

# URBENERGY

## Newsletter 1



EUROPEAN  
PROGRAMME  
FOR  
SUSTAINABLE  
URBAN  
DEVELOPMENT



## – Editorial –

# The urban contribution to combating climate change

**Ten European cities share the same vision on finding innovative solutions improving energy efficiency and the optimal utilisation of renewable energy sources**

### EU milestones for a green energy policy

As part of the European Union's climate package, the long term strategy of the EU is to accomplish its "20-20-20" goals that are to reduce greenhouse gas emissions, increase the share of **renewable energy** in the final energy consumption and achieve an increase in **energy efficiency**. Better energy efficiency should contribute to improving European competitiveness and will be important for managing external dependence in the context of high energy import prices and a difficult geopolitical environment.

### A crusade led by cities

In contributing to the achievement of these ambitious objectives, urban areas have a major role to play, given their population size and their lion's part in energy production and also the adverse effects thereof. Former Energy Commissioner Andris Piebalgs said the battle against climate change "*will have to be fought and won in the cities*" which consume most of Europe's energy as they account for **69 % of European energy use** and thus most greenhouse gas emissions. Cities can therefore act decisively to combat resource depletion and mitigate climate change by, for example, avoiding energy-intensive transport and promoting energy-saving housing policies, as well as containing urban sprawl. Improving energy policies in urban areas has spill-over effects on other sectors as well. Investing in cleaner, low carbon technologies will help the environment, contribute to fighting climate change and create new business and employment opportunities.

Despite a growing awareness of the contributions that cities can make in paving the way to a sustainable development, in many cases, urban areas still remain in relative **isolation** in the

development of policy at the local level. It is clear that cities exchange information and share best practice to support local sustainability, but joint and concerted action remains more the exception.

### In focus: green buildings for energy efficient residential housing

The question of how to see energy efficiency on a more strategic and integrated planning level is crucial when talking about improving energy efficiency in residential building blocks, the focal point of the URBACT thematic network URBENENERGY. Buildings, both residential and commercial, account for **over 40% of the EU's final energy demand** and are a major source of greenhouse-gas emissions, making energy-savings a key element of the European climate change strategy. This being a major problem in all partner cities of the URBENENERGY network, special emphasis is laid on the building sector, and specifically on residential buildings. With regards to the latter, it is essential to stop seeing energy efficiency as an isolated issue. Increasing the **energy performance levels** of buildings requires a portfolio of solutions, many of which are already available or currently being developed. The spatial arrangement of buildings, of human settlements and their service infrastructure are key factors for increasing energy efficiency in housing which contributes, in turn, to climate protection and also to a higher standard of living.

The partners composing URBENENERGY network are fully aware of the challenges related to improving energy policy and are committed to transforming these challenges into opportunities as to develop an innovative model for creating a sustainable energy efficient urban environment, with a focus on residential building stocks. After a successful project preparatory launch in February 2010, the network of 10 cities from as many different European countries, will study the results of the most relevant integrated approaches and good practices from all over Europe and also beyond.

## Project summary - URBENERGY – The urban contribution to combating climate change - An integrated model for energy efficiency conscious communities

**Energy is a top priority for Europe but policies are still fragmented. For urban areas a consistent policy approach and funding instrument could have a great future impact. Most cities in URBENERGY have pieces of the puzzle available or are working on it. The project will help to bring these together, accelerating individual findings. In this regard the findings and deliverables of URBENERGY could contribute to further integrated future policies on improving energy efficiency and the optimal utilization of RES in urban areas with a specific focus on residential buildings.**

### The Partnership

The partnership composing the EU URBACT II thematic network URBENERGY brings together 10 cities from 10 different European countries: **Avrig (RO), Tulln (AT), Development Municipal Agency of Pyrgos, Pyrgos (GR), Dve Mogili (BG), Durham (UK), Nice Cote d'Azur (FR), Italian National Research Council - Institute of Methodologies for Environmental Analysis (CNR-IMAA), Potenza (IT), Worms (GE), Valletta (MT) and Allerød (DK).**



