

RES-e regions / WP3

First activity: RES-e analysis in municipalities

Introduction: distinctive features of the situation of Navarra

The region of Navarra has a surface area of some 10.400 km² with 272 municipalities.

There are now 28 working wind farms usually located on the municipalities' lands.

The largest part of the mini-hydroelectric stations is located on private lands and the rest belong to the municipalities.

As for the solar PV energy connected to the grid, installations are carried out by particular owner associations and the lands do usually belong to the municipalities.

In the future, generating plants by means of renewable energies to be installed on municipalities' lands are expected to be: solar PV installations connected to the grid, some small wind farms and some mini-hydroelectric stations.

OPINION

Most of the respondents are in favour of investment projects to generate electricity from renewable energies. This kind of energy respects the environment and therefore any investment in this sector is welcome and its support is considered as necessary.

They also consider that the share of renewable energies has to be increased in coming years, both at a local and at a national level, according to the public interest and to the recommendations of the Kyoto Protocol.

Most of the respondents know the different technologies for renewable energy generation. The most popular is the wind power and the less one is the biogas exploitation.

Opinion depending on generating technology

Wind: All respondents have a positive answer because they consider wind energy as a clean energy with a low impact. Besides, this opinion is reinforced in those councils where wind farms are operating; advantages are much bigger than disadvantages.

Solar Photovoltaic: Also in this kind of energy the public acceptance is good, because they consider the low impact and also emphasize that generated electric energy is not only renewable but also very clean.

Biogas: Only some councils know this technology and the largest part have little information about it.

Biomass: With the exception of 3 councils, who have little information, all inquired councils know this technology. In general they consider it as a low profitable energy, just supported now by subsidies. Also, its polluting character and its impact are putting obstacles in the way of its development, which could be important.

Mini-hydraulic: This kind of energy is exploited in Navarra for many years and all respondents know it very well. They consider it has all good qualities of the wind power and solar PV although, due to the current level of exploitation they consider difficult its further development.

Perception of local authorities of the public opinion

All respondents agree on the positive attitude and acceptance of the citizens towards the RES-e generation, even though they show different levels of interest. Thus, they consider wind power as the most beneficial and profitable and also as the most developed and fostered energy.

As for the solar PV power, even though it is the cleanest and the most respectful one with the environment, it has a low productivity and the costs are high. It requires a bigger effort in investigation and for the time being it is considered as low profitable.

The biogas exploitation is the less popular. Due to the small size of this region, there are only two working plants.

With regard to the biomass use, it is perceived as a kind of energy with an important potential of development. However, it currently shows a low profit and the few existing projects are supported by public subsidies. Its polluting aspect generates some few detractors.

Finally, the mini-hydraulic is considered as very positive, even though its establishment is more difficult because of the landscape features of some areas of the region.

EXPERIENCES AND PROJECTS

Experiences with RES-e plants

Due to the huge development of the wind energy in Navarra, most of existing 28 working wind farms are located on lands that belong to the councils. These farms are annually generating profits for the councils, which are allowing investments.

The investments projects of solar PV installations connected to the grid are becoming important in Navarra thanks to owners associations settled on lands that usually belong to the councils. In some cases, even the councils own some of the PV installations.

Finally, it is important to mention that some councils are the owners of mini-hydroelectric stations located on their lands.

Energy strategy and targets as regards energy production

Some of the interviewed councils have supported the establishment of solar PV installations connected to the grid on their lands and some others have in this moment available lands to carry out future establishments.

In this same line, as indicated before, also councils lands are housing wind farms of private companies and some of the councils have analysed the possibility to install more wind farms on their lands.

Consumption of green electricity

Few of the respondents have considered the possibility to purchase green energy.

Electricity Production Guide by means of RE in the councils

Most of the respondents would be interested in participating in the edition of a guide on electricity production by means of RE. They would be also interested in receiving information about how to carry out projects in the council. They also consider important their participation in short conferences for council workers.

Barriers and supports

Two cases:

- *Councils with existing installations of renewable energies*
In the case of wind farms belonging to private companies, the councils are annually paid for the location of the wind generators. They do not make any comment with regard to possible barriers; in fact, they would like to have the possibility of installing more wind generators, which is not allowed by the new Energy Plan of the Government of Navarre. Councils are also owners of some solar PV installations connected to the grid, and in this case they do not mention any barrier because the administrative proceedings are not complicated and they are even eager to count with more installations on their lands.
- *Councils without any installation*
The barrier in this case is the limitation set up by the Government of Navarre to install more wind farms. However, they would be interested in the development of other projects of renewable energies.

Those private companies and councils that carry out investments in biomass and solar energy can receive the corresponding subsidies from the Government of Navarre.

CONCLUSIONS

The RES-e generation is considered as positive by all councils and they agree with the fact that the share of RES-e in electricity consumption should be increased. However, they would like to have a more direct participation in the projects already carried out or to be carried out in their township and they even consider the possibility to manage public wind farms which is an aspect not allowed by the current Electric Sector Law.

Some of the councils are owners of the solar PV installations connected to the grid and most of these installations are located on lands that belong to them.

As regards green electricity purchase, only few have considered this option.

All of the councils, except the very small ones, are interested in receiving information about RES-e generation or in participating in short informative sessions.