SES6-CT-2003-502705

RENEW

Renewable fuels for advanced powertrains

Integrated Project

Sustainable energy systems

D6.2.1 Detailed concept for a summer school

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B.A.U.M.-No.30 B.A.U.M. Consult GmbH

Revision

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Dissemination Level		
PU	Public	**X**
PP	Restricted to other programme participants (including Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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1. Contractual frame for summer school concept

The RENEW Summer Schools are organised within the Subproject 6, Training, of the RENEW project. Their contractual frame is defined by the actual detailed implementation plan for the RENEW project, valid for the months 13-30 of the project, i.e. the period January 2005 to June 2006. Within this implementation plan, it is stipulated:

"The concept for the summer schools will follow the schemes that exist for summer schools for many different research areas within the scientific community, i.e. a lecture and accompanying programme for a couple of days in summer where participants can not only listen presentations, but spend that time together with the lecturers, thus permitting extensive exchange and face-to-face scientific discussions.

Particular attention will be paid (1) to address potential participants from the new EU member states and (2) to promoting gender equality, the first notably through locating the events close to or within new member states and the second notably through proven schemes for care for children. In addition, attention will be paid to a general programme conception that facilitates to harmonise participation and contact to own children during the event. The following elements will be crucial for achieving this aim:

1. *Organised care for children during the summer schools.*
2. *Video transmission of the lectures in a room next to the area where the children stay during the daytime, for permitting breast-feeding mothers or parents whose children refuse to stay the whole day without them not to miss a lecture.*
3. *Baby chairs during the meals + renting of baby phones for parents.*
4. *A break in the official programme when children use to go to bed (between 18:00 and 20:30 about), thus shifting the evening programme to the later evening.*

The summer school scheme will foresee a changing venue from year to year, thus permitting to include different site visit programmes of relevance for the participants.

A source of lectures to ban on video will be the presentations given at the summer schools, additional presentations will be recorded at CUTEC Institute. The lectures will be made available in the web by B.A.U.M. Consult GmbH.

For both the summer schools and the web-based lectures the speakers will be asked to support their presentation by a scientific paper. Procedures will be established for collecting written contributions of high quality that can be published in proceedings booklets and as .pdf files."

2. General elements of the RENEW Summer Schools

2.1 Target group

- RENEW consortium members, not only those persons who are directly involved in the RENEW project, but also colleagues of them;
- wider scientific community;
- master thesis and PhD students of various disciplines: mechanical, chemical or environmental engineering, agriculture, economics, etc.;
- researchers and development engineers;
- decision makers;
- other interested persons and institutions.

2.2 Criteria for lecture programme

The lecture programme is a compromise between achieving two antagonistic targets:

1. The presentations should reflect the opinion of the RENEW project partners with regard to renewable motor fuels. At least, no RENEW partner should feel himself offended by the one of the presentations given. In particular, the position of the automobile industry, represented by the four automobile industry partners within the consortium, with regard to renewable motor fuels should be explicitly presented.
2. The programme as a whole should allow to give a rather complete overview on renewable motor fuels and the main aspects of their use. For this reason, it is also necessary to introduce the targeted interdisciplinary audience into topics such as motor technology, conventional, fossil fuels and their specifications, etc. For permitting the audience to get a better picture of the issues of the discussion on renewable motor fuels, the presentation of renewable fuels not covered within RENEW, should also be included.

The balancing out between these two main targets has been THE issue which has occupied the RENEW Coordination Committee intensively. The main lines of the compromise which was found are:

- The summer school programme comprises, apart from lectures on RENEW results, also lectures of a general and introducing character, e.g. on the motivation to deal with renewable motor fuels, on motor technology and on fossil fuels and their characteristics.
- The programme contains also lectures on first generation bio-fuels.
- A particular diligence is applied on the selection of the lecturers.
- For specific topics which are regarded as critical, the RENEW Coordination Committee reserves the right to reject parts of a presentation or to ask for additional information to be included in a lecture, which reflects the position of those members of the Coordination Committee who ask for the correction.

2.3 Criteria for lecturers

- Being a specialist working in the field,

- being a “non-lobbyist”, i.e. a person presenting the respective topic in a manner which is as scientific as possible,
- able to teach in English,
- able to speak clearly,
- able to give an exciting lecture,
- contribution to proceedings must be submitted in advance, at least by external, paid lecturers,
- similar lectures must respond to the same key questions (technical feasibility, cost-effectiveness of approach, ecologic aspects, in particular well-to-wheel considerations).

2.4 Criteria for site

- Availability of facilities and infrastructure for lectures;
- possibility to accommodate and cater some 50-100 persons for about 3 days;
- localities should facilitate the emergence of a climate of intense exchange among participants and lecturers: facilities for lectures, leisure, accommodation and catering situated very close to each other; no other groups disturbing; site itself attractive, but no other attractions near by;
- care for children should be possible.