The 5 initial cities (Avrig, Pyrgos, Durham, Tulln and Dve Mogili) extended their partnership as part of the development phase to a broader European network which held its first meeting in the Lead partner city of Avrig, on 15-16 February. On this occasion, the partners became familiar with one another's expectations as well as the requirements

of the European exchange and learning Programme promoting sustainable urban development - URBACT Programme. The State of the Art was presented and agreed upon, based on which the detailed investigation of the needs of the participating cities could start. Mr. Hen Gerritse, Lead Expert for the URBENERGY network, visited the partner cities as a result of which a draft synthesis was discussed during the later transnational workshop in Tulln, on 3-4 May. Based on this joint discussion, the consortium came to a conclusion with regards to project activities,

outputs and the methodology for cooperation in the implementation phase that is meant to start in June 2010 to last until November 2012.

### The Challenges

URBENERGY partner cities have identified the following core problem linked to the creation of energy efficient urban environment and community and of an optimal utilization of RES: a **lack of integrated technological, governance, local business, financial, legal and social framework**. Specific problems have been identified with regard to:

- an increasing need for technological product packages for local decision-makers
- the involvement of multiple entities in decision-making processes and of lack of integrative approach
- the lack of investments in RES, low market penetration of RES solutions; unexploited business opportunities in the field of urban regeneration by SMEs
- the lack of efficient integrated and of tailor-made financial schemes and legal environment to support new energetic solutions
- the lack of awareness of the cross-sectoral significance of EE solutions and of RES

### The Objectives

The URBENERGY partners have declared their commitment to the exchange and learning activity

as a result of which they will produce tailor-made Local Action Plans based on the jointly defined methodological framework for establishing energy efficient urban communities. This is in line with the main objective of the network, that is, **to develop an integrated framework for improving energy efficiency and the optimal utilization of RES by offering an innovative model for creating a sustainable energy efficient urban environment, with a focus on residential building stocks.**

The long-term goal of the consortium is **to turn residential areas from energy consumers into energy producers.**

## Methodology

The most efficient working methodology appeared to be **the peer review process**, that is, the evaluation of creative work or performance by other people in the same field in order to maintain or enhance the quality of the work or performance in that field. Given the set time-frame of the implementation phase and the need for an in-depth investigation of potentials in order to create high quality Local Action Plans, the peer review exercise has been tailored to project circumstances. The partnership has opted for **the deep dive process**, which is an intensive, in-depth peer review exercise letting a cross fertilization between know-how generated by transnational cooperation combined with on-the-spot implementation consultancy and coaching in which specific local circumstances are fully respected and recognized.

# URBENERGY NETWORK PARTNERS

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## AVRIG

- *Status:* Avrig is one of the most important cities of Sibiu County, Romania (RO)
- *Population :* 14.000 inhabitants
- *Total area:* 133 km<sup>2</sup>
- *Local situation and challenges:* The vision for Avrig, the Lead Partner of the URBENERGY network, is to become one of Romania's leading centers for renewable energy by 2020 and to become energy independent by 2030. The Municipality is promoting the development of two industrial areas focusing, on the one hand, on heavy industry and, on the other, on renewable energy and recycling industry, with the scope to create synergies which investors will benefit from. The investment programme of the city targets an integrated model for green, energy efficient communities by developing infrastructure, attracting investments, implementing energy efficiency measures and by creating new jobs in the renewable energy industry.
- *Potential contribution:* Having participated in several EU & transnational Programmes on efficient & sustainable waste management, EE, RES, Avrig has gained wide experience in these fields; it will share its good practice examples regarding the creation of the strategic framework, which supports the energy integrated model that the city is currently developing such as the Local Energy Strategy and Energy Plan, the Local Development and the Communication Strategy.

