

Energy from Waste

Day One | Tuesday 4th December 2018

8.30 Registration & Coffee

9.00 Chairman's Opening Remarks

Stuart Hayward-Higham, Technical Development Director,
Suez R & R UK

WHAT ROLE DOES ENERGY FROM WASTE HAVE IN MEETING NEW EUROPEAN AND UK POLICY GOALS?

OPENING ADDRESS / KEYNOTE ADDRESS

9.10 Update on England's Resource and Waste Strategy 

- The strategy will be comprehensive, and set out a range of actions to ensure that we maximise the life and value we get from our resources while minimising the negative environmental impacts associated with their extraction, use and disposal
- It will be structured around the entire lifecycle of products, materials and services, so it will consider how we make things, how we use them, and how we manage them at the end of that use
- Whilst this lifecycle approach will form the overarching structure for the Strategy, it is likely also to set out specific approaches for priority material streams and areas – for instance, food waste, plastic waste, and the cross-cutting issue of tackling waste crime
- The Strategy will therefore be of significant interest to the Energy from Waste sector from a number of perspectives

Dawn Woodward, Deputy Head, Resources and Waste, **Defra**

9.50 Waste Incineration BREF Best Available Techniques - Unveiling the unsaid of the BAT conclusions

- What is actually requested by the WI BREF?
- What is the scope? incineration, co-incineration, pyrolysis, gasification, bottom ash?
- Which ambiguities? What should be clarified and how? A guidance document?
- Available new and old techniques to update existing plants
- Newly imposed techniques e.g. Continuous mercury monitoring, Continuous dioxins sampling

Hubert de Chefdebien, Director, **CNIM**

10.30 Morning Coffee

NEW FOR 2018

11.00 UK biofuels policy: the role of waste feedstocks

- Latest developments on RTFO, including progress on development fuels
- Support for advanced technologies through DfT demonstration competitions
- Update on Renewable Energy Directive changes and implementation
- Wider Government bioenergy policy context

Rachel Solomon Williams, Head of Low Carbon Fuels, **Department of Transport**

11.40 An industry perspective on policy and whether it will deliver in reality

- The capacity gap which needs to be bridged with new investment
- The strength of new policy drivers for efw investment
- Industry view of turning aspiration into reality

Jacob Hayler, Executive Director, **Environmental Services Association**

12.20 Networking lunch

CHANGING FACE OF RDF EXPORTS AFTER BREXIT

13.20 RDF Market Outlook

- Overview of how the RDF market has developed
- Current opportunities and challenges facing the sector
- How might Brexit impact RDF exports from the UK to Europe
- How might the Circular Economy package impact RDF flow dynamics in Europe

Harriet Parke, Secretariat, **RDF Industry Group**

14.00 What is the potential that the new regulations will change the composition of residual waste and what impact might this have on treatment capacity and technology?

- Will increasing recycling & material bans impact on fuel quality for UK EFW fleet?
- What impact might quality changes have on net treatment capacity
- What options might need to be considered?

Stuart Hayward-Higham, Technical Development Director,
Suez R & R UK

14.40 "Effects of Brexit on RDF exports"

- Expected changes to the RDF market post Brexit
- The capacity gap within the UK and the required expansion required
- The effect of changing exchange rates

Mark Terrell, General Manager, **Andusia**

15.20 Afternoon Tea

OPERATOR CASE STUDIES – PART 1

15.50 CASE STUDY: Riverside Resource Recovery Facility and Riverside Energy Park, Cory Riverside Energy 

- Update on the Riverside Resource Recovery Facility
- Introduction of the Riverside Energy Park
- Nationally Significant Infrastructure Project (including timeline & community engagement)
- District Heating opportunity from the developments

Andy Pike, Director, **Cory Riverside Energy**

16.10 CASE STUDY: Krakow WtE plant: a role model for Europe 

- Future developments – what is expected from the plant
- Technical information
- Stages of the project implementation
- Financing options
- Production (electricity, waste)
- Operational problems
- Social aspects

Jakub Bator, Member of the Management Board, Waste Thermal Treatment Plant Director, **Krakowski Holding Komunalny S.A. (Municipal Holding Company in Krakow)**

16.40 PANEL DISCUSSION: How can both industry and government create an environment that encourages and enables private sector investment in new technology, plant construction and improved plant operation? 

- Will a stable regulatory environment and consistent energy policy provide the platform for deeper investment?

