Structural Funds for Sustainable Energy

Learn about 10 successful Sustainable Energy Projects co-financed through Structural Funds

SF
ENERGY INVEST

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Structural and Cohesion Funds for Sustainable Energy Investments

SF Energy Invest is a European project supported by "Intelligent Energy" that aims to trigger investments in sustainable energy by using the Structural and Cohesion Funds (SF) of the European Union.

This brochure presents good practice examples of sustainable energy projects, implemented with the help of European Structural and Funds in ten different regions and cities in Bulgaria, Czech Republic, Estonia, France, Germany, Hungary, Portugal, Romania, Slovakia and United Kingdom.

Sustainable energy and its numerous benefits for the people, economy and environment

Among the most important elements of sustainable energy are renewable energy, energy efficiency and sustainable transport.

Sustainable energy projects have proven positive social and environmental benefits for the regions and cities of Europe. Developing these alternatives are the most promising effort we can make to mitigate man-made climate change and reduce hazardous pollution, enhance local and regional energy independence, stimulate world-class high-tech industries and create thousands of new jobs. By the end of 2009, the renewable energy sector secured more than 10% of Europe's final energy consumption, provided one-quarter of the EU's bindings 20% greenhouse gas reduction target and over 550,000 high quality jobs.

Job creation

Sustainable energy projects stimulate the development of local businesses and create additional jobs in manufacturing, construction, operation and maintenance. Renewable energy technologies create employment at much higher rates than any other energy technology. EREC, the European Renewable Energy Council, believes that by 2020 renewable energy could offer jobs to 3 million citizens in Europe and provide a leading market with a turnover of several hundred billion Euros.
The move towards decentralized energy provision, the sustainable use of local resources for electricity production raises the image of the local community at the regional level, increasing the region's profile and potential for future investments in sustainable energy.

Cost savings

Through energy efficiency measures, energy demand declines and significant cost savings are achieved. Fuel costs decrease through renewable energies and sustainable transport, which in turn results in the reduction of the overall energy cost for the community.

CO_2 emissions reduction

The European Council established a CO_2 emission reduction goal of 20% by 2020 and a long-term goal with a target of 80 to 95% reduction by 2050 against 1990 emissions. Sustainable energy development in Europe will reduce annual energy related CO_2 emissions contributing with EU Climate Change goals.

"Creation of jobs, improvement of the trade balance, empowering local communities, the fight against climate change, this is really a strategy where no one can lose, but everyone wins"
(Jean-Louis Bal, Director of renewable energy and primary material - ADEME)

Structural and Cohesion Funds – a great opportunity to make sustainable energy happen!

The EU regional policy was designed to promote a coherent development of the entire community reducing disparities between the development levels of the various regions.

The three main objectives of the EU regional policies are:

- Convergence: diminishing the economic and social disparities among the 268 regions of the EU Member States by helping the lagging regions to catch up in their development. It mainly concerns New Member States.

- Regional Competitiveness & Employment: promoting more and better jobs in EU27.

- European Territorial Cooperation: stimulating cross-border cooperation.

More than a third of the budget of the European Union, about 350 billion euro, goes to the **European Structural & Cohesion Funds (SF).** More than a third of the budget of the European Union, €347 bn, goes to the European Structural and Cohesion Funds (SF). More than half of the SF budget is allocated to the 12 New Member States. In the ongoing period 2007 - 2013 an overall amount of €9 bn is accounted for sustainable energy projects. This low amount should be increase in the following years in order to achieve the Europe 2020 goals- reduce greenhouse gas emissions by 20% against 1990 emissions, increase the share of renewable energy to 20% and a 20% improvement in energy efficiency.

EU regional policy is financed by the European Structural and Cohesion Funds(SF), which can be used under some or all of the EU regional policy objectives.

The SF instrument has three main funds:

- European Regional Development Fund (ERDF)
- European Social Fund (ESF)
- Cohesion Fund (CF)

Structural Funds are made up of the European Regional Development Fund (ERDF) and the European Social Fund (ESF). They aim to reduce regional disparities in terms of income, wealth and opportunities.

