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RES-e Regions

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Partners:

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 (ES) ■ University of Ljubljana, (SI) ■ EREN,
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Click on www.res-regions.info for further RES-e info

The web site <u>www.res-regions.info</u> presents an updated picture of the RESe situation at a regional level in nine countries of the European Union.

PDF Version

Even if the context varies from a region to the other, you will notice the strong will and involvement of regional organisations and institutions in the promotion and implementation of green electricity.

This web site will be upgraded regularly. For the moment, you will find information on:

- 11 Regional RES-e maps describing the present market penetration of different RES-e technologies, the main financing mechanisms used, the existing support mechanisms, the concrete barriers to further market development, identification of those target groups most likely to develop RES-e technologies, which technologies encounter public opposition and how this is handled, and the present use of green electricity;
- 11 representative surveys on public opinion on different RES-e technologies presenting more clearly the opinion of the citizens;
- 11 Regional transposition reports which will give an analysis of the real life conditions of RES-e implementation;
- 11 Regional analysis reports explaining the special situations and needs of municipalities in relation to RES-e;
- A technological focus to support quick market takeup: the most promising technologies, which are suffering in their market development from lack of information, of dedicated know-how or of specialised actors, have been analysed in order to find out the best way to communicate to this sector and to support a quick market up-take.

www.res-regions.info



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RES-e in Upper Austrian Municipalities

Upper Austria has 445 municipalities, ranging from industrialised areas to small rural villages. A brief analysis of the special situation and needs of municipalities in relation to RES-e was carried out. 10 municipalities were selected and interviewed about their opinion on RES-e production and consumption and on their views of which kind of practical support they would find useful. The results showed that RES and RES-e have a very positive image in Upper Austrian municipalities and the general awareness is quite high. The experiences with existing plants (either owned by municipalities, companies or citizens) are very good and RES-e is a topic of discussion in the municipality. Nevertheless, the round-up showed a clear need for more information and energy advice.

One example is the municipality of Antiesenhofen with about 1,100 inhabitants. The municipality has set itself the ambitious aim of achieving 100% RES generation. About 65-70% of the total energy consumption is already covered by RES. Among the RES-e installations implemented are a CHP plant based on biogas and landfill and the revitalisation of 2 small hydro power plants which now have 30% more output. An enlargement of the biogas plant is under preparation.

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RES-e in municipalities in Västra Götaland

The region of Västra Götaland consists of 49 municipalities of which 12 have been interviewed and analysed regarding their energy strategy and measures in general, and RES-e especially. The municipalities are different in size, number of inhabitants, level of economic development, infrastructure, industry and business structure and location in the region.

The main conclusions are:

- The interest for energy topics is high, but local champions and committed politicians are still very important.
- Lack of resources is a problem, both in terms of personnel and financially due to other priorities and/or poor municipality economy.
- Most of the municipalities have assessed the energy situation in their local energy plan or strategy. However, few municipalities have specific targets for RES-e.
- Most municipalities have focused on RES-heat production, energy efficiency and alternative vehicle fuels instead of RES-e. However, CHP plants are quite common, as are private initiatives such as small-scale hydro or wind power plants.
- Purchase of green electricity is not especially widespread only one third of municipalities currently purchase green electricity.
- Public resistance to wind power plants is considered as a great barrier.
- Financial support and simplified processes for applying is vital for increasing the RES-e investments.
- Cooperation with other municipalities, organisations and private enterprises for planning, transfer of knowledge and investments etc. is considered helpful.

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RES-e in the municipalities of Greater Copenhagen Region

The frames and conditions of the development of the Danish energy sector is to a great extent laid down by the Danish parliament. Conditions for establishment of power plants, electricity settlement prices, and most other energy related issues are determined centrally. With a recent decision to build two more off-shore wind farms Denmark will reach the target set out in the RES-e directive, 29% in 2010.

The municipalities have to, by law, carry out certain energy activities mainly targeted at saving energy in public buildings. They are given no incentives from the state and have no tradition for building or supporting RES. Investments in energy savings have significantly higher effect than RES on the green accounts.

The present situation of the regional and local levels of public administration, the counties and the municipalities, is unusual, as they are under a complete transformation ending 2007. The 14 counties are replaced by 5 regions becoming responsible only for hospitals. The number of municipalities is reduced from 271 to 105. This process is draining the resources of the administrations and many activities are put on hold.

The technical staff in the municipalities are very well-informed about energy and technologies. However, due to a tax-stop imposed by the government, and a low priority on environmental issues for the politicians during the last 3-4 years the staff has been reduced significantly, and almost no initiatives on RES have been taken lately. Several municipalities are interested in RES for demonstration and education, but are not motivated for developing RES-strategies in the foreseeable future.

