



**Good Practices on Regional Research and
Innovation Strategies for Smart Specialisation**
Lublin Eco Energy Cluster

Lubelskie Region, Poland

December 2012

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1 Basic Data of the Practice

1.1 Title of the practice

Lublin Eco Energy Cluster

The Lublin Eco Energy Cluster backs up activities related to the use of renewable energy sources based on the potential of the Lubelskie Region through elaborating and launching innovation projects, supporting the stakeholders with the counselling services, exchanging experiences and knowledge, creating new partnerships.

1.2 Precise theme/issue/policy tackled by the practice

- Clusters
- Innovation friendly business environments for SMEs
- Research infrastructures, centers of competence and science parks
- Universities
- Digital Agenda for Europe
- Key enabling technologies
- Cultural and creative industries
- Internationalisation
- Financial engineering instruments
- Innovative public procurement
- Green growth
- Social innovation

Process of regional change initiated:

- transition
- modernisation
- diversification
- radical foundation of a new domain

1.3 Geographical range of the practice

Lubelskie Region (NUTS code PL31)
Poland

1.4 Contact details

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1.5 Sources of information

<http://fundacja.lublin.pl/index.php/en/lublineco-energycluster>

2 Introduction: Regional Smart Specialisation Background

The location on the eastern EU border with Ukraine and Belarus is one of the assets of the Lubelskie Region - a place friendly to investors, willing to act in the neighbourhood of eastern markets. There are 6 transcontinental road and railway routes from Brussels, Berlin and Warsaw to Lviv, Odessa, Kiev, Minsk and Moscow running through our region and six border-crossing points.

With four universities, a technical university and a few private higher education schools, Lublin is one of the biggest academic centres in the country - every fourth citizen is a student. It is worth mentioning that the offers of the Lublin universities encourage thousands of young people from the Ukraine, Belarus, Kazakhstan and the Commonwealth of Independent States.

Numerous state research institutes and research and development centres operate next to the universities, among others the Agrophysics Institute of Polish Academy of Sciences and the National Fodder Laboratory of Zootechnics Institute in Lublin and the prestigious centres in Puławy: the Institute of Soil Science and Plant Cultivation, the National Veterinary Research Institute, the Fertilizers Research Institute, the Apiculture Division of the Research Institute of Pomology and Floriculture, the Biological Threats Identification and Countermeasure Centre of the Military Institute of Hygiene and Epidemiology, the Experimental Plant of the Research Institute of Basic Technology Problems (State Academy of Sciences). Thanks to a strong scientific background the most promising for the region is the sector of new technologies.

Important industry roles are played by the following sectors: construction - based on local deposits of limestone, chalk, marl and sand, timber and furniture sector using forest stands of state forests, mining - with mining sector of hard coal, and machinery sector- with production of helicopters, tractors, agriculture and construction machines.

The economy of the region is based on agriculture - the Lubelskie Region with its good soil and climate conditions is a national leader of numerous agriculture and horticulture cultivations, among others hop, raspberries, currants and strawberries. In recent years there has been a dynamic development of production and processing of healthy, certified food. Cultivation of energetic plants is also becoming more and more popular. In the Lubelskie Region, there are suitable natural conditions for the production of bio-petrol and the development of eco-energy based on bio-mass. There are large areas of arable land and grassland in the region, belonging to the IV, V and VI soil quality class. Therefore, the region has large reserves of land that could be used for energetic crops.

To sum up, the Lubelskie Region has rich renewable energy sources, especially with great possibilities of producing and using biomass. It is strongly recommended to use plants from purposeful cultivations (for example: maize, rape) and from post processing waste in order to obtain biomass for thermal and electric energy production. The key national strategic document "Polish Energy Policy until 2030" suggests situating an anaerobic digester in every commune until 2020. The newest experiences and analyses in this field show that in the Lubelskie region, there is a great potential to develop anaerobic digesters based on organic waste from agriculture production and from agro-food processing.

3 Description of the Practice

3.1 Executive summary

The Lublin Eco Energy Cluster was founded on the initiative of the Foundation for Lubelskie Development (FLD) under the project “Lubelskie cooperation network for entrepreneurship and innovation development” which was co-financed by the European Union and the national budget. 16 partners signed the letter of intent on 30 May 2008.