The ERDF finances investments in companies (in particular SMEs) to create sustainable jobs. Also, it finances investments in local and regional authorities, NGOs, public authorities, and many more, depending on the Operational Programme. ERDF finances infrastructures linked notably to research and innovation in telecom-

Structural and Cohesion Funds for Sustainable Energy Investments

Objectives	Structural Funds and instruments		
Convergence	ERDF	ESF	Cohesion Fund
Regional Competitiveness and Employment	ERDF	ESF	
European Territorial Cooperation	ERDF		

munications, environment, energy and transport.
The ESF supports actions in Member States in the following areas: adapting workers and enterprises, access to employment for job seekers, the unemployed, women and migrants, social integration of disadvantaged people and combating discrimination in the job market and strengthening human capital by reforming education systems and setting up a network of teaching establishments.

The Cohesion Fund was created as a new fund to channel financial assistance to the least prosperous Member States. The Cohesion Fund apply to Member States with a Gross National Income (GNI) of less than 90% of the EU average. It serves to reduce their economic and social shortfall, as well as to stabilize their economy.

For the 2007-2013 period the Cohesion Fund concerns Bulgaria, Cyprus, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia and Slovenia. Spain is eligible to a phase-out fund only as its GNI per inhabitant is less than the average of the EU-15.

How does SF work?

At EU level, SF are centrally managed by the European Commission (DG Regio). The EC negotiates and approves the National Strategic Reference Framework (NSRF) proposed by the Member States, and allocates resources.

Each Member State prepares Operational Programmes (OP) that specify in detail the priorities and available budget for which SF can be used.

For each OP the Member State appoints a Managing Authority which is responsible for managing the SF on the regional or national level.

Investments flowing into sustainable energy are thus of strategic importance for the development of marginalized cities and regions. All sustainable energy projects presented in this brochure have success strategies in common: use of innovative technologies, financing secured with the help of Structural Funds and sustainable benefits for the local population.

List of sustainable energy projects

It feels good now to be at school!
Dobrich, Bulgaria

Effective educational infrastructure

Dobrich with **90,000** inhabitants is a town in Northeastern Bulgaria.

The municipality of Dobrich is one of the energy management champions in Bulgaria. Among its main achievements is the improvement of energy efficiency in the public building sector. Renovation of schools and kindergardens does not only ensure effective educational infrastructure and equal access to quality education, but contributes to the achievement of the local Covenant of Mayors CO_2 emission reduction objective, **25% by the year 2020.** The project was implemented in a total duration of **21 months** through the Operational Programme "Regional Development 2007-2013" with **84% of the total investment costs** financed through the European Structural and Cohesion Funds.

Improvements

The following improvements have been carried out in seven municipal buildings - five schools and two kindergardens: energy audits, replacement of windows, installation of insulation, roof repairs, renovation of surrounding areas and reconstruction of public areas. Furthermore, cooperation with energy services companies (ESCOs) has been established to leverage on private partners investments for future projects.

Project coordination: Municipality of Dobrich

More information:
EU Funds in Bulgaria (http://eufunds.bg)
Find EU Regional Policy in Bulgaria (http://ec.europa.eu/regional_policy)
Municipality of Dobrich (http://dobrich.bg)
Find the Managing Authorities in Bulgaria
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

Energy Efficiency Project in Dobrich
Source: Municipality of Dobrich

Dobrich
90,000 inhabitants

TOTAL INVESTMENT
€ 2.65 million

MUNICIPALITY OF DOBRICH
€ 57,314 = 2%

NATIONAL CO-FINANCING GRANT
€ 367,235 = 14%

€ 2.23 million = 84 % OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS (EUROPEAN REGIONAL DEVELPMENT FUND - ERDF)

KEY BENEFITS

ANNUAL ENERGY COST SAVINGS: € 134,679

ANNUAL CO_2 EMISSION REDUCTION: 1180 t

HIGH QUALITY EDUCATION

Detelina Nikolova
Mayor of Dobrich Municipality
"Through the implementation of such successful projects Dobrich municipality demonstrates that we are highly motivated and strive to be a sustainable model of the evolving European community with low energy consumption, reduced CO_2 emissions and better protection of the natural environment."

