



# ***BIO4ECO Sustainable regional bioenergy policies – A game changer***

**Clean and Green Energy 4 a sustainable Region**

## **REPORT STUDY VISIT ABRUZZO 14-15 March 2017**



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## 1. Introduction

The BIO4ECO project, funded by the Interreg Europe programme and running for 4 years (April 2016-September 2020), is made up of 10 partners from 8 European countries.

BIO4ECO aims to **improve regional and national policy processes and policy implementation** and delivery addressing the transition to a low carbon economy, in relation with renewable energy use, energy efficiency of building and forest and agricultural biomass.

In order to reach this goal, BIO4ECO foresees an **interregional and local learning process** aimed at facilitating the exchange of experiences among partners and local stakeholders to help them in generating the expected policy change.

During the second semester, the BIO4ECO learning process resulted in a **STUDY VISIT in Abruzzo** during which partners and project stakeholders had a **first-hand experience on integral solutions for bioenergy policies and strategies**.

The Study Visit in Abruzzo, which was organized by the Rural Development and Fisheries Policies Department of Abruzzo Region and took place on **14<sup>th</sup> and 15<sup>th</sup> March 2017**, represented an opportunity to exchange experiences and good practices among project partners and local stakeholders on issues of particular relevance to the region related to the **use of biomass**, which represents an important renewable energy source.

Project partners and stakeholders participated in a **Good Practice Exchange Workshop** on the theme of using biomass for energy production and **visited plants and facilities** within the region which make use of agro-forestry biomass for energy production.

The study visit was an opportunity for discussion between representatives of entities and organizations from Spain, Slovenia, Finland, Latvia, Romania and Italy, with the aim to discuss and suggest possible solutions to the existing problems in the local area.

## 2. Good Practice Exchange Workshop

The Rural Development and Fisheries Policies Department of Abruzzo Region, on the basis of previous exchange experiences organized by other partners within the BIO4ECO project, considered worthwhile to organize a workshop for discussion about different issues that represent a problem within the local context. In fact, putting people together to discuss on specific issues and listening to a different point of view and ways of acting can help local stakeholders to find useful solutions to face local problems. This idea to organize a moment for discussion was shared with the Lead Partner who agreed with this option. The topics to be discussed have been elaborated and decided jointly by

Abruzzo Region and LP and then shared with the partnership.

During the morning of the 14<sup>th</sup> of March, partners and stakeholders participated in a Good Practice Exchange Workshop during which they openly debated about issues and questions related to the use of biomass.

The workshop started with a brief presentation of the state of the art, bottlenecks and main criticalities for the use of biomass for energy production in the Abruzzo region, which was held by Francesca Hugony from ENEA (*Italian National Agency for New Technologies, Energy and Sustainable Economic Development*), who was also



the moderator of the discussion.

The analysis of the state of the art led to the following conclusions:

- Abruzzo region has a good trend in the usage of RES for energy generation, overcoming the regional target at 2020
- Electricity generation: biomass gives very low contribution in Abruzzo Region
- Thermal energy generation: solid biomass is the principal renewable source mainly operating in small heating appliances (criticisms for air quality)
- Due to the high potential of residuals solid biomasses district heating plants could have a wider usage. One of the main barrier is the high entity of investment costs.

Then, in the presence of Mr. Dino Pepe Councillor for Agricultural Policies and Rural Development, Mrs. Elvira Di Vitantonio Manager of Promotion of Knowledge and Innovation and Agriculture Service, Mrs. Iris Flacco Manager of Energy Policy, Air Quality and SINA Service, Mr. Rino Talucci representing Consorzi Forestali and Mr. Adriano Raddi representing the Lead Partner Forest Sciences Centre of Catalonia, an open debate session started and the following themes were addressed and fed the discussion among partners and stakeholders:

**RAISING PUBLIC AWARENESS** ⇒ partners and local stakeholders discussed about difficulties in public acceptance of biomass plants and about the need to adopt measures to raise public awareness (f.i. local involvement of population, sensitization of the public and consumers on the economic value of biomass, etc.).





**SUPPLY OF RAW MATERIAL** ⇒ the discussion on this issue was focused on the fact that currently one of the weakest points of the biomass supply chain is represented by programming and supply system management, both linked to the size and the supply of the plant, as well as the guarantee of a positive environmental balance by making use of wooded areas.

**RELEVANCE OF COSTS AND INCENTIVES** ⇒ partners and local stakeholders discussed about

the limited funding of the very high investment costs, weak incentives arising from the Common Agricultural Policy and poor dissemination of information.