The Foundation for Lubelskie Development has a great experience concerning implementation of projects. The main activities of the Foundation encompass providing commercial services for entrepreneurs, local authorities, labor market institutions, and also for research and science units from the Lubelskie region. This cooperation concerns preparing application forms, local development strategies, feasibility studies, business plans, as well as elaborating outlines for warmth, electric energy, and gas fuel providing plans.

For many years the Foundation for Lubelskie Development has undertaken activities aiming to promote the idea of the use of renewable energy source potential for the development of local economy, as well as for the improvement of energy efficiency.

Hence, on 31 March 2011 Partners Founders signed the partnership agreement on the establishment of the Lublin Eco Energy Cluster.

The mission of the cluster is to support all possible activities related to sustainable use of renewable energy sources based on the potential of the Lubelskie Region through elaborating and implementing technological, manufacturing and processing innovations, and to promote renewable energy source in the region.

The partners are convinced that their cooperation under the Lublin Eco Energy Cluster will contribute to the development of the modern technologies of energy production, to building the system of supply and distribution of energy, and also to undertaking research and implementing new technological solutions in the field of energy production from renewable sources.

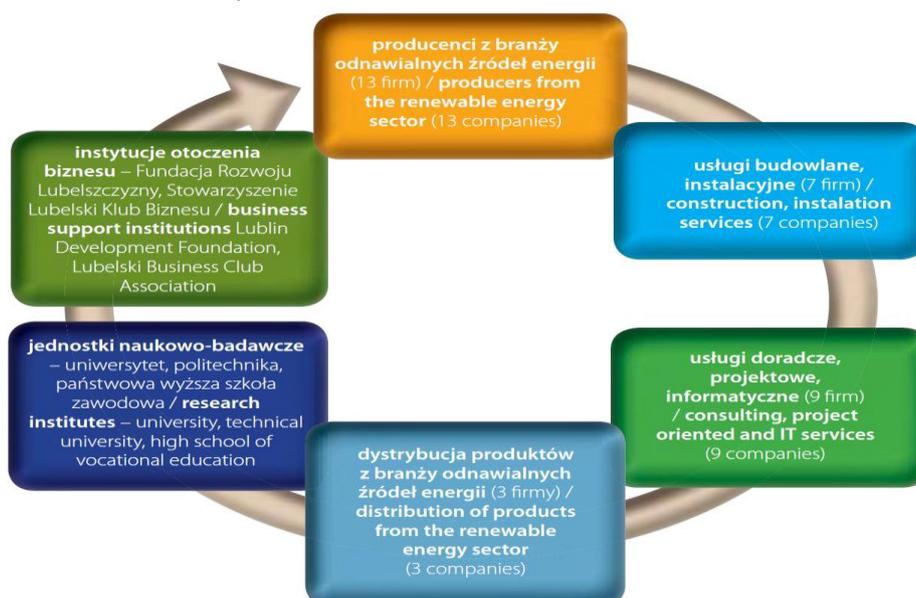
3.2 Key features of the practice

- Boosting the use of biomass potential including development of energetic plants cultivation for energy needs in the Lubelskie Region considering sustainable development;
- Boosting development of new technologies and analytical and research backup in the region for the development of renewable energy production;
- Promoting new technologies and appliances for electric and heat energy production using renewable energy sources;
- Promoting elaboration of prototypes, demonstrative installations and practical demonstrations in the field of renewable energy sources;
- Initiating and development of international cooperation in the field of biomass use behind eastern border;
- Undertaking activities to ensure energetic security for Lubelskie communes basing on local energy sources, especially on renewable energy sources.

3.3 Detailed content of the practice

The Lublin Eco Energy Cluster was created on the initiative of the Foundation for Lubelskie Development. The cluster brings together 39 entities, including: entrepreneurs, research institutes, institutes of higher education and business support institutions from the Lubelskie, Mazowieckie, Świętokrzyskie, and Wielkopolskie Region. The mission of the cluster is: “to support any activity related to sustainable use of renewable energy sources hinged on the potential of the Lubelskie Region by developing and deploying technological, manufacturing and processing innovations and by promoting renewable energy sources in the region”. The most important goals implemented by include: construction of a local model of production and supply of biomass with the preservation of a balanced development of the Lubelskie Region, stimulating development of new technologies and research and analytical back office, as well as supporting and preparing prototypes, demonstrative installations and practical implementations in the renewable energy sector.