The Czech Structural Funds Champion
Brno, Czech Republic

Energy consumption reduction of buildings

Brno with **405,000 inhabitants** is the second largest city in the Czech Republic.

The municipality of Brno has become a champion in co-financing its strategic municipal projects with the help of Structural Funds. From **July 2008 until November 2009** a project in the school "Kaminky" in Brno-Nový Lískovec was developed co-financed by the Operational Programme "Environment".

The elementary school "Kaminky" in Brno-Nový Lískovec was completely refurbished with the objective to reduce energy bills and provide higher comfort for building users.

Improvements

A number of measures have been implemented to reduce energy consumption and increase energy efficiency of the building, such as energy audits, wall and roof insulations, replacement of windows, refurbishment of pipes for heating and hot water distribution, new façades and indoor lighting. After the refurbishment, the energy and water consumption was drastically reduced **by 56%** for heating and hot water preparation, **50%** for electricity and **64.3%** for water.

Project coordination:
Municipality of Brno

More information:
Project (http://novy-liskovec.cz)
Operational Programme
(http://en.opzp.cz/sekce/506/about-operational-programme-environment/)
Municipality of Brno (http://brno.cz/)
Find the Managing Authorities in Czech Republic
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

City of Brno & "Kaminky" School
Source: Wikimedia Commons, City of Brno, Energy Cities

Brno
405,000 inhabitants

TOTAL INVESTMENT
€ 1.61 million

MUNICIPALITY OF BRNO
€ 484,171= 30%

STATE ENVIRONMENTAL FUND OF THE CZECH REPUBLIC
€ 64,556 = 4%

€ 1.06 million = 66% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS
(EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

ELECTRICITY BILL COST REDUCTION: 50%

WATER AND ENERGY CONSUMPTION REDUCTION: 56%

HIGH COMFORT FOR STUDENTS

Jana Drápalová
Mayor of Brno-Nový Lískovec
"After the adhesion of the Czech Republic to the European Union in 2004, the city of Brno seized the opportunity to co-finance its strategic urban development projects from the Structural Funds. We created a special department with a mission to develop high quality project proposals and submit them to relevant Operational Programmes. Since then, more than 70 projects have been co-financed from the Structural Funds."

City of Arts and Culture - a low energy jewel on the riverside Besançon, France

Low energy cultural centre

Besançon with **117,599 inhabitants** is the capital city of the Franche-Comté region in Eastern France.

The city of Besançon is also a signatory of the Covenant of Mayors – a voluntary commitment of local and regional authorities to reduce their CO_2 emissions by at least **20% by 2020.** This action is an integral part of the city's Sustainable Energy Action Plan.

The project "City of Arts and Culture" has been developed within the Regional Operational Programme "Franche-Comté", Priority: "Regional Competitiveness and Employment".

The new "City of Arts and Culture" is implemented from **2006 to 2012** respecting low energy standards and integrating renewable energy technologies. Designed by the Japanese architect Kengo Kuma, this cultural centre is to host the music, dance, theatre Conservatory of Grand Besançon and the Regional Fund for Contemporary Art. It aims to facilitate access to arts and culture for artists and citizens, to support the creativity and research in this field and to go beyond common energy and environmental standards. The project was initiated by the Urban Community of Grand Besançon, the Regional Council of Franche-Comté and the City of Besançon in cooperation with its departmental and national partners.

The centre will be the first low energy cultural centre of this size in France certified with the widely recognised performance labels – "Effinergie" and "High Environmental Quality". It integrates the energy efficiency and renewable energy technologies such as insulation, photovoltaic panels, heat pump, natural ventilation and lighting. Natural materials were selected taking into account their whole life cycle and impact on environment, air quality and user´s health.

