Techno-economics of biomass based power generation with CO <sub>2</sub> capture (TESBiC)	Dr Amit Bhave, cmcl innovations
11:30	Co-firing biomass for power generation: Experience at Drax	Dr Nigel Burdett, Drax
11:55	Markinch biomass combined heat and power plant	Ian Calvert, RWE npower
12:20	Lunch	
13:15	Biomass feedstock pre-processing (torrefaction)	Prof. Jenny Jones, Leeds University
13:40	Kinetics of the pyrolysis or devolatilisation of sewage sludge and solid fuels	Prof. Allan Hayhurst, Cambridge University
14:05	Potential of chemical looping for low-carbon power generation	Dr Paul Fennell, Imperial College London
14:30	Control of emissions from fluidised bed combustion and gasification	Prof. John Dennis, Cambridge University
14:55	Coffee break	
15:15	Biomass supply chain issues from power generation perspective	Dr Ausilio Bauen, E4tech
15:40	Biomass fuelled power generation: E.ON's perspective	Kelly Walker, E.ON
16:00	Closing remarks	

18:30 - The Conference dinner has been organised at the same venue and will include the celebrations of Prof. Hayhurst's 75<sup>th</sup> birthday.

## WHAT IS IT ABOUT?

Biomass is a flexible resource, capable of conversion to heat, power and transport fuel energy vectors (as well as bio-materials). Biomass produced in the UK has the potential to provide 10% of UK Energy mix in 2050. Currently, on practical scales biomass co-firing has been implemented in several fossil-fired power plants. However, more effort in terms of realisation of large scale dedicated biomass combustion, gasification or pyrolysis

plants is still required. Further, combined with carbon capture and storage (CCS) technologies, biomass conversion to heat and/or power could provide the UK with substantial net negative CO<sub>2</sub> emissions, with the potential to remove 50 to 100 MT of CO<sub>2</sub> from the atmosphere on an annual basis (depending on capture rates) and provide 80 to 120 TWhr of electricity annually.

## THE CONFERENCE

This conference focuses on the scientific developments and techno-economic issues related to realisation of biomass (both co-fired and dedicated) based power generation through combustion, gasification and pyrolysis, with or without the various pre-, post- and oxy-combustion CO<sub>2</sub> capture technologies.

This conference is suitable for industrial researchers, process engineers, technical and project managers, and the academic community interested in carbon-negative power generation.



# SIGN UP INFORMATION

## CONTACT DATA

---

Title (Mr, Ms, Dr, Prof.) \_\_\_\_\_

Name \_\_\_\_\_

Surname \_\_\_\_\_

Organisation \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State/Province \_\_\_\_\_

Postal Code \_\_\_\_\_ Country \_\_\_\_\_

Phone \_\_\_\_\_ E-mail \_\_\_\_\_

Special Dietary requirements:  Vegetarian  Other

	Conference (No dinner included)	Conference (including Dinner)	Dinner only
Students	<input type="checkbox"/> £70	<input type="checkbox"/> £90	<input type="checkbox"/> £40
Combustion Institute/loP Member	<input type="checkbox"/> £110	<input type="checkbox"/> £130	<input type="checkbox"/> £40
Non-member	<input type="checkbox"/> £130	<input type="checkbox"/> £150	<input type="checkbox"/> £40

**Parking is included**

Prices include VAT

Payments are accepted via the secured online store:

[http://onlinesales.admin.cam.ac.uk/browse/extra\\_info.asp?compid=1&modid=2&prodid=703&deptid=101&catid=415](http://onlinesales.admin.cam.ac.uk/browse/extra_info.asp?compid=1&modid=2&prodid=703&deptid=101&catid=415)

For overnight **accommodation** please contact Moller centre directly at:

Telephone: +44 (0)1223 465500; Email: [sales.moller@chu.cam.ac.uk](mailto:sales.moller@chu.cam.ac.uk)

**For more information, please contact:**

Kaysha Banton

cmcl innovations

<e>: [kbanton@cmclinnovations.com](mailto:kbanton@cmclinnovations.com)

<t>: +44 (0)1223 37 00 30

<f>: +44 (0)1223 37 00 40

<i>: [www.cmclinnovations.com](http://www.cmclinnovations.com)