Value chain and cluster competencies:



Source: Catalogue “Polish clusters and cluster policy”

Cluster activities

The activity of the Lublin Eco Energy Cluster focuses on, first of all, coordinating actions related to supporting members of the cluster. Moreover, the cluster signed a cooperation agreement with:

- Opolskie Center for Economy Development in October 2009. In cooperation with the Center, a study tour regarding renewable energy sources was organised to Lubuskie Region and the Brandenburg bundesland in Germany;
- Science and Technology Park „Euro-Center” Ltd, which runs the Euro-Center Cluster of Renewable Energy – exchange of experience and knowledge on exploitation of innovative energy saving building and implementation of the concept of passive office building;
- Institute of Agro-energy Ltd – in March 2011 a letter of intent was signed regarding the development of cooperation between the Lublin Eco Energy Cluster and the Mazowieckie Energy Association;
- Warmińsko-Mazurski Cluster TOGETHER WARMER (RAZEM CIEPLEJ) – in March 2011, cooperation aiming to create cooperative links, increase competitiveness and improve effectiveness of entities from both clusters was initiated. The partners undertake joint efforts to create and implement innovative technical, technological and organizational solutions regarding renewable energy sources and energy efficiency.

Moreover, the cluster members actively participate in the meetings of the Consulting and Advisory Group for Renewable Energy at the Board of the Lubelskie Region. They put forward demands, give opinions and suggestions regarding the renewable energy policy.

The cluster cooperates with the Marshall Office of the Lubelskie Region in relation to the implementation of the FRESH Project Forwarding Regional Environmental Sustainable Hierarchies. The project is implemented by the consortium of 12 institutions from 6 EU countries: Finland, Romania, Great Britain, Ireland, Italy and Poland. The aim of the project is to enhance the effectiveness of development policy of partner regions by exchanging best practices on creating and implementing operational programs, regional innovation development strategy. The emphasis is placed on eco-innovation which should be included in the updated Regional Innovation Strategy. The activities of the project include analysis and comparison of best practices regarding eco innovation policy and eco construction.

Since 2008 the Lublin Eco Energy Cluster has been the partner of the Lubelskie Energy Fair ENERGETICS, taking place every year in November. This is the flagship fair event in Eastern Poland, bringing together the energy and construction sector; held in Lublin - the capital of the region. The objective is to promote environmental-friendly innovations and new technologies related to the use of renewable energy sources and the improvement of energy efficiency among, e.g. entrepreneurs, local governments, individual consumers, and students.

Thematic scope of the event:

1. Electricity and electrotechnology

- production of electricity and heat, including biomass technology, solar, wind, hydro and geothermal energy
- lighting equipment, including manufactured in LED technology

2. Alternative and renewable power industry

- energy-saving systems

- improving energy efficiency in buildings
- the use of heat pumps, solar collectors, photovoltaic panels, wind turbines to produce heat and electricity

Exemplary initiatives in which the cluster participated:

- the project “Increasing the competitiveness of the Sokal Region using the potential of renewable energy sources - transfer of experiences from the Lubelskie Region” – implemented by the county government in Łuków (in Lubelskie Region) in cooperation with the Sokal District Administration (Ukraine) and the Foundation for Lubelskie Development. The project was prepared by the Foundation for Lubelskie Development and was co-financed as part of the Polish foreign aid programme of the Ministry of Foreign Affairs of the Republic of Poland in 2009. Also other partners of the Cluster were engaged in the project. The aim of the project was to improve living standards in the Sokal Region by increasing competitiveness of the region using the potential of renewable sources of energy
- the project “Energetic creators of changes” implemented under the Human Capital Programme. The aim of the project was to prepare local partners to create partnerships which would receive help in elaboration of the strategy of economic change management in terms of renewable energy sources. The project was addressed to the representatives of non-governmental organisations and local units of government from the Lubelskie Region
- the project “New field of vision of Lubelskie Region”. The aim of the project was to train up participants from Lubelskie Region to install installations of solar panels, biomass boilers, heat pumps.
- the conference “Renewable energy sources as a chance for the development of Lubelszczyzna – the development of agricultural biogas plants”, which took place on 5–6 November 2009 in Nałęczów, organized by the Marshal Office of the Lubelskie Region with the cooperation of LEC.