Project coordination:

Urban Community of Grand Besançon, the Regional Council of Franche-Comté and the City of Besançon, in cooperation with its departmental and national partners

More information:

Project (http://citedesartsetdelaculture.fr)

Operational Programme (http://europe-franche-comte.fr/feder.php)

Find the EU Regional Policy in France (http://ec.europa.eu/regional_policy/)

Find the Managing Authorities in France (http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

City of Arts and culture
Source: Ville de Besançon

TOTAL INVESTMENT
€ 46.40 million

URBAN COMUNITY OF GRAND BESANCON, REGIONAL COUNCIL OF FRANCHÉ-COMTE AND CITY OF BESANCON
€ 35.26 million = 76%

DEPARTAMENTAL AND NATIONAL FUNDING AND SUBSIDIES
€ 8.35 million = 18%

€ 2.78 million = 6% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS (EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

HIGH QUALITY ACCESS TO ART AND CULTURE

BUILDING COMFORT FOR ARTIST AND VISITORS

CERTIFIED BY ENERGY PERFORMANCE LABELS

Jean-Louis Fousseret
President of Grand Besançon, Mayor of Besançon
Marie-Guite Dufay
President of the Regional Council of Franche-Comté
"With our partners, we set up very strict energy and environmental quality criteria from the very first phase of the project, conception of the public tender".

A GENIUS from Transylvania
Brasov, Romania

Sustainable Energy University

Brasov is located in the central part of Romania. It has **286,000 inhabitants** and is a signatory of the Covenant of Mayors. This action is an integral part of the city's Sustainable Energy Action Plan.

The Green Energy Independent University Campus Project (GENIUS) started in 2009 with the financial support of the Operational Programme "Increase of Economic Competitiveness" and shall be finalised **by 2012**.

Innovation, sustainability and education

GENIUS will comprise an area of **30ha** of university buildings and student facilities - library, IT room, swimming pool, gym, mini foot-ball and tennis court. All buildings are being constructed in low energy standard and will integrate a mix of optimised sustainable energy measures and renewable energy technologies, along with smart grid solutions. This is a "live laboratory" for students and researchers focused on R&D and innovation in the field of sustainable energy. The site has been conceived by the researchers and students from the Civil Engineering Faculty of the University of Transylvania with the aim to become a national and European leader in the field of sustainable energy research and high-tech products development and innovation.

Reduction and control of energy consumption

The most interesting aspects of the project are the integrated management of energy production & consumption, including renewable energy systems and outdoor testing facilities focusing on PV, solar-thermal systems, heating pumps, small wind turbines and low energy buildings.

Low energy bills will have a positive impact on the university's budget and reduce the fees for student accommodation. The campus will offer high-level quality education, opportunity for "learning by doing" and socialising within a highly innovative and inspirational environment.

Project developers and coordination:

Transylvania University of Brasov, National Research Agency, Ministry of Education, Research, Youth and Sport and the Romanian Regional Development Agency

More information:

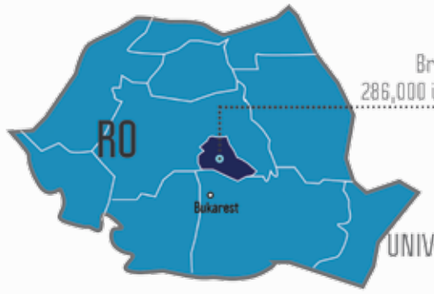
Project (http://unitbv.ro/institut_prodd)

Operational Programme
(http://eifn.ipacv.ro/include/documentations_files/POS%20MEC.pdf)

Find EU Regional Policy in Romania
(http://ec.europa.eu/regional_policy/)

Find the Managing Authorities in Romania
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

The Green Energy Independent University Campus Project
Source: University of Transylvania



TOTAL INVESTMENT
€ 24.92 million

UNIVERSITY OF TRANSYLVANIA
€ 6.48 million = **26%**

NATIONAL SUBSIDES
€ 8.22 million = **33%**

€ 10.22 million = 41% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS (EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

HEAT LOSSES REDUCTION

HIGH QUALITY EDUCATION

LOW ENERGY BILLS

Prof. Ion Visa
Rector of the Transylvania University of Brasov

"The project contributes to the National Strategy for Sustainable Development. It is a response on strategic priorities for scientific research in the field of sustainable energy at national and European level. It would not see the light without a strong partnership among the key partners - Transylvania University of Brasov, National Research Agency, Ministry of Education, Research, Youth and Sport and the Romanian Regional Development Agency."

