

BIOMASS NETWORKING IN EUROPE



DANISH
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Large scale Utilization of Biopellets for energy Applications (LUBA)

The demand for renewable energy is increasing in Denmark and one of the largest expanding areas in the near future is the use of biomass in power plants. The current use of biopellets comprises about 500 000 tons/year but is expected to increase to around 2 mil tons/year within the coming couple of years.

Due to this fast expanding demand and declining production of pellets in Denmark, about 90% of these pellets will have to be imported from all over the world. Such large import will evidently result in increased handling of pellets of different qualities and origin as well as demand new larger storage facilities with unknown risks such as formation of toxic gases (CO) and self heating in the storage.

Moreover, due to the expected increased diversity of quality and origin of these biopellets, demands for improved controls such as fast and representative sample taking of large volumes of pellets will increase as well as improved control of origin and thereby the sustainability of the imported biomass.



Danish Technological Institute address all these aspects of an increased large scale utilization of biopellets in Denmark by:

- carrying out experiments and measurements of gaseous emissions, oxygen depletion and self heating properties from biopellets in storage environments in laboratory as well as full scale test runs
- developing guidelines for estimating risks as well as presenting technical solutions to prevent self-heating and spontaneous ignition of pellets stored in bulk
- developing new automated sampling techniques and equipment for biomass, focusing on biomass powder and integrate the result in a guideline for representative sampling of biomass powder and similar materials
- analyzing the basis for an increased import of sustainably produced biomass and biomass certification systems for energy applications in Denmark

The Danish Technological Institute is coordinating the LUBA project and is also involved in several other projects concerning utilization as well as manufacturing of pellets from biomass.

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