## TULLN

- *Status:* The county capital of Tulln-at-the-Danube lies in State of Lower Austria (AT).
- *Population :* 16.000 inhabitants
- *Total area:* 72 km<sup>2</sup>
- *Local situation and challenges:* Due to the development towards a "Sustainable Energy City" and the target to achieve a 100% renewable energy supply, Tulln in the region of Lower Austria is a multiplier for suitable and feasible technologies and new management and financing concepts in the fields of renewable energy use and energy saving. Committed to engage in a socially responsible environmental policy, Tulln is actively promoting the energy issues to its citizens. Based on the 'City Development Concept' of 2007, ongoing projects and initiatives in the fields of EE and RES include: biogas study as a basis for further implementations, waste water treatment plant, both designed to cover future demands regarding the growth of the population; residential buildings with low energy requirements; eco-settlement and eco-district; a Decentralized Energy Management System (DEMS). The development of the Local Action Plan includes steps toward an energy bookkeeping system to monitor energy consumption of bigger communal buildings.
- *Potential contribution:* The city of Tulln would like to share with URBENERGY partners know-how on energy efficient collective buildings (college, kindergarten), passive house standards, biomass heating system with district heating net, biologic sewage treatment plants, energy bookkeeping and on ecological cleaning methods.



## WORMS

- *Status:* Worms is a city in the State of Rhineland-Palatinate, Germany (DE)
- *Population :* 86.000 inhabitants
- *Total area:* 109 km<sup>2</sup>
- *Local situation and challenges:* As a member of the Climate Alliance of European Cities, Worms is committed to the topics of climate change and carbon efficiency. The CO<sub>2</sub> emission reduction target set out in the "Climate protection and energy efficiency concept Worms" is to reduce greenhouse gas emissions and cut CO<sub>2</sub> emissions by 10 % every 5 years. Activities that have been carried out in the city in order to support carbon efficiency include: analyses of total energy consumption and CO<sub>2</sub> emissions; development of a Local Action Plan on climate protection and energy efficiency concept; setting up of an Energy-efficiency-network, consisting of city administration together with private companies; public-private-partnership project; measures taken to raise awareness of city dwellers of the importance of carbon efficiency.
- *Potential contribution:* The city of Worms could share with the other partners its experience gained from the development of the "Climate protection and energy efficiency concept Worms" and from the recycling of a former military base as a mixed-use site. Further good practice includes a wood-chip heating system dedicated to educational facilities. Worms has also gained know-how on the use of solar energy potentials.



## VALLETTA

- *Status:* The city of La Valletta is the capital city of the Mediterranean Archipelago of Malta (MT)
- *Population:* 6.000 inhabitants
- *Total area:* 0,8 km<sup>2</sup>
- *Local situation and challenges:* The challenges Valletta is facing regarding renewable energy sources and energy efficiency are related to its special status of World Heritage city. Consequently, RES and EE solutions shall not be invasive; alternative techniques compared to roof solar panels or wind turbines need to be found and emphasis should be made on increasing energy efficiency of buildings, encouraging energy saving in households and other areas, such as industry and public buildings and importing clean electricity from the European grid. Also, due to its geographical location, cooling is more important than heating. Valletta is a fortified city surrounded by water with limited space and no rural areas nor space to expand to. Energy efficiency and the wider use of renewable energy sources are still relatively new concepts. The central government is currently working on implementing a regulation to promote energy efficient methods and is issuing schemes to help households to invest in energy efficient appliances. The EE and RES business is quite limited; providing information to businesses as well as citizens on carbon efficiency is therefore also of crucial importance.
- *Potential contributions:* Having participated in several URBACT projects, Valletta Local Council can share experience on the elaboration and implementation of Local Action Plans and the operations taken by the Local Support Group in interaction with the project partners. The Council can share its knowledge on how to analyze challenges and possibilities, how to apply for funding after the development of the LAP and how to help local residents. Through the Local Action Plan to be developed in URBENENERGY specific development opportunities can be identified helping the Local Council to apply for further funding in order to promote and implement the proposed initiatives and developments.

## NICE COTE D'AZUR (NCA)

- *Status:* The Urban Community Nice Côte d'Azur, an inter-communal structure located in South-East France, gathers since 1<sup>st</sup> January 2009 the city of Nice and 26 cities of the metropolitan area.
- *Population :* 520.000 inhabitants
- *Total area:* 331 km<sup>2</sup>
- *Local situation and challenges:* The territory of the French Riviera intends to be France's benchmark region in terms of sustainable development, and, turning Nice into "The green city of the Mediterranean region" is a core ambition of its urban community. Energy is a subject with particular concern in the NCA territory where efforts have been made in reducing energy consumption and implementing RES and EE solutions, especially to compensate for the weak electricity networks in the city of Nice. The selected urban neighborhood towards the URBENERGY project involves the "Var Plain Eco-Valley" operation which wants to turn the region into an emblematic in terms of energy strategy building and policy measures. Additionally, the strong presence of micro-computing industries, research laboratories in the field of ICT and clusters like the CAPENERGIES (cluster for emerging projects in the field of energy) in the region is an opportunity to develop innovative solutions combining ICT and management of energy.
- *Potential contribution:* Examples of good practice Nice would like to share with URBENERGY partners include the installation and operation of micro hydro power systems in drinking water supply networks. Another good practice is the system of heating from waste water, and in particular the installation of the system in existing or new networks.