London - a world leading low carbon capital by 2025
London, United Kingdom

Sustainable urban regeneration through the JESSICA London Green Fund

London with **7.8 million inhabitants** is the capital city of England and the United Kingdom.

The city of London is a signatory of the Covenant of Mayors. This action is an integral part of the city's Sustainable Energy Action Plan.

The project is being implemented thanks to the Operational Programme "London" and technical assistance JEESICA (Joint European Support for Sustainable Investment in City Areas) between **2009 and 2015.**

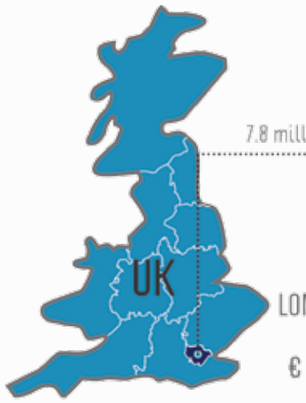
The London Green Fund worth **€ 114 million** was launched in October **2009** by the Mayor of London and the EU Commissioner for Regional Policy. It is the first JESSICA Holding fund in the UK managed by the European Investment Bank. It provides funding for two "revolving" Urban Development Funds which will mobilise further public and private funding for investments in waste and energy efficiency projects. The money invested in these projects in the form of equity and loans will be repaid and will serve as initial capital for further projects.

London intends to give a massive boost to its low carbon economy, support regeneration of deprived areas, create local green jobs and achieve its target of reducing its CO_2 emissions **by 60%** becoming a world leading low carbon capital **by 2025.**
The city will become a forerunner in finding new ways to exploit the cash value of waste. Low carbon waste and recycling infrastructure will be built giving priority to generation of green energy with technologies like anaerobic digestion and gasification, as opposed to incineration. Public buildings and social housing will be retrofitted using a combination of proven energy efficiency measures and local small-scale renewable energy systems.

Project coordinator:
City of London

More information:
Project
(http://lda.gov.uk/our-work/european-funds/ERDF/jessica/index.aspx)
Find EU Regional Policy in UK (http://ec.europa.eu/regional_policy/)
Find the Managing Authorities in UK
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

Boris Johnson with Rob Dobson London Fire commissioner, City of London
Source: London Development Agency and Wikimedia Commons



London
7.8 million inhabitants

TOTAL INVESTMENT
€ 114 million

LONDON DEVELOPMENT AGENCY
€ 36 million = 32%

LONDON WASTE AND RECYCLING BOARD
€ 21 million = 18%

€ 57 million = 50% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS (EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

CREATION OF AT LEAST 100 LOW CARBON JOBS IN WASTE INFRASTRUCTURE

CO_2 EMISSIONS REDUCTION: 28,000 t

LOW CARBON CITY

Boris Johnson
Mayor of London
"A century ago London was cashing in on carbon, but I am determined we now harness the wealth of investment opportunities coming from the shift away from the use of increasingly costly fossil fuels. The reward is not only better environmental stewardship and cash savings, but the injection of billions of pounds into the city's economy and tens of thousands of high quality jobs. In addition, the move towards energy efficient transport, homes and workplaces will deliver a better quality of life."

Small Island, Big vision
Liiva village, Estonia

Energy autonomy of Muhu island - boosted by district heating and biomass

Muhu island with **1,904 inhabitants** is located in the Western part of Estonia. The administrative center is located in Liiva village with **203 inhabitants**.

The aim of Liiva village was to improve efficiency of heat production and distribution. The municipality modernised the district heating system, including boilers, distribution pipelines and accomplished the transition towards locally produced biomass fuels replacing previously used sod peat and oil.

First studies for reconstruction of the district heating system were undertaken in 1993. The present project spanned over **3 years (2008-2010)**. The project was developed through the Operational Programme "Development of Living Environment" and **13%** of the total investment cost was financed through the European Structural and Cohesion Fund.

A new **750 kW** wood chip and waste wood fuelled boiler has been installed increasing the local wood chip consumption **by 67 %**. Thanks to a complete reconstruction of the distribution network, heat losses were reduced by at least **17%**.

Organization and cooperation are key factors for success!

