



**Promotion of biogas and its market development through local and regional partnerships**

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Deliverable D 2.1

**Compilation of administrative and regulatory framework conditions for each promoting country/region**

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# 1 Corporate structure (legal form) of the owners

There are several possible legal form as shown in the next table:

<b>Corporate Structure</b>	<b>Number of partners</b>	<b>Liability of partners</b>	<b>Constitutive Act</b>	<b>Minimum capital</b>	<b>Administrators</b>
One man business	Only the owner	Unlimited (personal property)	It is not necessary	It does not exist	The owner
Family Company	The owner and the collaborators, members of the family	Unlimited (personal property)	Certified private document with the list of the family collaborators	It does not exist	The owner and for specific decisions the collaborators from the family
Copartnership	2 or more	Unlimited (personal property)	Certified private document Or Public Act	It does not exist	The partners
Limited partnership	2 or more, at least one is unlimited partner	Unlimited (personal property) for the unlimited partners, limited to the capital deposited for the limited partners	Certified private document or Public Act	It does not exist	The unlimited partners
Limited company	2 or more	Limited to the capital deposited	Public Act	€ 10.000,00	The partners or others
Limited company (with one partner only)	One partner only	Limited to the capital deposited	Public Act	€ 10.000,00	The partner
Cooperative company	A certain amount of partners according to the kind of cooperative	Usually limited to the capital deposited	Public Act	It does not exist	The partners or others

## 2 Operators / Training of the operating personnel

According to the Legislative Decree 626, 1994, training and information regarding occupational safety and health in the workplaces are compulsory in Italy for all the employees. The employer is responsible for training and information courses on the following topics: general and specific risks in relation to the job, safety and prevention measures, First Aid procedures, fire prevention, evacuation and fire fighting activities, the names of the workers in charge of First Aid procedures, fire prevention, evacuation and fire fighting activities, management of emergencies.

Chemical and biological risk needs specific training in order to reduce as much as possible the risk. As to waste management there is no compulsory specific training and information. There are voluntary certifications such as (ISO/EMAS).

There are no other specific directives for the training operation of biogas plants.



## 3 Choice of Site

The site where to built the plant may have certain constraints such as environmental, archaeological, hydro geological, architectonic constraint. Depending on the kind of constraint the competent body (Region, Province and Municipality) should evaluate the project and give either positive or negative answer.

According to the Legislative Decree 387/03 art.12, plants for the production of renewable energy sources are useful for the community, it is therefore possible to expropriate the land where the plant will be built.

According to Legislative Decree 241/90, art.9 anyone who could be damaged by the expropriation procedure can take part in the procedure.

As to the smell in Italy there are no limit values or specific laws. The legislation only mentions the necessity to assure fair odour levels for the population.

## 4 Authorization procedure

*More detailed information are available on the web site:*  
<http://www.regione.abruzzo.it/xAmbiente/> in section “energia” – “autorizzazione unica”.

In Italy, the Regional Bodies are in charge of granting the so called “Autorizzazione Unica”, that is the authorization for the construction and functioning of plants for the production of electric energy from renewable energy sources. This authorization also involves modifications, improvements, restructuring, maintenance and infrastructures and all those works which are fundamental for the construction and functioning of the plants. In the case of Regione Abruzzo the body that we represent is in charge of it. All the procedure takes 180 days at the most. The only exception is the areas that should undergo the environmental impact assessment that needs to be done before the granting of the authorization.

There are also other bodies involved in this procedure, for example the provincial administrations are in charge of emissions in the atmosphere and industrial water wastes. In Regione Abruzzo there are 4 provinces CHIETI, l’AQUILA, PESCARA, TERAMO. Depending on the location of the plant the provincial administration is involved.

