



Regional Action Plan and strategy REGIONE ABRUZZO  
D.2.3 English summary  
**Bio-methane Regions**

## **Introduction**

The objective of the regional strategy and action plan is to determine the technical potential for the production of biomethane, to identify the barriers and obstacles in the specific region and country and to elaborate a strategy for a successful development of biomethane production. The fields concerned are: waste from agriculture and its effluents, energy crops (eg. maize and grass), organic waste from the municipal waste stream (green waste and food waste) and the waste from food processing industries.

The strategy sets out objectives for the medium and long term period and proposes measures to improve the feasibility of biomethane technologies. The strategy development has benefited from the involvement of the Advisory Committee members who collaborated in the elaboration of the present document and will revise and approve the final draft.

In a Region such as Abruzzo, it's important to develop a very simple strategy in order to disseminate at first the main characteristics of this technology, to make all the potential stakeholders aware of the economic and technical aspects. It is also important to establish a link between stakeholders, experienced consultants and company who supply the technologies that can support them in the choice that can suite the local characteristic of farms, industries etc.. (size of the plant, raw materials..). So the short term period should be a strong dissemination activity and, in the meantime, to suggest the public authorities to support this technology with funds, facilities that can foster the building of plants.

## **Identification of obstacles and barriers**

The development of biomethane production is very often hindered by obstacles and barriers. In order to elaborate a strategy to overcome them each partner will identify for his specific context on the national and regional level the problems preventing a stronger uptake.

The barriers that Regione Abruzzo/ARAEN analyzed in the development of the biomethane chain in Abruzzo have been detected, with the contribution of the members of Advisory Committee, both in the production stage (raw material, producers) as well as in the consumption stages. Regione Abruzzo at the moment has no experience in such kind of plants so there is the general difficulty to take on with a new technology. The main are:

- No standardized procedure for system design and prediction of the quantity of gas produced;
- Low awareness in the agricultural and agro-food sector;
- Difficult economical framework;
- Difficulty of collecting local raw material;

- Lack of awareness of the product biomethane among farmers, breeders and citizen;
- Potential producers demand complete but simple, clear and understandable information;

***Technical barriers***

- No standardized procedure for system design and prediction of the quantity of gas produced. As in Regione Abruzzo there are no such kind of plants the barriers is represented by the difficulty to predict the quantity of gas produced in a single farm and, more difficult, in an association of farms. So also the evaluation of the size and the components of the plant and the technology to be used represent an obstacle.
- Difficulties in raw materials collection at a local level. Lack of awareness on the Biogas among farmers, breeders and citizens.
- At the moment there is not a district heating network to be fed with the heat produced
- There are consultants able to plan the biogas plant, but companies that sell and install them are located in the north of Italy or in foreign countries and this point makes it difficult to encourage these technologies.
- Digestate: there is a lack of information about the possible use of the digestate as fertilizer and it is necessary that the digestate suites with the agricultural good practice issues and the nitrate directive.
- Energy crops: there is not production in the region and some research has to be done to study the cultivations to be started in the region.

**Regulatory barriers**

At the moment, in spite of the Legislative Decree no. 28/11 that has introduced incentives on the use of biomethane, the decrees have not been issued yet. Consequently, for the stakeholders there isn't a framework of reference within which to move their interests / investments.

To use biomethane for transport it is necessary that the legislator identifies a specific tax scheme for biomethane.

The recent national legislation makes provision for the promotion of the use of biomethane in transport, providing specific simplifications of the procedure to authorize the construction of new natural gas distribution systems and adaptation of existing ones for the distribution of natural gas. The representatives of the Customs Agency took part in the regional seminar held on June 6th 2012 to represent the current regulatory context in which to place the sale of biomethane. The interest aroused by the project is helping to clarify the existing legal vacuum.

### *Economic aspects*

- Subsidies and funds received by the farmers per cultivated hectare are insufficient; therefore energy crops can't be as competitive in market as food crops;
- The investment cost to build a biomethane plant are really expensive and the payback time is usually more than 5-10 years. Moreover, banks and financial bodies are not willing to take long term risks if the turnover of the plant is not guaranteed

### *Social aspects*

The main social barrier has been detected in the lack of information and awareness about the use and consumption of biogas between general public and the farmers.

Most of the people don't know what biogas is and how biogas can be used. Due to this situation, all the local actors underline the necessity to increase the information (quantity and quality) offered in particular to farmers and breeders. In particular, some of the potential producers demand complete but simple, clear and understandable information, which allows biogas to be identified as a guaranteed and validated product.

Moreover there is no collaboration and an existent network between farmers, local authorities, local industries, and local population.

## **Results**

As mentioned in the final document in Italian, the biogas produced in landfills is used for electricity that is usually fed into the grid. A small amount is dedicated to self-uses.

From the studies carried upon the situation of the Region it comes out that the potential small term development is to produce electricity from the biogas produced by anaerobic digestion of manure. This energy could also be injected into the grid or used as fuel. As the long term development it can be used also for small district heating systems or for fuel as vehicles but attention must be paid to the biogas quality that has to suite with the gas of the existing heating grid and to the one used as fuel.

List of the actions:

1. set up a regular connection between the political stakeholders of the different Regional Departments of the Regional Government: Energy and Environment, Agriculture, Waste Transport and Economic Development in order to develop measures, funds and other activities to foster the construction of biomethane plant;
2. information campaigns: at least one event per year in order to disseminate this technology and to make people aware of the progress made during the year before.
3. Set up a regular link between all the potential stakeholders in order to make all the action stronger.

4. Regular surveying of the amount of materials that can be used as substrate in biomethane plant on order to have available and updated data on the potential of the region
5. Set up a regular communication between the stakeholders and the company that built such kind of technology and other association that work in the filed of biomethane and renewables
6. Site visits to existing plants where farmers can talk with the owners;
7. Training of potential operators
8. Economic investigations in collaboration with representative of banks in order to set up possible financial plans
9. Food industries waste: investigation of the advantage of use that in biomethane plant instead of other final uses, especially if the industries are located nearby farm or other food factory.
10. Foster the development of projects increasing the cooperation between different companies who provide raw materials. This will also allow to optimize the substrate to increase the yield of biogas produced,
11. Participation in national and regional technical meetings aimed at facilitating the use of biomethane into the grid.
12. Analysis of the state of the art on the use of biomethane as a fuel
13. Implementation with dedicated crops through incentives linked to the RDP, the rural development plan, and its revisions mainly in marginal areas / fallow land.
14. Digestate: Promoting the use of digestate as fertilizer in accordance with local regulations
15. Targeted outreach to owners of biogas plants with a view to upgrading their system or a new business idea;