



Summary and Conclusions

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ERA-NET Bioenergy - International Workshop
Technologies for clean biomass combustion
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Workshop summary

- The workshop aimed to provide a comprehensive overview over the results of the project FutureBioTec
- The project benefited from an intensive cooperation of 11 partners from 7 countries
- A broad range of different biomass combustion technologies (stoves and automated boilers) from a few kW up to 20 MW have been addressed and systematic tests have been performed regarding their potential to reduce gaseous and particulate emissions
- New combustion and filter technologies have been developed
- Fundamental work on additives and fuel blending has been done
- In addition, secondary measures to reduce PM emissions for residential biomass combustion systems have been tested and evaluated



Project output available for dissemination (I)

- **State-of-the-art reports**
 - Operational influences of hand-charged wood stoves
 - Summary and evaluation of existing data on air staging strategies
 - Fuel additives and blending as primary measures for reduction of fine ash particle emissions
 - Particle precipitation devices for residential biomass combustion – survey on the present state in Europe

- **Publishable reports resulting from the experimental work within the project**
 - Design and performance of pulverised fuel combustion systems
 - Single reports regarding the ESP tests performed within the project (BE2020, SP, TFZ, Teagasc)



Project output available for dissemination (II)

■ Guidelines

- Low emission operation manual for chimney stove users
- Guidelines for low emission chimney stove design
- Design and operation concepts for low-emission biomass grate furnaces based on advanced air staging
- Guidelines for the design and application of particle precipitators for residential biomass combustion

■ Scientific papers

- In total at least 8 journal resp. conference papers are presently in preparation



Project output available for dissemination (III)

The proceedings of the workshop as well as all reports and guidelines will be provided as downloads on the BE2020 webpage www.bioenergy2020.eu



***Thank you for your attention and
your active participation
in the workshop***

Prof. Dr. Ingwald Obernberger