BIOTURBINE – Opportunities for Biofuel-Burning Microturbines in the European Decentralised-Generation Market

Bio-fuelled Micro Gas Turbines in Europe –

Market Opportunities and R & D Requirements

- Agenda -

Venue : **EUBIA – European Biomass Industry Association**
Rond Point Schuman 6
1040 Brussels
Belgium

Date : **24th September 2004**

Time : **9:30 – 17:30**

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- Agenda -

Biofuels – Production and Application in Microturbines			
9.30	9.40	Welcome	
9.40	10.00	Chances and Obstacles of Liquid Biofuelled MTs	M. Liebich, WIP
10.00	10.20	Status of Biofuelled Microturbines, Turbec Spa	E. Bianchi, Turbec Spa
10.20	10.40	Feasibility Study: Bio-fuels in Microturbines	Dr. D. Wendig, Univ Rostock
10.40	11.00	Rapeseed Oil in a Capstone C30	Y. Schmellekamp, FH Aachen
Microturbine Case Studies and Field Experiences			
11.00	11.20	CHP with Microturbines	Dr. B. Krautkremer, ISET
11.20	11.40	OMES – Experiences with 18 MT Installations	A. H. Pedersen, DONG
11.40	12.00	Verdesis - Bio-fuelled Microturbine Projects	X. Lombard, Verdesis S.A.
12.00	12.30	*Discussion* R&D Needs - Bio-fuelled Microturbines as a Chance to match the American efforts?	
12.30	*14.00*	*LUNCH*	
Current Market and Future Prospects for Microturbines in Europe			
14.00	14.20	Overview of Microturbine Technology and Market	Dr. R. Janssen, WIP
14.20	14.40	E-Quad Power Systems - Business Trends at Capstone	B. Peters, E-Quad Power Systems
14.40	15.00	Pro-2 Biogas CHP – A Success Story	B. Willenbrink, Pro-2
15.00	*15.30*	*Coffee Break*	
15.30	15.50	Bioturbine Market in Italy	F. Berti, Bmach Srl
15.50	16.10	Bioturbine, new Technology with new Opportunities	N. Vasen, ETA
16.30	17.00	*Discussion* How to tap the full Market Potential of Bio-fuelled Microturbines?	
17.00	17.30	Summary and Closing Remarks	

BIOTURBINE Project Summary

The main objective of the study is to assess the technical feasibility and the market potential of biofuels-burning microturbine systems for power/heating application, which is considered a short-term option to deploy innovative, efficient technology for distributed power generation, and which can contribute to the market development of biofuels in Europe.

The project aims at exploring the new opportunities to use liquid biofuels for distributed generation given by microturbines, which offer a unique combination complying with efficiency and environmental performance.

The bulk of the project is the identification and characterisation of market opportunities for the utilisation of biofuels to feed microturbines.

In particular, the study will cover the following issues:

- Current utilisation, technological development, technical/environmental performance of microturbine systems
- Liquid biofuels (bioethanol/biodiesel/vegetable oil): production, competitiveness, application for heating/power systems
- Current state of development of liquid-biofuels burning microturbines (commercial, demonstration projects, etc)
- Market potential in Europe of microturbine burning liquid biofuels, by tackling the following points:

    1) the potential utilisation in decentralised/niche electricity markets (continuous generation- peak power- back-up power- premium power- remote power- co-generation/tri-generation-mechanical driven applications, etc.)

    2) competitive technologies: a) conventional (e.g. diesel engines); b) under development (e.g. fuel cells)

    3) critical factors linked to a) the technology ; b) the fuels- are there barriers in terms of costs/efficiency/emissions performance targets to be achieved to utilise biofuels for microturbines ?

    4) non-technical factors –e.g. legislative, institutional, fiscal or administrative support (e.g. green certificates scenario)

Emerging micropower technologies (e.g. microturbines, fuel cells) and increase of renewable sources enhances both the opportunities for distributed power, as well as improvements in conventional small-scale power technologies. Therefore the goals of the project, on the long-term, are consistent with the goals set by the EC

- to improve energy efficiency of the energy system
- to enhance security of supply by increasing the share of liquid biofuels
- to promote energy production and use in such ways that respect health and environmental priorities

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