

# International Conference on Waste and Biomass Combustion

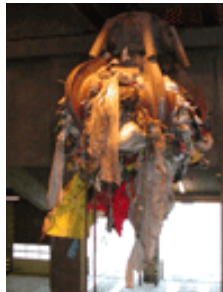
Progress beyond state-of-the-art  
– next generation technologies for retrofit and new combustion plants

8-10 October 2008, Hotel Michelangelo in Milan, Italy

It is our pleasure to invite you to participate at the International Conference on Waste and Biomass Combustion. The Conference will focus mainly on the technical aspects of waste and biomass combustion.

The main goal is to present technological innovations that will be commercialised in the near future. The sub-themes of the Conference will include technical presentations on topics that cover fuel preparation and handling, combustion processes, ash handling and emissions. The Conference will focus on technologies for both retrofitting existing and application in new, WtE and BtE plants.

The Conference is organised by SINTEF and A2A.



## Speakers

Leading experts are invited to give presentations within the conference topics.

## Site tour

There will be arranged a site tour to A2A's WtE plant in Brescia. In the year 2006 the Brescia WtE plant, the largest in Italy, treated 801,000 tons of waste (including 310,000 tons of residual biomass) with a net recovery of 528 GWh of electricity and 505 GWh of district heating, with a primary energy saving of 150,000 tons of oil equivalents and avoiding more than 300,000 tons of CO<sub>2</sub> emission.

## Social events

- Welcome reception
- Conference dinner
- Guided city tour

## Further information

Registration form including hotel information and up to date details can be found on the conference website.

## Organisers and sponsors:



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[www.energy.sintef.no/arr/ngbw](http://www.energy.sintef.no/arr/ngbw)  
email: [ngbw-conference@sintef.no](mailto:ngbw-conference@sintef.no)

# Conference programme

## Wednesday 8 October 2008

Registration starts at 11.00

### Lunch

### Opening session

Welcome and introduction Lars Sørum, SINTEF

Welcome by local host Antonio Bonomo, A2A

Latest EU Policy and Framework developments for energy from biomass and waste. EU officer

### Coffee break

### Keynote session

Waste Gerrit Brem, University of Twente  
Biomass Ingwald Obernberger, TU Graz, TU Eindhoven

### Coffee break

### Session 1

#### Fuel: Characteristics, effects and pre-treatment

Overview on fuel characteristics Lars Sørum, SINTEF

Characterisation of combustion properties of solid fuels Daniel Nordgren, VRD

Synergy effects on co-firing sewage sludge with biomass/waste on the presence of alkali chlorides in a circulating fluidised bed boiler Lars-Erik Åmønd, Chalmers

Emission assessments for biomass and waste fuels in a multi-fuel reactor Øyvind Skreiberg, SINTEF

### Welcome reception

## Thursday 9 October 2008

### Session 2

#### Fuel: Practical operational aspects & Ash: Characteristics and effects

Problem solution concepts for firing risky biomass in efficient power plants Martti Aho, VTT

Deposit Formation in the FASAN WtE Boiler as a Function of Feedstock Composition and Boiler Operation Flemming Frandsen, DTU

A full-scale study on the partitioning of trace elements in a WtE plant - Effects of firing different waste types Anne Juul Pedersen, DTU

### Coffee break

### Session 3

#### Ash: Utilization

Developments in upgrading and utilisation of MSWI bottom ashes within Europe Frans Lamers, KEMA

Wet-chemical separation of critical elements from incineration ashes Holger Ecke, VRD

Wet upgrading of MSWI bottom ashes into marketable products Laurens van der Kooij, AEB

Treatment and utilisation of MSWI fly ashes and APC residues Henrik Ørnebjerg, Vestforbrænding

### Lunch

### Session 4

#### Conversion: Processes, applications and system design

EFW implementation in England - latest trends/future projections & IEA Task 36 Energy from waste, Activities

Niranjan Patel, PUK

High Efficiency Waste to Energy: Drivers for new developments, experiences in Amsterdam

Marcel van Berlo, AEB

Thermodynamic Process Analyses to realize efficiency improvements of Waste to Energy plants

Pierre Ploumen, KEMA

Demonstration of model predictive control in waste incinerators

Ruud van der Linden, TNO

Monitoring the combustion process directly on the grate of Municipal Solid Waste incinerators

Jiri Martinec, JRC

Optimisation of plant operation by a new combustion control system

Volker Müller, GKS

**Site visit at A2A's plant and Conference dinner in Brescia, bus departure at 15.15.**

## Friday 10 October 2008

### Session 5

#### Conversion: Corrosion and fouling control

Role of gas and particle phase on high-temperature-chlorine-corrosion Ragnar Warnecke, GKS

Acid dewpoint corrosion, the influence on the boiler design Kenneth Villani, SKG

Corrosion behaviour of candidate steels and alloys in laboratory conditions of biomass combustion environment

Jiri Krejčík, SVUM

Corrosion reducing additives: Results from the use of ChlorOut-solution in waste and biomass fired boilers

Anders Hjörnhede, VPC

### Coffee break

High Temperature Corrosion – Lab-scale investigation of deposit-induced corrosion of superheater alloys under simulated waste and biomass incineration environments

Markus Schmitt, MPIE

Lab-Scale Investigation of Corrosion of Superheater Materials under Simulated Biomass-Firing Conditions

Simone van Lith, DTU

Corrosion in waste fired boilers: A thermodynamic study

Michaël Becidan, SINTEF

### Lunch

### Session 6

#### Conversion: Emissions, emission reduction and cleaning

Nitrogen Chemistry in Biomass and Waste Combustion Peter Glarborg, DTU

Industrial testing of an innovative catalyst system for NOx removal in WtE plant of Brescia

Antonio Bonomo, A2A

Title to be decided Martin Brunner/Volker Wiesendorf, von Roll

Title to be decided Anthonio Grimshaw, Energos

### Coffee break

A comparison of alternative strategies for energy recovery from municipal solid waste

Stefano Consonni, Politecnico di Milano

Closing remarks by NextGenBioWaste co-ordinator