Exemplary current projects:

- The project “Schools of new opportunities – modernization of education”. The project is implemented in partnership with the Group of Schools from Łuków. The aim of the project is to implement in schools of this Group new curriculums taking into account the introduction of a new specialisation in technical college (technician for appliances and systems of renewable energy production) and a class specialisation in the field of service and installation of appliances for renewable energy production)
- The project “Elaboration of the development strategy of the Foundation for Lubelskie Development as a business support and transfer of knowledge institution”. One of the outputs of the projects is the website www.ekoenergia.fundacja.lublin.pl which is dedicated to the aspects of renewable energy sources. The website is addressed to the entrepreneurs from the Lubelskie Region which are interested in gaining knowledge in the field of renewable energy sources and in establishing partnerships with potential partners in renewable energy sector.

The members of the Lublin Eco Energy Cluster actively organize and participate in study visits. The aim of the study visits is to promote Polish and foreign good practices of local government units which have chosen the track of fast development based on use of renewable energy sources and improvement of energy efficiency.

The members of the Lublin Eco Energy Cluster promote their offer on the cluster website – www.fundacja.lublin.pl (The Lublin Eco Energy Cluster bookmark). The questions regarding the possibility of taking up cooperation are transferred through the coordinator to the members of the cluster and analysed jointly. The partners also exchange market information and work on joint initiatives among others during meetings organised by the Lublin Eco Energy Cluster.

3.4 Bodies and stakeholders involved

The Lublin Eco Energy Cluster brings together 39 units, including 34 entrepreneurs, science and research units, academies, business support institutions.

The Cluster Partners cooperate in the field of energy production (solar, wind, water and geothermal energy) and in the field of production and use of biomass. Among partners there are producers of machines and appliances (briquetting machines, granulators, grinders, equipment for production of briquettes and pellets, biomass boilers, solar collectors), as well as producers of pellets and briquettes. There are also designers and constructors of wind farms, photovoltaic farms, small hydroelectric power stations, etc.). Another group consists of entities dealing with waste economy, IT solutions for renewable energy branch, higher education and researches, as well as energy efficiency and energy saving construction.

The Foundation for Lubelskie Development is the Lublin Eco Energy Cluster coordinator.

3.5 Timescale and maturity

The Lublin Eco Energy Cluster was founded on the initiative of the Foundation for Lubelskie Development under the project "Lubelskie cooperation network for entrepreneurship and innovation development" which was co-financed by the European Union and the national budget. 16 partners signed the letter of intent on 30 May 2008.

On 31 March 2011 Partners Founders signed the partnership agreement on the establishment of the Lublin Eco Energy Cluster.

On 28 April 2011 the Cluster Council was founded which is the highest organ of the Cluster.

3.6 Legal framework

The coordinator of the Lublin Eco Energy Cluster is the Foundation for Lubelskie Development, the main goals of the Foundation as a coordinator are to initiate and support the use of renewable energy resources potential and to take actions to improve energy efficiency in Lubelskie Region.

3.7 Financial framework

Since the partners founders signed the partnership agreement, the members of the Cluster pay an yearly fee. The Cluster animator is employed by the Foundation for Lubelskie Development.

4 Monitoring and Evaluation

The activities of the Lublin Eco Energy Cluster are monitored on a half yearly basis in terms of the reports.

These reports contain information on:

- Cooperation initiatives and experiences exchange in the field of the cooperation development under the clusters
- Projects related to the Cluster activities
- Promotion activities
- Counselling services

The employment in units associated in the Cluster amounts to 2 911 people.

The employment in research and development in the Cluster amounts to 233 people.

In the course of 2 last years, units associated in the Cluster have implemented 50 legally protected innovations.

The cluster entrepreneurs export their products to Russia, Holland, Czech Republic, Germany, Finland, Slovakia, Great Britain, France, Belorussia and Ukraine.

5 Lessons Learnt

The Lublin Eco Energy Cluster implements successfully projects involving stakeholders interested in renewable energy sources from the whole Lubelskie Region. It brings together not only companies but also other institutions aiming to carrying out researches, promoting and popularising the use of renewable energy sources.

The vast offer, experience and counselling services are the key factors contributing to the successful development of the cluster.