Panel Members:

Dawn Woodward, Deputy Head, Resources and Waste, **Defra**

Andy Pike, Director, **Cory Riverside Energy**

Richard Belfield, Head of Project Development, **Hitachi Zosen Inova**

Shelley de Souza, Assistant General Manager, **SMBC**

17.10 Chairman's Closing Remarks and Close of Day One


Stuart Hayward-Higham, Technical Development Director,
Suez R & R UK

8.30 Registration & Coffee

9.00 **Chairman's Opening Remarks**
Richard Belfield, Head of Project Development, **Hitachi Zosen Inova**

NEW TECHNOLOGIES AND FUTURE TRENDS

OPENING ADDRESS / KEYNOTE ADDRESS


9.10 **Gasification – strategic insights for implementation** 

- What is gasification, why is it important, where does it need to go?
- What projects are being delivered and which lead us to delivery of the benefits that gasification offers?
- Understanding the critical commonality between all gasifiers – how different end vectors support each other
- Thoughts on what is needed to support policy makers

Geraint Evans, Programme Manager, Bioenergy and CCS, **Energy Technologies Institute**

9.50 **"Next Generation of EFW Performance"**

- Technical developments for higher plant performance
- Combustion efficiency
- Energy efficiency

 **Richard Belfield**, Head of Project Development, **Hitachi Zosen Inova**

 **Dr. Helen Gablinger**, Director Research & Development, **Hitachi Zosen Inova**

10.30 Morning Coffee

DOES EFW HAVE A PLACE IN THE CIRCULAR ECONOMY?

11.00 **Circular Economy (CE) thinking and EFW – The role of EFW in UK waste management under a CE scenario**

- Circular Economy Thinking and EFW
- CE in the Context of Municipal Waste Management
- The Role of EFW in UK waste Management Under a CE scenario

Alban Forster, Infrastructure Sector Lead – Europe, **SLR Consulting Limited**


11.40 **Update on the Circular Economy Programme in London**

- Business Development – zooming in on some projects (CO₂, heat, bottom ash, (plastic) recycling, biowaste, etc.)
- The Mayor's circular economy and waste vision for London
- Approach for accelerating London's transition to the circular economy
- Policies and programmes
- Call on Government to take action - Energy from Waste

Doug Simpson, Principal Policy and Programme Officer, **Greater London Authority**

12.20 Networking Lunch

OPERATOR CASE STUDIES – PART 2

13.20 **CASE STUDY: AEB Energy from Waste** 


- Vision of AEB – connecting AEB to its environment (heat, steam, CO₂, products from waste, separation, recycling). Long term vision
- Operational and technical updates at the Energy from Waste plant (Status High Efficiency WtE in Amsterdam)
- Plant optimization – increasing performance
- Business Development – zooming in on some projects (CO₂, heat, bottom ash, (plastic)recycling, biowaste, etc.)
- Opportunities and challenges faced

Peter Simoes, Strategic Advisor, **AEB**

14.00 **CASE STUDY: The Future New Integrated Solid Waste Management System for the Cayman Islands** 

- Landfill Investigations
- Solid Waste Policy and Strategy development
- Procurement of New Services including a new WTE Facility
- Permitting and Construction of new ISWMS

Jim Schubert, ISWMS Senior Project Manager, **Cayman Islands Government**

14.40 **CASE STUDY: Trajectory towards a demo plant in Flanders to produce bio-based aromatics from lignin/wood** 

- VITO as co-initiator of Biorizon à mission: enable commercial production by 2025
- First phase in the trajectory of the demo plant: design and construction of a pilot plant
 - Mapping of available technologies
 - EFRO project LignoValue Pilot
 - Objectives
 - Design from the pilot (in ideal conditions: mobile, both wood and lignin, flexible (multiple processes))
- Tailoring of lignin oils towards required specifications
- Our activities on biopolymer development

Dr. Kelly Servaes, Project Manager Lignin – BioAromatics, **VITO NV**

15.20 Afternoon Tea

FINANCING OPTIONS IN THE ENERGY FROM WASTE INDUSTRY

15.50 **Challenges and Opportunities in Financing Waste Projects**

- Current UK waste market and challenges
- What makes a bankable project
- Opportunities in UK Waste
- Opportunities further afield

