



## RES-e Regions / WP3

### First activity: Analysis of RES-e in municipalities

#### ***Introduction: specificities of the french situation***

In France there is a lot of very small municipalities. Due to this scattering most of municipalities delegate their responsibility in electricity to the so called syndicates of electricity or syndicates of energy. This is the reason why these syndicates have been chosen as the first contact partners for the interviews.

Due to the results of the RES-e map of WP1, the inquiry in the french region targeted only on the three main technologies likely to be developed in the next future: wind turbines, photovoltaic and hydro power.

#### **OPINION**

##### **General opinion of local authorities**

Most of the interviewed persons are in favour of RES-e and are aware of the directive. They all agree with the fact that the share of RES-e in electricity consumption should increase, though one of them is doubtful on the possibility to increase this share.

Some people claim even that RES-e is essential and that the increase of the share of RES-e is an emergency.

There are nevertheless several levels of positive opinions:

- the enthusiastic persons are favourable to these technologies from a general point of view or even any kind of RES-e plants
- the cautious persons warn that everything cannot be done and some points have to be carefully paid attention to; for instance a RES-e plant has to be adapted to the territory

A small difference has been found between municipalities themselves and their syndicates of energy. About half of the syndicates of energy issue reserves on the techno-economic feasibility of RES-e solutions, while municipalities express their support to RES-e without adding any comment.

##### **Opinion according to the production technology**

Generally, when people are asked about particular RES-e technologies, they are often more reserved or even much less enthusiastic. Particularly, some syndicates of energy have already had experiences with RES-e for sites remote from the grid and have partly built their opinion on their own return of experience.

A small minority of interviewed municipalities are favourable to all kinds of RES-e plants and do not want to favour a particular technology. The other municipalities have on the contrary a particular opinion on each kind of technology.

#### *Wind energy:*

The answers are consistent with the poll carried out by Louis Harris in April. Only one interviewed person think that wind turbines disfigure the landscape. Other people are favourable to wind turbines under conditions:

- it should be taken care of the landscape, especially in areas of high mountains; the wind turbines need to be harmoniously integrated to the landscape
- it is necessary to have consultation and meetings with the population and local authorities very soon, already from the beginning of the projects before the starting of planning procedure

#### *Photovoltaic:*

Several syndicates of energy consider that PV is a low power source and is only suited to stand-alone systems for remote sites. Half of the syndicates of energy consider that the too long energy pay-back time of PV modules is not in favour of the environmental balance of PV. Two persons mentioned also the problem of recycling of PV modules and batteries of stand-alone systems. On the other hand, some interviewed persons argue that PV plants have an illustrative and educational role, and show the involvement of municipalities and syndicates of energy in RES-e.

The municipalities seem to be a bit more open to grid-connected PV and know the possibility of building integration. A mayor of a small municipality thinks that the PV is suited to roofs of industrial buildings, because he knows such a PV plant in his area.

Quite a lot of people are waiting for returns of experience on this technology around them and have not yet set their opinion on it.

It seems that people have a few difficulties to imagine other applications for PV than those they already know or heard about. It is especially typical with the syndicates of energy. For them, PV is closely associated with remote sites. Thus there is a high need for exchange of information and dissemination of return of experience of grid connected PV plants integrated to buildings. Some mental pictures could evolve so that they become in phase with reality.

#### *Small hydro power:*

A large majority of syndicates of energy are very open to the small hydro power and several of them have even currently projects. They think that potential is available, for instance with sites of old mills.

Two elected people in municipalities could not answer because they do not know this technology. Other interviewed persons are open to this technology.

Some people have spontaneously enlarged the question and expressed their opinion that larger potentials of RES could be harnessed in the area of heat production. One person claimed even that wood for heating is a more relevant topic than RES-e. Of course these opinions are of great interest from a general point of view as regards the best strategy to

achieve a sustainable energy supply in our societies, but cannot be taken into account in the frame of the present work.

### **Public opinion, as felt by the local authorities**

Most of the interviewed persons agree that the citizens are generally and theoretically in favour of RES-e generation, but would be much more reluctant if a RES-e installation was planned close to their living place. For instance, in a small village from which a project of wind turbines could be seen, 96% of people are against wind turbines, while 80% are in favour of PV and small hydro power. One interviewed person spoke of psychological problem about installation of wind turbines.

Here it is of particular interest to underline that the reaction is quite the same as regards highways and nuclear power. People enjoy to use highways and consume electricity, but are opposed to the implementation of a highway or a nuclear reprocessing plant or a storage center of nuclear waste close to their living place.

Regarding small hydro power the resistance would come mainly from the fishermen when projects are planned.

There is a notable exception in the area with the highest mountains of the region. In this area people are very sensible to the landscapes and are theoretically reluctant to wind turbines even if some are not yet planned.

