

BIOENERGY in EU countries
Current Status and Future Trends

International Forum

Cluj-Napoca, Romania, 26 May 2011

Trans-national Renewable Energy Cluster
- partnership initiative -

North-West Regional Development Agency

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North-West Regional Development Agency “NWRDA”

- ❑ NGO of public utility, located in Cluj-Napoca, Cluj county, Romania
- ❑ Covers 6 counties from Northern Transylvania and has Branches in each county
- ❑ NWRDA acts as Intermediary Body for the Regional Operational Program (ROP) 2007-2013, financed by the Structural Funds
- ❑ Since 1998, NWRDA has gathered a vast experience on planning, programming, networks, cooperation between academia, administration and business environment by elaboration in partnership of regional programming documents, strategies innovation activities
- ❑ NWRDA has implemented many European Cooperation projects in different fields and research projects linked with innovation strategy (FP6) and geothermal field (CLUSTHERM Project, FP7)
- ❑ The Agency is initiator and manager of the Regional Institute of Research, Education and Technology Transfer, the pilot project of the Regional Innovation Strategy, former concluded FP6 project.
- ❑ The Agency is closely connected to the business environment being a member of European Enterprise Network.
- ❑ By close cooperation with local authorities as the executive body of the NW Regional Development Board, it has the ability to improve regional and local development policies, SMEs, innovation and energy related issues.

Trans-national Renewable Energy Cluster

TREC

- INTERREG IVC Sub-project of SMART+ Project
- May 2011 - April 2013
- Budget of cca 265.000 euro
- **Coordinator** : North-West Regional Development Agency - “NWRDA”, Cluj County, Romania
- **Participant 1**: INCDO-INOE 2000, National Research Institute for Analytical Instrumentation - “ICIA”, Cluj County, Romania;
- **Participant 2**: Centre for Research and Technology Hellas / Institute for Solid Fuels Technology & Applications, “CERTH/ISFTA”, Western Macedonia, Greece;
- **Participant 3**: Waste Management of Western Macedonia S.A. - DIADYMA S.A., Western Macedonia, Greece;
- **Participant 4**: German Biomass Research Centre - „DBFZ”, Saxony, Germany.

TREC Objectives

- The aim of the project is to analyze, transfer and disseminate good practices for the promotion of innovation, research and technological development of SMEs and in particular, promoting energy from renewable sources, by collaboration between partners from the mentioned European regions.
- Creation of a renewable energy cluster - “TREC”
- The cluster will be jointly developed by the setting up of *two regional clusters, in Cluj and Western Macedonia* and will benefit by consulting and transferred good practices from members and the existing renewable energy clusters and networks from Saxony Region, Germany.

www.smartplusinnovations.eu/subprojects

CLUSTER = “(geographic) concentration of interconnected businesses, suppliers and associated institutions in a particular field based on commonalities and complementarities. These concentrations can give rise to external economies such as emergence of specialized suppliers of raw materials and components or growth of a pool of sector-specific skills and foster development of specialized services in technical, managerial and financial matters.



Members' Role within a Cluster

Cluster Member	Contribution	Benefits
Universities/research	Applied and new-developed research Information, technology and know-how transfer	Continuous adaptation of educational curricula New labs financed by the industry Long Life Learning Research Nucleus
Firms (industry, services)	Cooperation, Networking Common use of facilities Integrated marketing and promotion	Raise in added value Costs savings Other competitive advantages
Public Authorities	Mediator Dissemination of information and results Direct Support	Economic/regional development
Intermediaries	Easy and active links Contribution to the dissemination	Clients loyalty Competitive advantages

TREC Activities

- Elaboration of *Joint Study on Renewable Energy*, by collecting information on Energy related actors of good practices on existing clusters in each project region - *mapping* of resources, potential, of initiatives, projects, research, companies, associations, platform on renewable energy from Cluj (North-West Region), Western Macedonia and Saxony
- Development of a *common data base of SMEs*, large companies, universities, public authorities targeted as TREC members
- Jointly elaboration of *TREC Statute*, partnership agreement, functioning and organisation rules, interregional input
- Exchange of good practices between partners + transfer of cluster management experience from DBFZ Leipzig (3 inter-regional meetings)
- Development of **2 Regional Renewable Energy Clusters**, in Cluj and Western Macedonia via *intensive promotion* and *8 regional meetings*.
- **Setting up Trans-National Renewable Energy Cluster**, promoting networking, cooperation, joint projects and common benefits in the 3 regions
- Further development of the newly created cluster/s will be achieved by joint elaboration of a **development strategy**, accompanied by a concrete **plan of action**, by creating synergies between the needs of SMEs, through network activities between project partners, enhanced links between research & development stakeholders and business sector, at regional and interregional level and will also contribute to the identification of future common objectives further funding of the cluster/s