Shelley De Souza, Assistant General Manager, **SMBC**

BEST PRACTICE TO INTEGRATE DISTRICT HEATING FROM EFW PLANTS

16.20 **How EFW and district heating can be catalyst to decarbonize heating and reform energy usage**

- Energy transformation
- Urban resource efficiency
- Carbon capture
- City- and energy planning
- Circular waste strategy

Johnny Stuen, Technical Director, EGE (Waste to Energy Agency), **City of Oslo**

17.00 **Integrating Energy from Waste with a growing heat network market**

- Waste heat as a potential resource
- An overview of the opportunities and challenges that these projects face
- Technical, commercial and regulatory considerations
- Case study examples

Emma Ashcroft, Manager, Cities and Regions, **The Carbon Trust**

17.30 **Chairman's Closing Remarks and Close of Day Two**

Richard Belfield, Head of Project Development, **Hitachi Zosen Inova**

Waste to Fuels - A Future Landscape?

Workshop Leader:

David Woolford, Principal Consultant,
Ricardo Energy & Environment



Workshop Overview:

The workshop will examine the UK journey to waste to fuels solutions and how current subsidy mechanisms may be able to provide vital support to technology developers and investors and how these may be legally bound in the future.

We will also look at 2 project case studies; achieving end of waste and the key challenges within the project environment that may need to be overcome to achieve delivery of new and developing technologies.

Agenda

13.00 Registration and Coffee

13.30 Existing subsidies available to those looking to invest or operate in this area:

- Which types of technologies are eligible?
- How are subsidies expected to change?
- How will these affect future projects?

David Woolford, Principal Consultant, **Ricardo Energy & Environment**

14.00 Legal approach to engaging future renewable transport fuel certificates

Nick Churchward, Partner, **Burges Salmon LLP**
Sam Sandilands, Senior Associate, **Burges Salmon LLP**

15.00 Afternoon Tea

15.30 Current and expected market activity over the next decade:

- How will technology and regulation impact the market?
- What is the expected feedstock availability?
- What are companies to look out for?

David Woolford, Principal Consultant, **Ricardo Energy & Environment**

16.00 The Key challenges to overcome to achieve end of waste

Elizabeth Lawrenson, Senior Consultant, **Ricardo Energy & Environment**

16.30 Discuss 2 project case studies

David Woolford, Principal Consultant, **Ricardo Energy & Environment**
Elizabeth Lawrenson, Senior Consultant, **Ricardo Energy & Environment**

17.00 Questions

David Woolford, Principal Consultant, **Ricardo Energy & Environment**
Nick Churchward, Partner, **Burges Salmon LLP**
Sam Sandilands, Senior Associate, **Burges Salmon LLP**
Elizabeth Lawrenson, Senior Consultant, **Ricardo Energy & Environment**

17.30 Closing Remarks

About the Workshop Leader:

David has over 15 years' experience in the waste sector and over 25 years' experience within mechanical and civil engineering and project management in the UK, Middle East and beyond. With wide knowledge and expert understanding of strategic planning and business development of the UK and EU waste markets, he has provided support to some of the UK's largest waste companies at a strategic level, as well as providing pivotal support to SMEs.

David is a member of the monitoring team on the Fuels for Freight & Flight Competition (F4C) which is being run by the UK Department for Transport (DfT). The competition will allocate £20m of grant funding to support novel advanced conversion technologies, transforming waste into renewable fuels for heavy good vehicles and aviation; these sectors are seen by Government as harder to decarbonise as electrification is unlikely to be viable. David assessed funding applications during January 2018 and will monitor the delivery of the selected plants through to 2021.

David has recently conducted due diligence of a UK dRTFC qualifying plant to validate estimated capital and operational costs of building a 100,000 tpa plant and is providing technical and commercial advice to the developer of 250,000 tonne per annum gasification plant that converts biomass into renewable transport fuel.

David brings his experience of supporting waste infrastructure projects, extensive understanding of stakeholders, and good inter-personal skills. His knowledge and experience of due diligence and delivery can be best placed to help both those within the waste sector and also those who may be seeking to enter for the first time.

Company Overview:

Ricardo Energy & Environment is a leading sustainability consultancy, helping clients to respond to environmental challenges and opportunities around the world. Our team of over 400 staff has supported many governments, businesses and international organisations for over 40 years. The team draws on this impressive heritage with expertise in air quality, climate change, chemical risk, energy, water, environmental impact, resource efficiency, sustainable transport and waste management.