The success story in Liiva demonstrates professional management, well-coordinated cooperation between local people and administration, good will, mutual trust and joint interest in economic development.

Plant operator:
Muhu Rural Municipality

More information:
EU funds for Estonia
(http://eufundings.com/regional-policy/estonia.html)
Find EU Regional Policy in Estonia
(http://ec.europa.eu/regional_policy)
Muhu Rural Municipality (http://muhu.ee)
Find the Managing Authorities in Estonia
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)
Project (http://www.bioenergy-in-motion.com/index.php?id=2&sId=52)

Liiva Biomass Heating Plant
Source: Muhu Rural Municipality

TOTAL INVESTMENT
€ 447,382

COMMERCIAL LOAN	MUHU RURAL MUNICIPALITY	OTHER PUBLIC GRANTS
€ 51,130 = 11 %	€ 70,303 = 16%	€ 268,429 = 60%

€ 57,520 = 13% OF THE TOTAL INVESTMENT FROM
THE STRUCTURAL FUNDS
(EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

ANNUAL CO_2 EMISSION REDUCTION: 207 t

HEAT LOSSES REDUCTION: 17 %

INCREASE OF LOCAL WOOD CHIP PRODUCTION: 67%

Raido Liitmäe
Mayor of Muhu Rural Municipality
"Investments into environmental protection and energy saving are investments into sustainable future of Muhu island."

100% Renewable Heat and Power
Feldheim Community, Germany

Wind energy, solar energy, biogas and more

Feldheim community with **145 inhabitants** is located in the city of Treuenbrietzen.
100% renewable electricity and heat supply – that is where the municipality of Feldheim is heading. In order to achieve this ambitious target, the cornerstone was set by developing a pilot project during **5 years** (finished in **April 2010**). The project was developed through the Operational Programme "Brandenburg **2007-2013**" with **36%** of the total investment cost financed through the European Structural Funds.

Renewable energy is now being produced in a new wind park with an installed capacity of **74 MW**, a solar park (PV) with a capacity of **2.25 MW** and a biogas plant with an installed power capacity of **500 kW**. Furthermore, the construction of a district heating network of **3 km** will optimise energy consumption of the municipality. Local jobs have been created in a local factory producing solar panels.

Renewable energies created new job opportunities, "green jobs", in the community and reduced the prices for energy! The prices for renewable heat and power are **10% to 20%** lower than for conventional providers.

Plant Operator and Project Developer:
Municipality of Treuenbrietzen and Energiequelle GmbH

More information:
Project (http://neue-energien-forum-feldheim.de)
Operational Programme (http://efre.brandenburg.de)
Municipality of Treuenbrietzen (http://treuenbrietzen.de)
Find the Managing Authorities in Germany
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

Feldheim Community Project
Source: Energiequelle GmbH

Treuenbrietzen
8,675 inhabitants

TOTAL INVESTMENT
(HEATING)
€ 1.72 milion

EQUITY	BANK LOAN	DE FUND
€ 138,000 = 8%	€ 757,000 = 44%	€ 207,000 = 12%

€ 621,000 = 36% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS
(EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

SUSTAINABLE COMMUNITY
GREEN JOB CREATION
LOWER ENERGY PRICES: 10 TO 20%

Michael Rascheman
Director of Energiequelle GmbH, Project Developer
"Feldheim demonstrated that a decentralised, renewable, cheap and local energy supply is possible"

Geothermal Energy - Power from the Earth
Mórahalom, Hungary

Local geothermal energy production and 80% reduction of GHG emissions

Mórahalom with **6,100 inhabitants** is a small town situated 21 km Southwest of Szeged, Hungary.

Mórahalom is one of the **50** most disadvantaged settlements of Hungary, but at the same time, in the past **10 years** it has been one of the most dynamically developing regions. The geothermal cascade system was developed during **2008 to 2010** to reduce dependency on natural gas by using a renewable heat source. The project was co-financed by European Structural Funds with **50%** of the total investment costs financed through the Operational Programme "Environment and Energy".