2.5 Criteria for date

It has become clear, that the duration of the regular RENEW meetings is already at the upper limit of the duration for which RENEW partners can make themselves available. A prolongation of these meetings by adding the summer schools directly before or after would make participation of RENEW project partners extremely difficult. For this reason, it has been decided by the SP6 partners to organise the summer schools not directly before or after a RENEW meeting, but independently at a different date.

Traditionally, summer schools take place in summer holidays, as the name suggests. As one of the main target groups, students, can not participate, if the summer school takes place during the lecture periods, the RENEW summer school must be timed during the Europe-wide lecture-free periods, i.e. in August.

2.6 Exclusivity of RENEW Summer Schools

As to the knowledge of the organisers, the RENEW Summer Schools are the first Europe-wide on the topic of renewable motor fuels, the name “European Summer School on Renewable Motor Fuels” is used synonymously to “RENEW Summer School”.

3. The specific case of the RENEW Summer School 2005

3.1 Target group

As under 2.1

3.2 Lecture programm

The RENEW Summer School 2005 covers the following topics/ sessions:

I. General introduction: overview on bio-fuels, motor technology
II. Existing automotive fuels: fossil and first generation bio-fuels
III. Generation of synthetic gas from bio-mass and gas cleaning: different process routes covered by RENEW + general introduction and overview
IV. Transport fuel synthesis (from syngas produced from biomass): process routes covered by RENEW + additional process route for methanol as intermediate product + overview lecture
V. Horizontal issues: biomass potential and logistics, life-cycle analysis, cost assessment, etc.

The detailed programme with lecture titles and lecturers is attached in the Annex.

3.3 Training instruments

- Lectures (from 25 to 60 minutes, questions included)
- Panel discussions at the end of each session
- Guided tour on the Umwelt-Campus (2 hours)
- Free discussions during breaks and meals (undefined)

3.4 Location

Environmental campus '(Umwelt-Campus) Birkenfeld, Polytechnical Univ. (FH) Trier, Germany

- Very modern facilities and many interesting demonstration objects on site
- Little risk, that participants get dispersed in the evening
- Low-cost accommodation and catering possible
- Very good access (see 3.6)
- Facilities free in August 2005

3.5 Date

29-31 August 2005 (after that date several events in the field of biomass take place, before, too many potential participants might effectively be in holidays)

All three days are fully dedicated to courses.

3.6 Access

- via train from Frankfurt or Saarbrücken, direct train every two hours
- flight to Frankfurt, then direct train
- motorway

3.7 Accommodation

- up to 50 persons in Umwelt-Campus Guesthouse
- further 50 persons can be accommodated in Congress Center (Elisabeth Stiftung), 5km away
- student apartments could be used, too

3.8 Catering

- Umwelt-Campus Restaurant

3.9 Special features

- Specific attention to gender mainstreaming
- Care for children ensured (Umwelt-Campus kindergarden)
- Video transmission of lectures to site where children are kept

3.10 Socialising instruments

- Evening reception at first evening
- Summer school party at second evening

3.11 Media for announcement of summer school

- internet pages of RENEW, B.A.U.M., CUTEC, ZSW, VW
- internet pages dedicated to renewable energies, automobile industry, engineering, etc.
- specialised journals
- European and national organisations dedicated to renewable energy
- Biomass Master Course
- Specific information channels for female academics

3.12 Participation fees

- No fees for students, nor for RENEW project partners;
- 120 Euro for other participants until 30 June 2005, 180 Euro after 30 June 2005
- Participants pay themselves for accommodation and meals

3.13 Summer school proceedings

Within the context of the RENEW summer school, written documents (abstract, paper, CV) are requested from all lecturers as well as a set of presentation slides (normally in the form of a power-point presentation). These documents are submitted to B.A.U.M. Consult GmbH. In addition, if the lecturer has given a prior agreement in writing, a video will be produced on the respective lecture by CUTEC Institut GmbH. The presentation slides will be integrated in the videos. (See also deliverable D6.2.2, Overall concept of a web-based lecture course, and D6.2.4, Detailed structure of the web-based lecture course.)

It is planned that all submitted written documents, jointly with the produced videos, will be put together in a set of DVDs as proceedings (documentation) of the summer school. Each participant will receive a free copy of the complete summer school proceedings on DVD. Each written contribution and video will be marked explicitly as a contribution to the RENEW summer school.

Furthermore, the RENEW summer school proceedings will be made available for free down-load to the interested general public on a web-server of B.A.U.M. Consult GmbH. Interested persons can also order a complete set of DVDs from B.A.U.M. Consult GmbH against a protective charge. No commercial or any further non-commercial use or exploitation is foreseen.