INCDO-INOE 2000, Research Institute for Analytical Instrumentation - ICIA

ICIA: main results in *Bioenergy* field :

- Laboratory for Biofuel Quality Certification, CABIO, accredited by the Romanian Accreditation Association
- Technology and small capacity pilot installation to obtain biodiesel from raw and used vegetable oils using a transesterification process
- Pilot installation to obtain bioethanol from sugar beet
- Technology for chemical and enzymatic hydrolysis of lignocellulosic materials for second generation biofuels obtaining
- Technology based on enzymatic transesterification process in order to obtain 2nd generation biofuels
- National strategy for biofuels and their implementation on large scale on Romanian market and national plan BIOMASS
- Technology and plug-flow and up-flow installations and to obtain biogas from biogenic wastes
- National campaign regarding biofuels implementation on large scale
- Inception of Technological Platform for Biofuels in Romania, BIOCARO
- Member of the European Renewable Energy Research Centers Agency , EUREC
- Admission in the European Biofuels Technology Platform



National research institute,
with state capital,
accredited for research:

- **Bioenergy and biomass**
- **Environment and health**
- **Analytical instrumentation**



Centre for Research and Technology Hellas / Institute for Solid Fuels Technology & Applications CERTH/ISFTA



- Established in 1987,
- non profit organization
- working in Ptolemais city,
- region Dytiki Makedonia,
- Greece

- The institute is the main Greek organization for the promotion of research and technological development, aiming at the improved and integrated exploitation of solid fuels and their by-products
- CERTH/ISFTA develops a number of activities aiming to enhance the exploitation of the indigenous solid fuel supplies, such as lignite and solid biomass.
- It has experience in consultancy services for companies, especially in the energy field and plays a linking role between research and business entities.



Waste Management of Western Macedonia S.A. DIADYMA S.A.



- ❑ Public equivalent institution, founded in 1996 by the municipalities of Western Macedonia, Greece.
- ❑ DIADYMA`s major task is planning, implementing and operating the Integrated Waste Management System (IWMS) of the Region of Western Macedonia.
- ❑ The company has been developing know-how in fields such as collection and transferring systems, recycling and mixed solid waste, processing and treatment, paying attention to minimizing the environmental impact.
- ❑ Cooperation with other technical companies and authorities in Greece and abroad improved the company`s experience and know-how, resulting into the undertaking of projects such as the Integrated Waste Management System of Eastern Macedonia & Thrace, Waste Management of Athens Olympics etc., as well as, various INTERREG projects, ranging in themes from landfill redevelopment to recycling.

- The company is involved in numerous regional development projects in Saxony and other parts of Germany, aiming the implementation of regional bioenergy supply chains covering the whole value chain from crop growing to final conversion into electrical power and/or heat or mobility;
- DBFZ`s innovation coordinator is responsible for the creation of the bioenergy cluster team of the Leipzig cluster initiative recently born - Energiemetropole Leipzig;
- The institution has the capacity to involve other cluster initiatives in Saxony and to deliver cluster management knowledge and best practices.

German Biomass
Research Centre
DBFZ

- Non profit research organization
- residence in Leipzig,
 - Sachsen region,
 - Germany

Open Entry for renewable energy stakeholders

- **Companies:**
 - energy producers, energy suppliers, energy distributors,
 - energy related services
 - producers of equipments, spare parts, retailers, distributors
- **Researchers:**
 - Universities
 - Research centers
 - Centers of excellence
- **Public authorities:**
 - Energy related authorities
 - Town halls
- **Intermediate/ Facilitators:**
 - Consultancy companies
 - Financial institutions
 - Centers of technology Transfer
 - Chamber of Commerce
 - etc

Thank you for your attention !

***Trans-national Renewable Energy Cluster ,
SMART+ Sub-project***

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