The geothermal cascade system consists of two drilled wells, one outflow well of **1.26 km** deep and one injection well of **0.9 km**. Within the project a new district heating system of **2.85 km** was established to supply public buildings with different heat demands, such as the town hall, library, kindergarden, primary school, community centre and a hotel. By means of combining geothermal heat with district heating, it was possible to replace natural gas by a local, emission-free source leading to reduction of gas consumption by about **482,000 m³** and related GHG emissions by **70-80%** per year. Currently, further developments are foreseen - the geothermal cascade system will be complemented with a heat-pump system that will utilise remaining waste heat. This new project is supported by others European funding programs such as INTERREG for preparation of feasibility study, licenses, and Environmental Impact Assessment.

Plant Operator:
Municipality of Mórahalom

More information:
Find the EU Regional Policy in Hungary
(http://ec.europa.eu/regional_policy)
Municipality of Mórahalom (http://morahalom.hu)
Find the Managing Authorities in Hungary
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

Geothermal Cascade System
Municipality of Mórahalom

Szeged
169,731 inhabitants

TOTAL INVESTMENT
€ 2.05 million

EQUITY
€ 1.02 million = 50%

€ 1.02 million= 50% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS (EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

ANNUAL GAS CONSUMPTION REDUCTION: 482,000 m³

ANNUAL CO_2 EMISSION REDUCTION: 70-80%

STABLE HEAT SUPLY

József Zoltán Pásztor
Mayor's Office of Mórahalom
"With the realisation of the geothermal cascade system in the city of Mórahalom we are able to supply public buildings with heat and hot water. This means a reduction of 1,054 t CO_2 emissions per year as well as less dependency on natural gas."

Good bye dirty coal, hello wood chips!
Senica Town, Slovakia

Locally produced biomass fuels for the reconstructed urban heating plant

Senica town with **21,000 inhabitants** is located in the Trnava Region, Western Slovakia.

The project was developed between September **2009 and April 2010**, co-financed by the Operational Programme "Competitiveness and Economic Growth".

The objective of the project was to renovate an existing old heating plant and to turn it into the largest heating plant for biomass in town, providing heating services for residential buildings. The original two boilers for natural gas were replaced by two boilers designed for wood chips burning with a total capacity of **8 MW.** This project is an example of how renewable energies can reduce dependency on imported gas providing a secure and stable heat supply.

For the local heat supply company "Služby", wood chip based heat production was a mean to maintain heat prices and to remain competitive at the local heat supply market. Služby provides central heating and hot water for **5,600 households** in Senica. The public-private partnership between Služby and the municipality has proven to be very successful. Thanks to this energy efficiency projects, more local people now work in local wood processing companies. This project is a good example for adding local value as money spent on heating services stays in the region rather than with foreign gas suppliers.

Plant operating company:
Služby and Comeron Group

More information:
Find EU Regional Policy in Slovakia
(http://ec.europa.eu/regional_policy/)
Comeron Group (http://comeron.sk)
Find Managing Authorities in Slovakia
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

Biomass Heating Plant
Source: Comeron Group

TOTAL INVESTMENT
€ 2.88 million

COMMERCIAL LOAN
€ 1.73 million = 60%

€ 1.15 million = 40% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS (EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS

STABLE HEAT PRICES

RELIABLE HEAT SUPPLY

GAS DEPENDENCY REDUCTION: 90%

Ing. Jozef Smolka
CEO Comeron Group
"The results of this project are energy savings, slightly cheaper cost of heat supply, energy security and positive environmental effect for the inhabitants of Senica."

Electric Bikes - an engine for the recovery of public areas and local economy
Águeda, Portugal

Bringing the city back to the citizens!

Águeda with **49,456 inhabitants** is located **240 km** North of Lisbon.

Through the Operational Programme "Centro" the city of Agueda was able to successfully realise from **July 2010 to February 2011** the E-Bike Project. Águeda is a signatory of the Covenant of Mayors. This action is an integral part of the city's Sustainable Energy Action Plan.