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RES-e in Slovenian municipalities

Slovenia is a new EU member country (as of May 2004) and the target regarding RES-e directive is 33.6% electricity from renewable energy sources by 2010. In Slovenia there are 193 municipalities ranging from well developed to practically undeveloped areas with regard to electrical energy production from RES. Ten analyses of municipalities regarding their energy strategies and targets for energy production were carried out. Nine of the analysed municipalities have made an energy plan, but in spite of that they affirm that they do not have any energy strategies and targets.

Most of examinees are in general very favourable for renewable energy sources and also for electricity production from those sources. Opinion of most of the respondents is that their inhabitants do not have any prejudice against renewable energy sources and electricity produced from renewable energy sources – therefore they have a neutral opinion. But some of the respondents affirm that general opinion in their municipality regarding electricity production from renewable energy sources is very positive, although there is the question of the change in opinion if such a system was set-up in their immediate neighbourhood

Higher awareness about greenhouse gas emissions, which originate from fossil fuel combustion, is necessary for higher production of electrical energy from renewable energy sources in Slovenia. Further informing of people with seminars, info lists, various workshops, and other activities will be necessary. Demonstration systems, as well as realization of concrete systems for green electricity production higher subsidies and feed in tariffs, will be required.

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French municipalities in favour of RES-e

France has increased the feed-in price for photovoltaic electricity. The French government announced a few weeks ago new measures in favour of electricity from renewable sources in the frame of the governmental programme of actions regarding climate change. Since 2002 the feed-in price for electricity from photovoltaics was set to $0.15 \in /kWh$. This price will increase by 50% for private individuals, while it will be doubled to $0.30 \in /kWh$ for communities and industrial users. This measure should boost the French market of photovoltaics.

In Rhône-Alpes the municipalities are generally favourable to electric plants from renewable energy, even if some of them consider one should be cautious and choose the right RES-e technology adapted to a specific territory.

Municipalities still have few experiences with RES-e plants, but those who have grid-connected solar PV roofs are quite satisfied with them.

Municipalities in France are numerous and often very small. This is the reason why most of them delegate their responsibility in electricity to the syndicates of energy. These have often had experiences with RES-e for remote sites and may have a more reserved opinion, because they could encounter maintenance problems with these particular systems.

Public opinion is a more difficult topic, because people like to consume electricity without awareness of the consequences.

Neither municipalities nor syndicates of energy have clearly defined strategies as regards energy. Nevertheless they take specific actions when they have the opportunity.

The municipalities consider it is too soon to think about buying certified green electricity but are open to the idea, while the syndicates of energy are quite reluctant to pay more and would rather invest their money in new production capacities.

Municipalities have the opinion that the key factor for market development is the political will and the energy awareness of the public, although financing and heavy administrative procedures are also noticeable barriers.

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RES-e in Councils of Navarre

Navarre has a total of 272 municipalities throughout the region, located both in industrialised and in rural areas. With regard to RES-e, a brief analysis on the situation and needs of the Councils has been carried out. 10 councils with renewable energy facilities were chosen and they answered a questionnaire with 17 questions about their opinion and points of view towards the generation of RES-e. The results describe their positive attitude towards RES-e and RES; they are in favour of an increasing share and they know the technologies. Their experience with exiting plants is very good; several Councils are owners of RES-e installations and show an interest in being informed and in participating in RES matters.

An interesting and clear example is the Aibar municipality with only 928 inhabitants. They have a Renewable Energy Training Room which allows the dissemination and knowledge of the existing RES installations in the area. This territory contains a wind farm of 37 MW and the council owns solar photovoltaic facilities connected to the grid as well as solar thermic installations.

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Views of municipalities regarding green electricity production

Within the European project RES-e Regions the municipalities in all partner regions were interviewed to express their opinion on RES electricity in their districts. In the region of Saarland in Germany the interviewed persons in general were environment issue managers or collaborators of building authorities. All of them had opinions on renewable electricity production as well as on the estimation of the population in their municipalities.

The questions asked covered the following subjects:

- General opinion of local authorities concerning RES-e
 In principle all questioned persons are in favour of renewable
 energies as a source for the production of electricity. Some of them
 have had bad experiences which colour their opinions on particular
 technologies.
- Opinion on different RES-e technologies
 All technologies were welcomed except those where some problems were already encountered. So the public opinion was estimated as favourable in most municipalities. Real success stories could be detected when people were involved in planning of plants and when they didn't exceed a certain size.
- Experiences with RES-e plants Having received a funding programme from the government of Saarland, all municipalities have some experience mostly in the sector of small- to medium- sized PV-plants.
- Energy strategy and targets regarding energy production. Consumption of "green" electricity None of the interviewed municipalities has developed their own energy strategies and defined targets of "green" energy production and consumption in their districts. So none of them consumes "green" electricity in public buildings.
- Barriers and support

The barriers for more electricity from renewable energies are quite evident in municipalities. Being forced to save money in their public budgets, investments fostering renewable electricity are placed very far down the investment list. So no funding programmes or investment in public awareness raising measures have been initiated in the last years. The interviewed administration staff would appreciate nevertheless a small brochure which answers the main questions of interested people.