## ALLEROED

- *Status:* Alleroed is situated on the island of Zealand, Eastern Denmark (DK).
- *Population:* 23.500 inhabitants
- *Total area:* 67 km<sup>2</sup>
- *Local situation and challenges:* Member of the "Green Cities Denmark" Municipalities network, Alleroed has a strong commitment to support sustainable development as set out in the Municipality's Overall Strategy (2007) and in the Municipal Master Plan (2009), which constitute the planning framework for the municipal development in 2009-2021 and target CO2 emission cut by 25% for 2015 compared to 2006 trends. An administrative unit has been formed to take care of matters regarding climate change, reduction of energy use and environmental sustainable development in general. Several green actions have already been launched, including CO2 emission/energy monitoring, energy inventories in all public buildings, energy saving projects for private households, space saving projects (reducing the building space used also to reduce the energy used), use of RES in municipal buildings, development of green procurement measures to be used in procurements where requirements for sustainability are relevant. The cooperation with stakeholders has always been a high priority in Alleroed and the Municipality's publications raise awareness of citizens on environmental priorities and encourage citizens and developers to work and think in a sustainable way.
- *Potential contribution:* Alleroed wishes to share with URBENERGY cities its experience in implementing state of art technologies to achieve energy saving and increased use of RES. The city has developed good practices as regards bookkeeping of the energy use in public buildings registering energy consumption; energy saving street lights.

## POTENZA – represented by the Italian National Research Council - Institute of Methodologies for Environmental Analysis (CNR-IMAA)

- *Status:* Potenza is the regional capital of Basilicata region, in South Italy (IT)
- *Population:* 69.000 inhabitants
- *Total area:* 174 km<sup>2</sup>
- *Local situation and challenges:* CNR-IMAA is a knowledge institute of the city of Potenza that works towards developing a model framework for the establishment of energy efficient urban communities. The institute provides methodological support to the URBENERGY network. The Municipality of Potenza has several existing initiatives related to EE and RES, such as the "Clean Heat" Project, reducing energy bills of public buildings and services, light pollution in the old town centre of Potenza and surveying municipal thermal plants and landfill biogas recovery, etc. The Municipal Energy-Environmental Plan (MEEP) adopted in 1997, currently under revision, contains strategic targets and measures to increase the percentage in the use of RES and has driven policy makers to achieving the fixed targets and introducing energy and environmental aspects in all planning phases.
- *Potential contribution:* The city would like to share with URBENERGY partners its experience linked to the promotion of RES and EE in public buildings; to the implementation of regulations concerning the development of public lighting based on energy-efficient solutions.



## DVE MOGILI

- *Status:* The Municipality of Dve Mogili is located in the North Central Region of Bulgaria (BG).
- *Population:* 12.000 inhabitants.
- *Total area:* 40.000 km<sup>2</sup>
- *Local situation and challenges:* The Municipality has extremely high expenses for energy consumption in all sectors (heating with naphtha, wood and coal and electricity) whereas the share of RES is close to zero. At the same time, the city has to comply with relevant national laws and regulations regarding EE and RES (Bulgarian Energy Strategy "2020") setting a 16% national target of RES share (wind, biomass and hydroelectricity) within the gross final energy consumption by 2020 in response to which the city has developed its own Municipal Plan for Energy Efficiency, foreseeing an energy consumption analysis of the buildings and properties of the Municipality; substitution of current street lighting systems and launch of negotiations for developing a natural gas pipeline, as a substitution to the fuel (naphtha) based heating systems in public buildings. Additionally, the city aims at building photovoltaic and wind parks based on a PPP model and give institutional support to the local RES businesses to enter market. The overall strategy sets the ambition for the city to become an energy producer for the whole North-Eastern part of Bulgaria and become completely energy independent.
- *Potential contributions:* The Municipality of Dve Mogili has only recently started to engage in measures and action linked to sustainable development, energy efficiency and renewable energies. Thus, there are relatively few good practices to share with the partners. The Municipal Plan for EE, recently elaborated, will serve as a starting point for the development of the URBENERGY Local Action Plan.