Several people have highlighted the fact that people have no consciousness of the implications of energy consumption.

## **EXPERIENCES AND PROJECTS**

### **Experiences with RES-e plants**

Due to their mission of providing electricity to the citizens of municipalities, several syndicates of energy have installed PV stand-alone systems for rural electrification. They are satisfied with these systems which meet the electricity demand in a suitable manner. It seems that this good experience with photovoltaic does not automatically conduct to the approval of grid connected PV systems. Problems of too high maintenance cost of small windmills for stand-alone systems are also mentioned.

The syndicates of energy who had no proper experiences with RES-e stand-alone systems seem to be more open to grid connected RES-e plants. But I do not want to draw any conclusion on the relationship cause/consequence.

Several municipalities have a little experience with grid connected PV integrated on public buildings. But this experience is still very recent. They seem nevertheless to be satisfied with the grid connected PV roofs.

Regarding wind turbines there is very little experience because there is only 5 wind parks in Rhône-Alpes. Among the interviewed persons one good and one bad experience have been found. In the first case a methodology of consultation has been carried out, and in the second case there was probably a discrepancy between the territory concerned by the project and the local authorities in charge of the planning.

But two persons gave opinion about dismantling of wind parks. They think that the cost of dismantling has to be funded and that a regional law is necessary in order to avoid that former wind parks become industrial waste land when they stop to be operated.

## **Energy strategy and targets as regards energy production**

Municipalities as well as syndicates of energy have no clearly defined strategy as regards energy. No systematic methodology is applied. Nevertheless, the public buildings have often been submitted in most cases to an analysis of their energy consumption in order to apply measures of energy savings. Only one syndicate of energy said they are currently thinking about strategy for energy.

Although no clear energy strategy is defined, most of the interviewed persons mention that punctual actions of measures of energy savings are taken on the occasion of public buildings modifications.

The interviewed persons do not have any targets for their territory, excepted the municipality of Chambéry, which has set the target of 8 Wp of PV per inhabitant, according to the target for 2010 as defined in the White Paper on RES in 1997.

## **Consumption of green electricity**

Most of the interviewed municipalities have not yet started to think about it. It seems to be to soon, although some of them would be favourable to it.

Some syndicates of energy are more advanced and think about the project of a buying association. Those who have started their thought are quite reluctant to pay more for green electricity already flowing in the grid. Someone argued that the feed-in tariff already covers the production overcost of RES-e.

Several interviewed persons are doubtful about the guarantee given by the green certificates although green certificates can play an educational role.

They may be ready to pay more if the overcost is invested in new capacity productions, but this issue is not clear at all among the stakeholders. There is still the need for information and a debate on this topic.

A minority of syndicates of energy would rather like work on the production side than consumption. They suggest to invest themselves in RES-e plants or increase the RES-e production among all electricity producers.

## **BARRIERS AND SUPPORT**

### **Barriers**

Two cases have been met:

- municipalities who do not own themselves RES-e plants:

Obviously they did not have the opportunity to meet the barriers, that is why they do not mention heavy administrative procedures or difficulties to grid access. But they are aware of the financing difficulties as well as the problem of consistency of public opinion.

- municipalities who already had experiences mention insufficient subsidies and length of administrative procedures

Several municipalities are convinced that the key factor in the market development is the political will. Truth of prices of classical electricity production is mentioned by a syndicate of energy. According to some interviewed persons the energy awareness of the public opinion is a basic topic.

## **Support**

Several needs have been identified:

- sensitising and general information
- to show examples of concrete installations
- to show that RES-e solutions are cost-effective (maybe taking into account mitigation of CO<sub>2</sub> emissions) and global cost is advantageous
- need of support to concrete projects of owners (advice about planning)

## **CONCLUSIONS**

### **A crucial necessity to increase the general energy awareness**

As regards public opinion, a huge work to increase the level of consciousness as regards consistency between wishes and consequences on the own behaviour has still to be done in an effective manner.

On this point of view, the behaviour of citizens and persons with responsibilities is quite similar. A lot of interviewed persons are favourable or very favourable to RES-e, and favourable to the diversification of electricity sources but they are more reserved when concrete plants are in question.

This discrepancy between theoretical opinion and concrete action seems to be very common in each of us. Thus there is a lot of work to do to make every of us aware of the consequences of their behaviour: who wants to consume electricity should be also ready to accept and suffer advantages as well as drawbacks of the installation of plants.

### **A need to support and encourage projects**

The elected people in municipalities have good intentions, but are often waiting for return of experience in other places, before to start to install PV plants on their own buildings. Most of them do not want to be pionniers because they see too many risks.

There is a need of information regarding the cost of PV. A dissemination of examples of global discounted cost of real plants would be relevant.