Some suggestions from discussion:

- Incentives and funding for new technologies are needed as they are more performing, less impactful and have a greater index of acceptance;
- The national intervention is needed as investments are not affordable by regions;
- EU projects are particularly strategic for regions as they allow to apply without the burden of regulations and legislation and to compare the plants and experience with other countries in order to identify the best technology.







### ***3. Visit to plants and facilities which make use of agro-forestry biomass for energy production***

**14<sup>th</sup> March 2017**

#### **Visit to the bio-liquids energy plant located in VALLEMARE - CEPAGATTI**

The energy plant, owned by the company Energygreen srl, is a trigeneration plant (total potential is 940 kW) co-funded by the EU. This plant uses bio-liquids (vegetable oils) to produce electric energy, hot and cold air.

The energy plant to the Energy Services Manager while heat production serves an industrial factory and, in the near future, will be also used to heat up a sport centre.





**14<sup>th</sup> March 2017**

**Visit to the biomass (wood chips) energy plant located in POPOLI (Pescara) that provides energy to a local school and other public buildings (1000 square metres)**

This is a classic plant which produces renewable energy from wood chips. It has been co-funded by the EU and has a total potential of 150 KW.

Wood chips is collected locally, therefore it represents a case of very short supply chain (< 3Km) which advantages both in terms of economic sustainability and reduced pollution associated to the biomass transport.

Partners and stakeholder also visited facilities dedicated to the storage and distribution of wood chips.



**15<sup>th</sup> March 2017**



**Visit to AURELI farm, located in ORTUCCHIO (L'Aquila), engaged in the production and processing of vegetables that uses its own vegetables' wastes for energy production**

In the morning, partners and stakeholders visited the farming company AURELI, world leader in the production and processing of vegetables (especially carrots), which are cultivated locally, in the Fucino upland, one of the most important agricultural areas in Italy.

The main principles of AURELI's company philosophy is the respect for the environment and the territorial integration with the land in which it is part of.

Therefore, the manager of the company illustrated the measures they are taken in order to activate a circular economy. Within the farming company, waste become energy: AURELI has installed a biogas plant powered exclusively from biomass of plant origin. Specifically, the plant works with by-products of the company and is integrated with the dedicated crops.

The electricity produced by the plant allows the company to be 100% autonomous, while the heat recovery lowers the thermal energy needs of about 25%; moreover, the digestate, being an excellent soil conditioner, reduces by 50% the consumption of fertilizers.



**15<sup>th</sup> March 2017**

**Visit to the biomass energy plant located in COLLELONGO (150 kw from forest biomass) that provides energy to a public building (local school)**

In the afternoon, partners and stakeholders visited the biomass energy plant located in Collelongo (AQ) which provides energy to a public building (local school).

The wood chips heating system is modern and the wood chips are contained in an adjoining tank with a capacity of about 70 tons. The plant has been co-funded by the EU through Leader 2007-2013 Programme and is run by COLAFOR, an association which is also in charge of municipal forests (around 3.000 hectares) in Abruzzo and so able to produce wood chips directly. The plant has a total potential of 150 KW and reaches a temperature of 70-80 °C producing hot water to heat the near local school. They are planning an expansion in order to provide also some neighbouring houses with a small heating network.





**15<sup>th</sup> March 2017**

**Visit to the biomass energy plant located in BISEGNA (L'Aquila)**

The study visit ended with a visit to the thermal plant in the town of Bisegna (AQ) located approximately 1100 mts above sea level.

The biomass energy plant (wood chips and pellets), with a power of 115 kW, was co-funded by the EU and provides energy to a community centre and theatre school. One of the boilers of hot water is also linked to the solar panels on the roof of the building.



## MAIN CONCLUSIONS

- Energy Service Companies (ESCOs) should be actively engaged in developing and implementing regional integrated strategies for bioenergy raising
- Governance at regional level should be refreshed through increased interdepartmental coordination and a more proactive approach to mainstream bioenergy development
- Differences regarding natural features and economic/social development among European northern and southern countries are crucial for taking decisions and achieving EU2020 goals
- Forestry plans and programmes management must be adapted to the different contexts
- New technologies are very important and they can be applied thanks to incentives
- Bioenergy can be an important step in bio-economy
- Transparency of the data related to air quality and bioenergy emissions is very important in order to improve social acceptance
- Bioenergy represents a viable and optimal alternative in rural area and small municipalities