## PYRGOS – represented by the Development Municipal Agency of Pyrgos

- *Status:* situated in the Western Peloponnesian, it is the capital of the Prefecture of Ilia, Greece (EL)
- *Population:* 51.000 inhabitants
- *Total area:* 171 km<sup>2</sup>
- *Local situation and challenges:* The Municipality of Pyrgos aims at covering all its public buildings' energy needs by alternative forms of energy in the percentage of 75%. An obvious focus is set on the strategy regarding the development of solar energy exploitation given the high, intense and long-lasting sunshine in the area. Apart from this, other forms of energy that are possible for the city to exploit at reasonable costs are wave energy, wind energy and, for certain activities, geothermal energy. In order to respond to the diverse demands, different parallel strategies should be developed aiming at different partial results: solar energy to cover the power supply to satisfy general needs, geothermal energy and natural gas to cover the energy needs linked to air-conditioning, natural gas or propane to cover the needs of crafts and industries, etc.
- *Potential contributions:* Pyrgos has experience in constructing a photovoltaic park and the Municipality's know-how includes technical knowledge and statistic evidence of operation so far. By way of cooperation within the project, Pyrgos will be able to disseminate the procedures of attracting investors from other European countries.



## DURHAM

- *Status:* Durham is situated in the Northeast of England, within County Durham (UK)
- *Population:* 500.000 inhabitants
- *Total area:* 2.700 km<sup>2</sup>
- *Local situation and challenges:* The Durham County Council, newly established in 2009, is very active in the field of renewable energy and energy efficiency. In 2009 its Alternative Energy Scheme received the Runner-Up award from the Renewable Energy Association (REA) for its work installing RES. The target is to reduce CO2 emissions by a minimum of 40% by 2020. The Council has taken measures with regards to raising awareness of city dwellers of the importance of carbon efficiency. Existing strategic documents include the Durham County Sustainable Community Strategy, Climate Change Master Plan for County Durham, Durham County Alternative Energy Scheme providing a financial incentive to encourage the take-up of RES. The Alternative Energy Scheme is an example for integrated strategies to address some of the relevant problems and opportunities.
- *Potential contributions:* The County Council has worked to establish a network of local businesses that have the sustainable energy skills to install all available renewable technologies. Durham County has been successful in stimulating demand both in the take-up of RES via its financial incentive schemes and the creation of a sound infra-structure of accredited RES suppliers and installers. Moreover, Durham County has established a 'whole house' database of properties throughout its district which identifies the EE and RES potential as well as its current thermal capacity. This database is being promoted by Government and BRE (Building Research Establishment) and is seen as best practice for local authorities in the delivery of EE measures.



## – INTERVIEW –

### Mr. Arnold G. Klingeis, Mayor of Municipality Avrig - URBENERGY Project Lead Partner

**URBENERGY Partnership turns financial and economic crises to an opportunity by addressing urban sustainability**

**What motivated the city of Avrig to launch the URBENERGY project – “an integrated model for energy efficiency conscious communities”?**

The starting point of the project was the “green vision” of the Municipality of Avrig aimed at repositioning Avrig’s local economy on a global trend in the sector of energy. Acknowledging that, without any doubt, energy is and will be one of the most important issues of the 21<sup>st</sup> century; our strategy promotes Avrig to being one of Romania's leading centers for renewable energy by 2020 and, by 2030, becoming an energy independent city. We understood that this development will result in new jobs, lower utility bills and a city that is known as a good place to invest, work, live and visit.



