

## Kick-off Meeting

Chalex Research Ltd, Torquay, United Kingdom  
11th/12th October, 2004

**Workpackage 6:  
„Technology Transfer and Staff Secondments“**

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## Suggestions 1

- **Definition of („Renewable“)MicroCHP (RES-MicroCHP)**
- **Elaborate an open list of existing types of RES-MicroCHP**
- **Unitarian structure of database right from the beginning is of primordial importance for all tasks**
- **Additional focus of research activities and technology transfer on new-accession states (needs, acceleration, introduce best available technologies)**

**The chance is now and afterwards for ten years never.**
- **Involve experts on sociological research (to find out target groups, channels to them, their motivations, client circles from fff [family, friends and fools] to ordinary consumers**

The logo graphic for MicroCHEAP is located on the left side of the slide. It features a vertical black line that intersects a horizontal black line. To the left of the vertical line, there are overlapping colored squares: a yellow one at the top, a red one in the middle, and a blue one at the bottom. The text 'MicroCHEAP' is positioned to the right of the vertical line, centered vertically relative to the horizontal line.

## MicroCHEAP

### Suggestions 2

- **Report to funding bodies**  
**MicroCHP is a business for single consumers and small companies. It needs MicroCredits on European scale.**  
**Double task:**  
**1st) To harmonise the criteria of bankers, managers of funds and investors with the technical knowledge of engineers**  
**2nd) To counterbalance Basel II and and the retreat of big business banks from crediting of small and medium-sized enterprises (SMEs) and find new forms of fundraising and financing**
- **To combine RES and micropolygeneration means trading with new complete value-added chains, that means**  
**clutching people that uusually do not co-operate (f.i. stirling manufacturers so far have used to contact natural gas suppliers but have not co-operated with with biogas plant or biomass combustion plant operators**

## Definition of „(Renewable) MicroCHP“ (Proposal)

**„Appliance with an installed electrical or thermal capacity of less than 5 kW to transform primary or secondary renewable energy sources (RES) into combined end energy carriers, as combined**

- **heat and power**
- **heat, cold and power**
- **cold and power**
- **heat and cold**
- **power and storage medium (like hydrogen, pressurized air or kinetic energy)“**



## MicroCHEAP Workpackage 6

### The Objectives

- **To transfer knowledge between partners (and interested parties)**
- **To identify opportunities for technology transfer within (and outside) the network**
- **To diffuse practical know-how and experience with the network, to aid future research and help overlap between technologies (and accelerate development by recoupling deficiencies back to researchers)**
- **To identify the main potential clients (and applications) for renewable RES-Micro-CHP**



## MicroCHEAP Workpackage 6

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### The Tasks

- **6.1 Preparatory work and initial workshops**
  
- **6.2 Technology transfer workshops**
  
- **6.3 Staff secondments**



### The Deliverables

- **First topical seminar (Month 6 ~ March 2005)**
- **Second topical seminar (Month 12 ~ September 2005)**
- **First technology transfer workshop (Month 18 ~ March 2006)**
- **Second technology transfer workshop (Month 30 ~ March 2007)**
- **Training secondments (Months 19 – 30 ~ April 2006 – March 2007)**
- **Staff secondment report [Month 34 ~ August 2007) Torquay, United Kingdom**
- **Technology transfer programme report (Month 36 ~ September 2007)**



## MicroCHEAP Workpackage 6

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### To decide on 1

➤ **1st topical seminar**

**Subject:** „Review of marketable near-to-market and far-from-market\*  
RES-Micro-CHP“

**Site:** Potsdam, Germany

**Date:** March 28/29, 2005

**Responsible:** FEE

➤ **2nd topical seminar**

**Subject:** „Methodology of marketing RES-Micro-CHP“ (marketing analysis, target groups, access, methods of financing, competitors, etc.)

**Site:** Barcelona, Spain

**Date:** September, 2005

**Responsible:** UB

\* > 2 years for first implementation



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### To decide on 2

- **Drafts for data structure of data sheet / database 1**

#### Basic data

**Responsible: FEE**

**Deadline: October 31, 2004**

**Afterwards open for discussion**

**Responsible: All. Suggestions to FEE, Chalex, WBI, copies to all.**

**Deadline: November 20, 2004**

**To finalise and adapt to overall database**

**Responsible: WBI**

**Deadline: November 30, 2004**



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### To decide on 3

- Drafts for data structure of data sheet / database 2  
Structure of technical dataheets of all kinds of transformers

**Internal combustion engines**

**Responsible: FORCE**

**Microturbines**

**Responsible: ISET**

**Fuel Cells**

**Responsible: CRES**

**Stirling engines**

**Responsible: ECN**



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### To decide on 4

- **Drafts for data structure of data sheet / database 3**  
**Structure of technical data sheets of all kinds of transformers**

**ORC**

**Responsible: Lund**

**Thermoelectric appliances**

**Responsible: Chalex**

**Hybrid, including storage**

**Responsible: Fh-ISE**

**Others**

**Responsible: EA**

**Procedure and deadlines as in previous sheets**



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### To decide on 5

- **To list manufacturers of any kind of RES-Micro-CHP 1**  
**Every partner in his own country and report to FEE**

**Deadline: February 28, 2005**

**Afterwards: Changes, only, February and August of the years to come**

### Additionally:

<b>AF</b>	<b>Canada</b>
<b>ARMINE</b>	<b>Rest of the World</b>
<b>ASTON</b>	<b>USA</b>
<b>AUE</b>	<b>Ukraine</b>
<b>BEAMA</b>	<b>China</b>
<b>BTG</b>	<b>Czech Republic, Bulgaria</b>
<b>CODES</b>	<b>Former Yugoslavia</b>



