ENERGY

Per informazioni: Stefania Tedeschi - tedeschi@apre.it

Riferimento: ENE7-EU-LCP-1

Data Scadenza: **11/06/2007**

Programma: **ENERGY**

Titolo: ENERGY.2007.3.1.2 / ENERGY.2007.3.2.6

Tipo Progetto:

Descrizione: A research Group here in Greece is interested to apply in the Energy Call Part 2: Call identifier: FP7-ENERGY-2007-2-TREN;

Activity Energy.3: Renewable Fuel Production; Area Energy.3.1: First generation biofuel from biomass, Topic ENERGY.2007.3.1.2:

Biodiesel from oil crops, animal tallow and used cooking oils and according to the advice of the European Commission (DG TREN) also to refer to Area Energy.3.2: Second generation fuel from biomass, Topic ENERGY.2007.3.2.6.:

Hydrogenation of oils and fats, for a collaborative project tetantively entitled:

'Development of a novel cascade reaction industrial process by combination of enzyme-catalyzed transesterification with aqueous/organic biphasic organometallic- and heterogeneous-catalyzed hydrogenation of oils and fats for the production of biodiesel of improved oxidative stability, energy and environmental performance at a low pour point'

Tipo Ente: Università

Partner richiesto: We are now looking for an European Company producing biodiesel first generation i.e. methyl esters of vegetable oils and fats in order to perform the scale up of the enzyme-catalyzed transesterification of oils and fats in industrial scale and also for an European Company to hydrogenate the transesterified oils and fats in industrial scale.
Ideal coordinator of this collaborative project would be one of the industrial partners (according of the instructions of EU).

Per informazioni: Stefania Tedeschi - tedeschi@apre.it

Riferimento: ENE-EU-SMCP-1

Data Scadenza: **26/06/2007**

Programma: Sviluppo sostenibile, cambiamento globale ed ecosistemi - Energia

Titolo: “Syngas for methanol production via a new microwave auto-reforming process of biogas “

Tipo Progetto: Medium Collaborative project

Descrizione: The goal of this project is to develop and scale up a new process based on microwave heating for converting biogas into synthesis gas for its use as feedstock in methanol production. Compared to conventional reforming, this process uses the CO2 present in the biogas, instead of steam, to reform the CH4. Therefore, from an economic and environmental point of view, this new process has the following advantages: (i) energy savings, since no generation of steam is required, (ii) catalyst savings and (iii) uses of two green house gases to produce fuels and chemicals>

Tipo Ente: Centro di Ricerca>

Partner richiesto: 1SME+1RTD related with microwaves (same country preferably)
SME: microwave’s technology manufacturing.
RTD: suited in design, implementation and optimisation of microwaves.
1SME+1RTD (same country preferably)
SME: interested in methanol applications
RTD: expertise in the conversion of syngas in methanol (analityc, catalyst, etc)
1SME or 1RTD (preferably), for dissemination issues.

Per informazioni: Federica Prete - prete@apre.it

Riferimento: **ENE7-EU-SMCP-3**

Data Scadenza: 28/06/2007

Programma: **ENERGY**

Titolo: **VAPCO**

Tipo Progetto:

Descrizione: Topic adressed by this project:
Topic 4.1.3 : small distributed systems for seawater desalination

VAPCO project abstract:
The project aims at developing an innovative de-centralized desalination process assisted with a wind turbine and a solar water heater.
Evaporation/Condensation of clean water is ensured by a vapor compression unit and heat exchange surfaces (vapor compression distillation). The mechanical energy is supplied by a wind turbine and the seawater supply system is completed with a solar water heater to improve the system efficiency. This desalination process intends for producing clean water in Mediterranean areas suffering of increasing water scarcity. A demonstration component will be design, equipped with sensing devices and tested in southern Spain. The project organization aspires to perform a comparison of several innovative concepts for focusing on a pilot process. The design process mainly takes into consideration 2 alternatives and 2 design criteria. The alternatives concern the chain of mechanical energy conversion. This conversion will be based on direct transmission to the compressor or on the transformation of mechanical energy into electricity to supply the compressor. The alternatives of concepts will be selected according to cost and maintenance minimization criteria. The competitive positioning of this desalination process is interested in water supply for remote, sunny and windy areas where centralized high power plants are ineffective. Due to wind energy, these desalination units should exploit better the potential of some coastal regions than solar stills. This market niche also concerns northern or western African countries in the short term (Tunisia, Morocco).

Tipo Ente: Università>

Partner richiesto: We are looking for a sme in EU, especially from France or Spain, able to characterize a site from the wind potential and/or solar potential perspectives. This sme will participate to the investigation of the innovative process capability (energetic and economical aspects).
Staff members: Person-month =at least 6 months, at most 20>

Per informazioni: Federica Prete - prete@apre.it

Riferimento: **ENE7-EU-LCP-2**

Data Scadenza: **18/06/2008**

Programma: **ENERGY**

Titolo: Renewable Energy Supply and Energy efficiency in Buildings

Descrizione: AREA: Energy 8.3 Large Scale Integration of Renewable Energy Supply and Energy efficiency in Buildings: Eco Buildings

No topics are opening calls published in 2007

Proposal idea:
Malta is still lacking behind in environmental friendly measures especially in the building sector. The Housing Authority intends to develop the first Eco building in Malta particularly emphasising on residential building. This building would include eco-friendly measures from the design to the construction stage in order to evaluate its feasibility in the local context and its applicability in Malta and other countries abroad. It will include research on possible energy efficient technologies in buildings and share of best practices.