To turn our vision into reality, we have developed a program called “*Local Energy – The local contribution to combat climate change. An integrated model for energy efficient communities*” focusing on the production of renewable energy and energy efficiency measures. We are convinced that, in the energy sector, new models need to arise, first of all, to combat climate change, and also to ensure competitiveness by supplying our

more and more energy dependent communities. At the same time, we are aware that real and fast change in production and supply of energy must happen and must start from the local level. Technology and innovation in clean energy solutions need to be spread out, to get up a modern, decentralized energy infrastructure which, by the end, will decrease our common dependence on fossil fuels.

**Europeans consider climate change as one of the most serious problems faced by the world today. URBENERGY intends to function as a means of urban contribution in combating climate change. What is the specific role of cities in the mitigation of change?**

Cities are the biggest pollution generators and energy consumers. That is why it is vital to transform them into energy producers through the Local Energy Program which URBENERGY is supporting. The network is meant to motivate and encourage the process of decentralization in the energy sector. The project demonstrates how improvement of the energetic situation in urban areas is related to economic and social development as well as to halting environmental damage caused by the adverse effects of climate change and the undesirable and unsustainable economic growth. Under this circumstance, the decentralization process refers to the transfer of absorbing technologies, of know-how and of small production units at the local level.

**In what terms does the URBENERGY project fit into current European energy trends and policies? What is the innovative value of the project?**

Policy-making levels in the EU have made efforts to improve energy efficiency (EE) as a response to the negative consequences of climate change and economic crisis. The long term strategy of the EU, as stipulated in the Communication of the Commission “Europe 2020 - A European strategy

for smart, sustainable and inclusive growth”, is to reduce greenhouse gas emissions by at least 20% compared to 1990 levels or by 30% if the conditions are right, increase the share of renewable energy in our final energy consumption to 20%, and achieve a 20% increase in energy efficiency. Each Member State has established the necessary legal and administrative framework on national level to ensure that the commonly agreed target is achieved. The decentralized nature of most of the renewable energy applications and also the proper communication, information for potential clients (suppliers, customers and installers) make it the responsibility of the local level to make good use of the possibility and turn theory into action. URBENERGY project has adopted an integrated approach and will suggest an integrated model for using the potential of renewable energies and energy efficiency as catalysts to sustainable long-term development in urban areas by introducing new and innovative models, series of technological tools as well as financial and legal mechanisms, hence to turn residential areas ultimately from energy consumers into energy producers.

**What long-term goals does the project target as regards optimal utilization of RES (Renewable Energy Sources) and improvement of EE (Energy Efficiency)?**

URBENERGY network plans its activities bearing in mind that improving energy policies in urban areas has spill-over effects on other sectors as well. Investing in cleaner, low carbon technologies will help the environment, contribute to fighting climate change and create new business and employment opportunities. On the long-term, the project aims to develop energy-independent cities by 2030 thanks to a model that others can learn and benefit from and contribute to. On the long-term the effects of the project should be a massive reduction of the dependence on fossil fuels and the development of sustainable local economy, especially of the local energy industry which will create jobs locally. We are convinced that the energy factor has a determining role with respect to economic competitiveness we are focusing on. To achieve the EU's energy goals could result in €

60 billion less in oil and gas imports by 2020. This is not only financial savings; this is essential for the Union's energy security. Further progress with the integration of the European energy market can add an extra 0.6% to 0.8% GDP (EU wide). Meeting the EU's objective of 20% of renewable sources of energy alone has the potential to create more than 600 000 jobs in the EU. Adding the 20% target on energy efficiency, it is well over 1 million new jobs that are at stake.