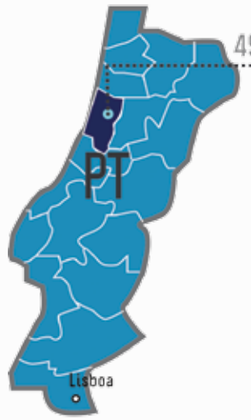
The objective of this project is to create new, more environmentally friendly mobility habits reducing CO_2 emissions and bringing the public areas back to the citizens. The solution was to create a public network of electric bicycles available to citizens.

Bikes have become much more popular, easily overcoming the city's elevation. People enjoy a simple registration system and a payment of only a symbolic fee. The number of vehicles on the streets and corresponding CO_2 emissions have been reduced. New areas were opened for walking and socialising, making the city a great place to live for everyone. Moreover, the initiative provides an incentive for a re-launch, modernisation and innovation of the traditional local bike manufacturing industry. In the past, Águeda used to be called a land of bike factories.

Project coordination:
Municipality of Águeda

More information:
Project (http://cm-agueda.pt/nbike)
Find EU Regional Policy in Portugal
(http://ec.europa.eu/regional_policy/)
Find the Managing Authorities in Portugal
(http://ec.europa.eu/regional_policy/manage/authority/authority_en.cfm)

E-bike Project in Águeda
Source: City of Águeda



TOTAL INVESTMENT
€ 315,685
CITY OF AGUÉDA
€ 59,980 = **19%**
€ 255,705 = 81% OF THE TOTAL INVESTMENT FROM THE STRUCTURAL FUNDS (EUROPEAN REGIONAL DEVELOPMENT FUND - ERDF)

KEY BENEFITS FOR THE COMMUNITY

- MORE ENVIRONMENTALLY FRIENDLY MOBILITY HABITS
- CO_2 EMISSIONS REDUCTION
- NEW PUBLIC AREAS ARE AVAILABLE FOR THE CITIZENS

Gil Nadais Resente da Fonseca
Lord Mayor of Águeda
"Urban mobility projects dealing specifically with bicycle usage should receive more visibility and financial support at national and European level, mainly due to their impacts on health, on the environment, and consequently on the quality of life"

SF Energy Invest

SF Energy Invest stimulates investments on sustainable energy using **Structural and Cohesion Funds** within the final phase of the **programming period 2007 - 2013.**

SF Energy Invest helps to improve the political and practical framework conditions for sustainable energy investments in the **Structural and Cohesion Funds upcoming programming period 2014 - 2020.** To achieve our mission, the project team is active in **12 European countries** to:

- Organize mobilization campaigns to promote Structural and Cohesion Funds for sustainable energy, including Energy Investment Days (EIDs), round tables, panels and study trips.
- Enable project developers to apply for Structural and Cohesion Funds, by producing a project application manual and by preparing 5 pilot projects in 5 pilot regions.
- Promote the success stories of already realized "good practice projects".
- Assess practical framework and financing opportunities for Structural and Cohesion Funds investments by analyzing the Operational Programmes link to Structural and Cohesion Funds & Energy in each of the campaigning regions.
- Define a sustainability assessment matrix link to Structural and Cohesion Funds & Energy for the evaluation of sustainable energy project, using a pool of existing criteria.
- Develop practical policy recommendations for increasing the importance of sustainable energy in the upcoming programming period 2014 - 2020.
- Discuss and disseminate practical policy recommendations amongst decision makers on EU and national level in the scope of a panel discussion and a workshop in Brussels link to Structural and Cohesion Funds & Energy.

Countries involved in the SF Energy Invest Project:

Bulgaria
Czech Republic
Estonia
Germany
Hungary
Poland
Portugal
Romania
Slovakia
United Kingdom

Coordination:

NL Agency, The Netherlands

Project Partners:

Agência Para a Energia (Portuguese Energy Agency) ADENE, Portugal

Austrian Energy Agency (AEA), Austria

Archimedes, Estonia

Berlin Energy Agency (BEA), Germany

Black Sea Energy Research Centre, Bulgaria

CECODHAS Housing Europe

Energy Cities, Europe

ENVIROS, Czech Republic

European Renewable Energy Council (EREC), Europe

WIP – Renewable Energies, Germany

Photo credit of cover page by : Ville de Besançon, Project: City of Arts and Culture - a low energy jewel on the riverside

http://sf-energyinvest.eu