The summer school lecturers will be asked to sign a letter of agreement on the dissemination of their contributions to the summer school. Each lecturer will have the free choice between:

- no agreement on dissemination
- agreement only on the dissemination of the written documents
- agreement only on the production and dissemination of a video of his/ her lecture
- agreement on the production of a video and dissemination of the written documents and the video

No rights will be conferred to anybody by the agreement given by the lecturer, except the right to disseminate partly or totally the contributions given to the RENEW summer school in the manner indicated above.

Annex

RENEW Summer School
Programme 2005

Monday, 29 August 2005

08:30 Guided tour on Umwelt-Campus

General introduction

Session moderator: M. Stöhr, B.A.U.M. Consult GmbH

10:30 Welcome

10:45 Why bio-fuels? - An introduction into the topic
M. Specht, Zentrum für Sonnenenergie- und Wasserstoffforschung Baden-Württemberg

11:45 Automobile motor technology and requirements for automotive fuels
C. Kohnen, Volkswagen AG

12:45 Panel discussion with referents of morning session

13:00 Lunch break

Existing automotive fuels

Session moderator:
U. Zuberbühler, Zentrum für Sonnenenergie- und Wasserstoff-Forschung

14:00 Properties of liquid transport fuels from mineral oil
W. Doermer, BP

14:35 Bio-ethanol - existing pathways
D. Schieder, Techn. Univ. Munich

15:10 Bio-gas up-grading for use as automotive fuel
W. Tentscher, Asian Institute of Technology (a.D.)

15:45 Coffee break

16:00 Bio-diesel from trans-esterification of oils and fats
J. Krahl, Univ. Coburg

16:35 Pure plant oil – a motor fuel?
G. Gruber, Institut für Energie- und Umwelttechnik

17:10 Panel discussion with referents of afternoon session

18:00 Dinner break

20:00 Evening Event

Tuesday, 30 August 2005

Generation of synthetic gas from bio-mass and gas cleaning

Session moderator: CUTEC-Institut GmbH

08:30 Gasification of bio-mass -
an overview on available technologies
U. Zuberbühler, Zentrum für Sonnenenergie- und Wasserstoff-Forschung

09:15 The case of the Choren Carbo V gasifier
M. Rudloff, Choren Industries GmbH

09:40 Coffee break

10:00 The case of the Future Energy gasifier
R. Stahl, Forschungszentrum Karlsruhe GmbH

10:25 Indirectly heated gasifiers - the case of the Güssing reactor
R. Rauch, Techn. Univ. Wien

10:50 CFBR - the CUTEC concept of biomass gasification
M. Schindler, CUTEC-Institut GmbH

11:15 The case of the Chemrec black liquor gasifier
I. Landälv, Chemrec AB

11:40 Panel discussion with referents of morning session

12:30 Lunch break

Transport fuel synthesis

Session moderator: E. Heinl, Volkswagen AG

13:30 Synthesis of automotive fuels from bio-mass syngas -
An overview of available technologies
G. Schaub, Engler-Bunte-Institut, Univ. Karlsruhe

14:15 Fischer-Tropsch-Diesel synthesis
M. Rudloff, Choren Industries GmbH

14:40 Fischer-Tropsch heavy products up-grading
A. Lappas, Center for Research and Technology Hellas

15:05 Coffee break

15:25 Di-Methyl-Ether synthesis
I. Landälv, Chemrec AB

15:50 Ethanol synthesis
J. Caraballo, Abengoa Bioenergia S.L.

16:15 Methanol-to-synfuels synthesis
T. Dimmig, Institut für Energieverfahrenstechnik und Ingenieurwesen, Techn. Univ. Freiberg

16:40 Panel discussion with referents of afternoon session

17:30 Dinner break

19:30 Evening event

Wednesday, 31 August 2005

Horizontal issues

Session moderator: M. Stöhr, B.A.U.M. Consult GmbH

08:30 Biomass potential and potential development
M. Pisarek, EC Baltic Renewable Energy Centre

09:30 Biomass supply and logistics in future scenarios
D. Thrän, Institut für Energetik und Umwelt GmbH

10:30 Coffee break

10:45 Life cycle assessment of BtL pathways
S. Jungbluth, ESU-Services

11:45 Cost assessment of BtL pathways
A. Vogel, Institut für Energetik und Umwelt GmbH

12:45 Lunch break

13:45 Technology assessment of BtL pathways
F. Seyfried, Volkswagen AG

14:45 Material flow management in regions
P. Heck / K. Helling, Umwelt-Campus Birkenfeld

15:45 Closing session

16:00 End