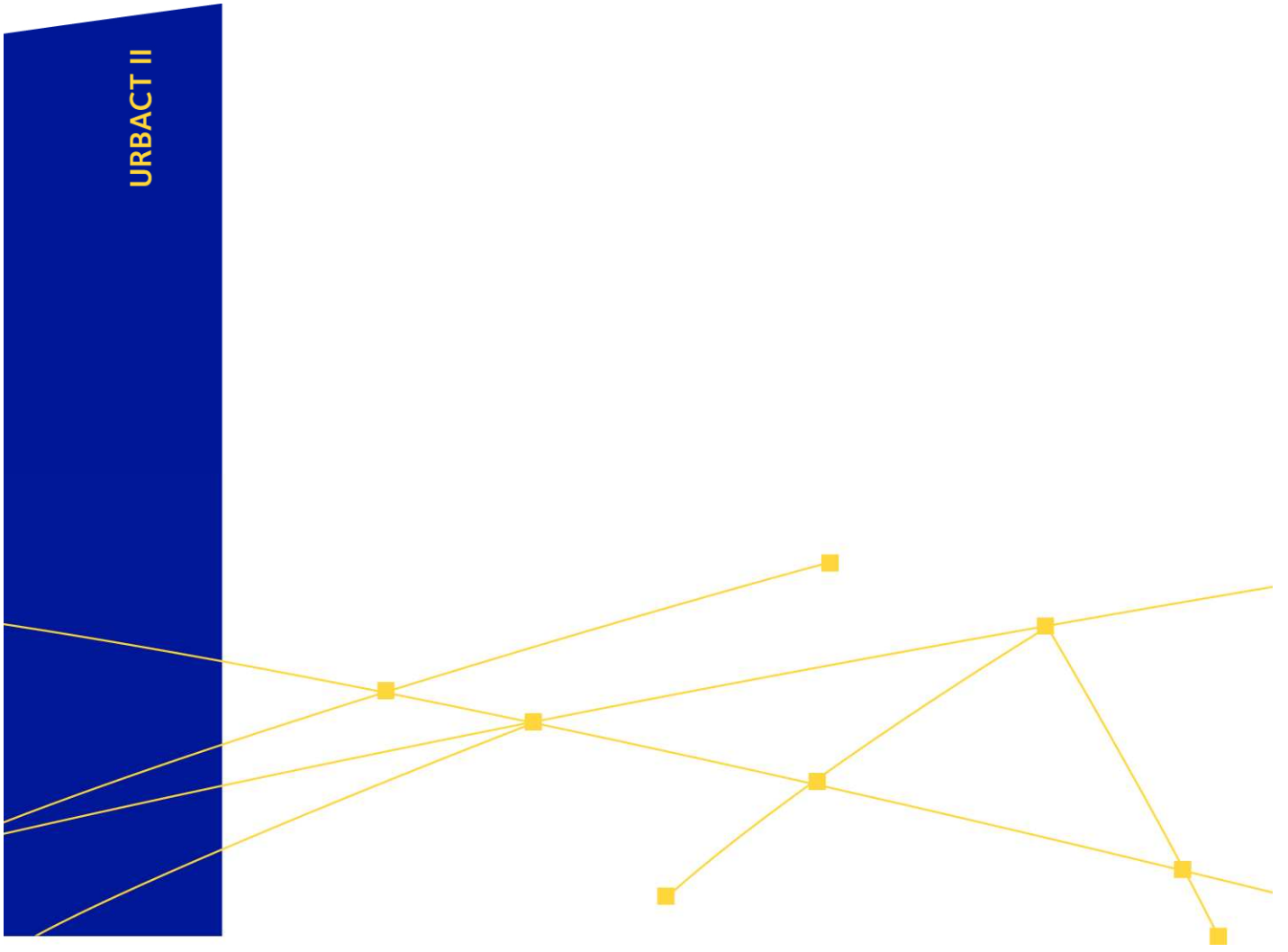
**What experience can Avrig share with other cities that could serve as a good example or practice in other towns?**

As a Mayor, my intention is to improve the quality of life of the people living in their town through sustainable urban development. We have already started to demonstrate our commitment by preparing our strategic framework as an essential starting point to modernize and reposition our local economy. Taking into consideration that energy will become a more and more important question for all of us, it can be used as a framework for other cities to enter the energy sector as producers, and at the same time, reducing the import of fossil fuels and keeping financial resources locally. This will create a long term and growing effect on local economy. The launch of this innovative framework on the market has created an interest from European stakeholders in the private and public sectors.

**What goals does the partnership wish to achieve with the setting up of the Local Support Groups?**

LSG is an obligatory component of the URBACT II Programme that aims at involving the community in the project activities and let them participate in the production of the outputs of the project. The members of the LSG represent a network that has been set up to promote an interactive platform for the collection and dissemination of knowledge which, in turn, feeds the local energy policy-making process. The membership of the LSG will reflect actively the cross-sectoral approach of the project by inviting representatives of organizations in the fields of energy, environment, and business and economic development as well as employmen

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