## MicroCHEAP Workpackage 6

### To decide on 6

- To list manufacturers of any kind of RES-Micro-CHP 2

### Additionally:

<b>CRES</b>	<b>Cyprus, Turkey</b>
<b>DGS</b>	<b>Austria</b>
<b>EAT</b>	<b>Japan</b>
<b>ECN</b>	<b>Benelux</b>
<b>EC NET</b>	<b>Newsealand</b>
<b>ENEFEL</b>	<b>Poland</b>
<b>FH-ISE</b>	<b>Latin America</b>
<b>FORCE</b>	<b>Rest of ex-Soviet Union</b>
<b>Gaia</b>	<b>Baltic Republic</b>



## MicroCHEAP Workpackage 6

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### To decide on 7

- **To list manufacturers of any kind of RES-Micro-CHP 3**

### Additionally:

<b>IUAV</b>	<b>Switzerland</b>
<b>Lund</b>	<b>Norway</b>
<b>NTUA</b>	<b>Russia</b>
<b>SPUN</b>	<b>Hungary, Romania</b>
<b>STSL</b>	<b>Australia</b>
<b>UB</b>	<b>Portugal</b>



## MicroCHEAP Workpackage 6

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### To decide on 8

- **To list competitive technologies**

**Every partner in his own country and report to FEE**

**Deadline: February 28, 2005**

**Afterwards: Changes, only, February and August of the years to come**

**Additionally:**

**ISSET Rest of the world with market penetration in Europe**

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## MicroCHEAP Workpackage 6

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### To decide on 9

- **To establish a list of professional associations**

**Every partner in his own country and report to FEE**

**Deadline: February 28, 2005**

**Afterwards: Changes, only, February and August of the years to come**

**Additionally:**

**Chalex                      Rest of Europe**



## MicroCHEAP Workpackage 6

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### To decide on 10

- To elaborate a list of projects

Every partner in his own country and report to FEE

**Deadline: February 28, 2005**

**Afterwards: Changes, only, February and August of the years to come**

Additionally:

**Responsibility as in charts 13 - 15**



## MicroCHEAP Workpackage 6

### Suggestions 1

- RES-Micro-CHP to be treaded 1

Internal combustion engines (steam engines?)

External combustion engines (solar stirling, bio stirling)

Microturbines

Fuel Cells (AFC, DMFC, PAFC, PEMFC, SOFC, MCFC?, Direct-Ethanol-FC?, biological FC?)



## MicroCHEAP Workpackage 6

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### Suggestions 2

- RES-Micro-CHP to be treaded 2

Thermoelectric systems

Organic Rankine Process

Windenegy plants with electric heating devices

Hybrid systems with storage

Others, which?



## MicroCHEAP Workpackage 6

### Suggestions 3

- RES primary energy carriers to be treaded

biomass (gaseous, liquid, solid)

geothermal

solar radiation (photovoltaics, solar thermal)

windenergy

others, which?



## MicroCHEAP Workpackage 6

### Suggestions 4

- RES secondary carriers to be treaded

hydrogen

methane (enriched biogas)

methanol

sun and synthetic fuels

others, which?



## MicroCHEAP Workpackage 6

### Suggestions 5

- **List of obstacles and barriers for research & development and implementation**
- **To elaborate checklists on marketability of RES-Micro-CHP**
- **To identify**
  - target groups, f.i. craftsmen and their chambres (special training instructions?)**
  - early markets**
  - niche markets**
  - mass markets**
- **To report on every public relation measure (posters, papers, articles, interviews, exhibitions etc.)**
- **To deliver and exchange individual websites for publication and offer to transfer RES-Micro-CHP technology**
- **To dedicate one workshop to a special meeting of developers and manufacturers of RES-Micro-CHP with researchers to stimulate transfer of successful scientific results**

## FEE-Network Relations Fuel Cells – Gaseous & Liquid BioFuels

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FEE- Federal Task Group  
„Gasification of Biomass“  
since 1994

Project Idea 1993  
PEM-FC-System  
for TGZ Glaubitz  
Realized 1996

BMVEL: Federal Task Group  
„Biogenous Gases – Fuel Cells“  
Task of FEE: Establishing &  
Management since 2001

EU-Research Network  
ThermoNet  
since 2001

Gasification  
GasNet

Pyrolysis  
PyNe



Transregional Group „Develop-  
ment and Industrial Testing of an  
own PEM-FC-System for Home  
Supply“  
Partner for Marketing and PR  
since 2001

BMBF-„International Networks  
on RES-Research“  
since 2003  
Task of FEE: Gasification Gas

Concept on Centre of Excel-  
lence and Demonstration for Fuel  
Cells in Saxony 2002

EU-Co-ordinated Action  
„Integration of Micro-CHP in  
RES-Systems“ (MicroCHEaP)  
since 2004  
Task of FEE:  
Technology Transfer

Order of the WM  
Brandenburg:  
Exposé for a  
„Fuel Cell Strategy  
for Brandenburg“  
2002

Initiative and Management of the  
Steering Group for Establishing a  
Joint Working & Research Group  
„Fuel Cells, Gaseous & Liquid  
Fuels“ of  
East-German Bundesländer  
since 2002

### Interests of FEE

- **Participation of innovative small and medium sized enterprises (SME) and research institutes (among them associates of FEE with own technologies and plants)**
- **Establishing durable relations between partners for divers projects (strategic core neighbourhood: Austria, Finland, Germany, the Netherlands, Poland) and profitable international networking**
- **Strictly orientated on surmounting real hurdles on the road to market**
- **Finding solutions for regional economic relations with international links and implications**