The technical Report to be sent to the regional body must include the following parts:

1. town and territorial planning
2. description and analysys of the type of activity involved: productive cycle, production of the plant, and energy consumption
3. raw materials
4. water cycle
5. emissions in the atmosphere
6. wastes management
7. re establishment of the site(comma 4 dell’art. 12 del D.Lgs 387/03)
8. monitoring and control plan
9. conditions that differ from normal functioning

## 5 Components of the plant

The following points were analysed, mentioning all the aspects involved and the laws that rule each specific topic:

- Civil Engineering
- Fire prevention (accumulation tank, co generator engine)
- Potentially explosive atmospheres ATEX Directive
- Electric plant
- Protection from atmospheric discharges – ground lead systems – Procedures
- Emissions in the atmosphere
- Hygiene
- Waste waters discharge
- Noise
- Maintenance
- CE marking

### i.e. Civil Engineering

**UNI 10458:1995** is a specific norm for biogas plants. It includes classification of plants, requisites, rules for the construction, offer, and start up. Because it has become inadequate for today's market it has been revised by a Group of researchers GC 904"

### **Progetto CTI : E0209A420**

It defines classification of plants, requisites, rules for the construction, offer, and start up of the plants for the production and use of BIOGAS from anaerobic fermentation.

This norm applies to any anaerobic digestion plant that use organic wastes such as biomass, organic wastes etc. It does not rule biogas captation plants from dumps.

**Italian building regulations:** DPR n. 380/2001 "Testo unico per l'edilizia", "Norme tecniche per le costruzioni" DM 14/01/08, DM 16/01/96, Costruzioni in zona sismica DPCM n. 3274 del 20/03/03, DM 14/09/05.

### i.e. Emission in atmosphere and waste waters

Legislative decree 152/06 part V establishes limit values and monitoring frequencies

## 6 Choice of Substrate – input

Regulation (EC) No. 1774/2002 :European Regulation on the treatment and further use of animal by-products could prevent a further spread of diseases. This very extensive regulation governs the collection, transport, methods and procedures of treatment, as well as the further disposal, use or trade in the products respectively.

In the case of wastes, the Legislative Decree 152/06 must be respected.

The substrate will respect technical prescriptions in order to obtain maximum efficiency.

The material will be evaluated by the regional administration during the authorization procedure. Those plants that produce energy and put in the net will obtain the Green Certificates (special incentives).

## 7 Gas utilisation – outcome

The biogas produced can be used for the production of energy, with the acquisition of Green Certificates.

There are also other kinds of incentives, the TEE are granted to certify energy consumption reduction and energy efficiency.

The biogas produced can also be used for heat production both for self production inside the companies and in district heating system.

To be connected to the grid the owner has to present a request, according to the Electric Energy Authority normative n.281/05 to :

**Terna if the connection power is  $\geq 10$  MVA**

Other local distributors such as ENEL if the power is **< 10 MVA**.

The procedure is ruled by normative DK5310 which establishes also timing and contract conditions.

## 8 Utilization of digestate

If the digestate comes from anaerobic digestion of manure, energy crops and agro-industrial waste it has to be followed the DM 07/04/2006 regarding the agronomic utilization of this product. It fixes the conditions of the spreading and the maximum amount of N per unit of surface. If a percentage of other waste is in the input substrate also the digestate is considered as waste and the agronomical spreading has to be authorized in line with art. 208 of legislative Decree n.152/06.

Other regional measures:

- Delib.G.R. 7 settembre 2007, n. 899) “Art. 92 - D.Lgs. 3 aprile 2006, n. 152 - Approvazione definitiva del programma di azione per le zone vulnerabili da nitrati di origine agricola rielaborato a seguito delle osservazioni ministeriali”

- L.R. 17 luglio 2007, n. 22 (Pubblicata nel B.U. Abruzzo 25 luglio 2007, n. 42.) “Promozione dell'utilizzo dei rifiuti compostabili e degli ammendanti per la tutela della qualità dei suoli”.

## 9 Avoidance of hazards

The main issues of the biogas plant to take into consideration are: smell, Fire risks, explosion risk, asphyxia risks, emission of pollutant in air, examples of previous accidents occurred, phytotoxicity. The relative measures to avoid the relative hazards have already been included in the previous chapter. Moreover a proper formation and information of operator is necessary in order to prevent any kind of accident and properly react in case it occurs.

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