

IEA Bioenergy

WEBINAR SERIES

Aerosols from Biomass Combustion

A Potential Drawback with Technical Solutions
A Statement by the IEA Bioenergy Task 32

March 22, 2018

4:00 pm - 5:00 pm Central European Time
11:00 am - 12:00 pm Eastern Daylight Time
3:00 p.m - 4:00 pm Greenwich Mean Time



Prof. Dr. Thomas Nussbaumer
Professor for Bioenergy
Lucerne University of Applied Sciences
Horw, Switzerland
General Manager, Verenum Research
Zürich, Switzerland

Presentation Summary:

Biomass is currently the most important renewable energy carrier and it is expected to play an important role in future energy systems, thereby complementing fluctuating energy sources like solar or wind energy. On the other hand, biomass combustion can generate inhalable particulate matter (PM₁₀) which can cause adverse health impacts. CO₂ mitigation strategies involving biomass therefore need to consider potential health impacts and ensure low PM emissions. This implies that measures ensuring low PM emissions need to be identified and enforced. The IEA Bioenergy Task 32 performed a survey on the properties and health relevance of different particle types summarized as salts, soot, and tar from biomass combustion, and on measures to reduce the resulting emissions. The overview shows, that in residential biomass combustion, organic pollutants are an important drawback due to incomplete combustion, which needs to be avoided by appropriate design and operation of the combustion and use of suitable fuel. In automated biomass boilers, organic PM is avoided by near-complete combustion, while inorganic PM from ash constituents is released. These particle emissions, however, can be effectively reduced by precipitation. Hence biomass can be used as an environmentally friendly fuel, if state-of-the art combustion devices are applied and appropriately operated, while open fires and inappropriate use of biomass combustion systems need to be avoided.

IEA Bioenergy, also known as the Technology Collaboration Programme (TCP) for Research, Development and Demonstration on Bioenergy, functions within a Framework created by the International Energy Agency (IEA). Views, findings and publications of IEA Bioenergy do not necessarily represent the views or policies of the IEA Secretariat or of its individual Member countries.

Connect to the webinar at: <http://cif-ifc.adobeconnect.com/electures/>

Unable to attend the live lecture? Lectures will be recorded and archived for later viewing at <http://www.ieabioenergy.com/iea-publications/webinars/>



IEA Bioenergy

All electronic lectures are free
FOR ADDITIONAL INFORMATION OR TO REGISTER, CONTACT:
E-mail: lectures@cif-ifc.org
Tel: +1-705-744-1715 ext. 630 Fax: +1-705-744-1716

In Collaboration with:



Canadian Institute of Forestry
Institut forestier du Canada