Tipo Ente: Pubblica Amministrazione>

Partner richiesto: Partner sought:
- consultancy
- industry
- research
- education

Expertise required:
Co-ordinator for this project is required.
Housing associations, research organisations and private organisations interested in research, application and demonstration of eco-friendly measures and energy efficient technologies in the building sector.

Per informazioni: Federica Prete - prete@apre.it

Riferimento: **ENE7-EU-LCP-2**

Data Scadenza: 28/06/2007

Programma: ENERGY

Titolo: Technical and economic evaluation of decentralised Biodiesel Production

Tipo Progetto:

Descrizione: CALLS:
1. FP7 Cooperation Work Programme: Theme 5 – Energy:
FP7-ENERGY-2007-2-TREN Deadline: 28/06/2007
2. FP7 Capacities Work Programme: Part 2 – research for the benefit of
SMEs: FP7-SME-2007-1 Deadline:
04/09/2007
3. Other relevant calls in 2007 and 2008

PROJECT IDEA:
- Proposed title: Technical and economic evaluation of decentralised Biodiesel Production (under development with national partners)
- Project type: Collaborative Research Project (CP) or Coordination and Support Action (SCA)

Tipo Ente: Centro di Ricerca

Partner richiesto:
- Target partner organizations: R&D institutes and SMEs from EU and third countries
- Role of partners in desired project: research, technology development, dissemination, demonstration, (coordination)

Per informazioni: Federica Prete - prete@apre.it

Riferimento: **ENE-PT-LCP-3**

Data Scadenza: 28/06/2007

Programma: Sviluppo sostenibile, cambiamento globale ed ecosistemi - Energia

Titolo: Technical and economic evaluation of decentralised Biodiesel Production

Tipo Progetto:

Descrizione: CALLS:
1. FP7 Cooperation Work Programme: Theme 5 – Energy:
FP7-ENERGY-2007-2-TREN Deadline: 28/06/2007
2. FP7 Capacities Work Programme: Part 2 – research for the benefit of
SMEs: FP7-SME-2007-1 Deadline:
04/09/2007
3. Other relevant calls in 2007 and 2008

PROJECT IDEA:
- Proposed title: Technical and economic evaluation of decentralised Biodiesel Production (under development with national partners)
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Tipo Ente: Centro di Ricerca>

Partner richiesto:
- Target partner organizations: R&D institutes and SMEs from EU and third countries
- Role of partners in desired project: research, technology development, dissemination, demonstration, (coordination)

Per informazioni: Federica Prete - prete@apre.it

Riferimento: **ENE-EU-SMCP-1**

Data Scadenza: **26/06/2007>**

Programma: Sviluppo sostenibile, cambiamento globale ed ecosistemi - Energia

Titolo: Applications with renewable energies

Descrizione: Topic ENERGY.2007.8.2.1: High efficiency poly-generation - applications with renewable energies

SUMMARY OF THE APPROACH:
The production process on the farms requires a lot and different energy: heating, cooling, mechanical, electrical, diesel fuel. So, the agricultural productions on the farms require energy, but the agricultural waste with significant energy potential remains on the fields. Apart of that plants like raspel can be used for oil production and out of that as transesterification resulting to bio diesel used as substitute for fossil diesel.
The basic idea of this project is to utilize agricultural waste for energy production on the farm in the most convenient cost/effective solution. In this way, many effects might be achieved:

- Utilization of agricultural waste as renewable energy
- Substitution of current energy supply (electric from the grid, natural gas for the heat, etc)
- Cost benefits
- Environment pollution decrease

The design of Power Plant suitable for the farm has to take into account:

- The energy potential and request
- Energy efficiency
- Available technology
- Investment costs
- Transport, maintenance and the other costs

We will take a particular farm where one half of the farm is under maize,wheat and raspel and the other half are vegetables. The preliminary estimate gives as agricultural waste fuel of 2000 tons, different caloric values. Processing of the agricultural product, for 6-8 months period, requires different energy vector. Current energy supply consists of 300 kW electric energy, 4 MW natural gas (for heating and drying. A part of electric energy (88 KW) is converted to mechanical energy for driving 4 ventilators.
For driving the agriculture machinery 100.000 l per year of diesel fuel is needed.
The basic objectives of this project are the energy estimation of 2000 tones agricultural waste and maximal substitution of fossil diesel fuel.
The project covers the biomass energy data, preliminary energy potential and request, costs estimation, profitability and payback period.

The availability of agricultural waste is B = 2 000 tons per year.
The energy production period is 7 months, or T= 5 000 h.
This gives biomass/hour rate R= 2 000 tones/5 000 h = 400 kg/h (biofuel)
Or, energy potential per hour ET = 400 kg/h * 4.00 kWh/kg = 1 600 kWh/h
Taking energy efficiency of 80% gives energy output of EOT = 0.80 * 1 600 kWh/h = 1 280 kWh/h
We propose steam turbine which is convenient for different agricultural waste as fuel as basic technology.
Heating power is EH = 1 000 kW.
The request for electric and mechanical power is EEM = 280 kW, divided as
Electric power EE = 230 kW,
Mechanical power EM = 50 kW,

It has to be remembering that the 3 MW energy from natural gas remains uncovered. One solution is current public pipe system. The other option is to increase Power Plant energy production by taking agricultural waste from the neighbouring farms. In the case of Power Plant increase to the required 4 MW heat and 300 kW electric energy, the additional 4 700 tons of agricultural waste has to be collected. This is a rough estimation.

In brief: Small demonstration plant with the following features:

- Combustor for agricultural waste
- Steam turbine or stirling motor
- Current generator

Partners involved from: Austria, Serbia, Slovenia, Romania, Bulgaria (in negotiation)

Tipo Ente: Altro>

Partner richiesto: Additional partners sought:

- Power plant design
    - Power plant construction