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RES-e in Andalusian municipalities

For the setting up of the project, a sample of 11 municipalities of diverse sizes has been selected, distributed among the whole Andalusian geography.

As a conclusion to this study, it can be pointed out that most of the analysed municipalities have the following points in common:

- All municipalities have a very good opinion on the generation of electricity by Renewable Energy Sources, though in most cases, evaluations on the potential users of Renewable Energies connected to the grid have not been carried out.
- Among the different Renewable Energy Sources, Biomass is the most unknown since there is great confusion surrounding this energy source.
- All the municipalities want to receive concrete information (implemented technology, financing, etc.) on each one of the Renewable Energies connected to the grid, by means of a supply of information given by municipal Technicians/Experts.
- From this study, the need for a "Guide to Renewable Energies Connected to the Grid" is required which would be a useful reference tool for further studies on this energy issue.



ubbetic Mountains, Cordoba © Turismo Andaluz S.A;

The municipalities of Almensilla, Benamejí, Cabra, Carcabuey, Doña Mencía, Encinas Reales, Fuente Tójar, Iznájar, Lucena, Luque, Palenciana, Priego de Córdoba, Rute, Zuheros, aware of the need for an energy management service, welcome the proposal of the Andalusian Energy Agency and the University of Cadiz, in collaboration with partners in Greece, United Kingdom and Germany, for the creation of an Energy Assessment Office for Rural Areas. The office will offer energy support services to buildings in companies, town halls and industries located in the participating municipalities. This project is financed by the Intelligent Energy Programme of the European Commission.

The office provides free services, among which are the assessment of energy design of buildings in the planning phase, as well as the fulfilment of regulations of the Technical Building Code and the Regulation of Thermal Installations in Buildings, complying with the new European Directive of Energy Efficiency in Buildings. Special attention is given to the actions favouring the implementation of new sources of renewable energies in buildings, particularly public buildings.

One example, the municipality of Lucena, where the new Energy Assessment Office for Rural Areas (EAORA) is located, has been the pioneer in developing an Energy Optimisation Plan through the implementation of an Agreement subscribed with Sociedad para el Desarrollo Energético de Andalucía, SODEAN, S.A., today the Andalusian Energy Agency. The EAORA offers energy support services to buildings in companies, town halls and industries located in the participating municipalities. Special attention is given to the actions favouring the implementation of new sources of renewable energies in buildings, particularly public buildings. Likewise, the municipality of Lucena has actively participated this year in the survey and study on renewable energies connected to the electricity grid elaborated in the framework of the European Project RES-E Regions WP3 Municipalities.

1 http://www.ofaer.info/ www.juntadeandalucia.es/agenciadelaenergia

RES-e Transposition in Wales

The majority of individual planning applications in Wales are heard by the local authorities where they are lodged. This does not mean, however, that Wales has the destiny of renewable energy in its own hands. Any application for more than 50MW of generating capacity is decided by the DTI in London, so the situation arises whereby the final decision about the majority of generating capacity of renewables in Wales is decided elsewhere.

Work continues on making grid access more straightforward, and this seems to be a priority for the UK government with microgeneration moving continually up the agenda. This has implications for the awarding of guarantee of origin certificates and for payment for electricity export.

Transposition of EU directives into UK law is underway. The working group responsible for monitoring barriers to transposition reports that 19 of the 24 named barriers had been removed, 2 were on the way to being removed, and only 3 remained.

Barriers removed include removing requirements for $\frac{1}{2}$ -hourly metering (helping microgeneration), reduction of gate-closure times (preferable for wind energy, clarification of procedure for generators connecting to the same piece of network, and incentives for DNOs to connect distributed generation.

In common with many European regions, grid access remains a problem for larger renewable generation.

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RES-e in the electricity market

The Italian legislative framework on renewable energy sources adopted the European Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market by means of the Legislative Decree no. 387/2003.

In addition to indicating the main domestic objectives, this decree promotes the consumption of electricity from renewable energy sources, introduces the guarantee of origin and clarifies a series of technical and regulatory aspects concerning the injection into the market of "green" electricity.

The economic advantage for producers of "clean" energy is guaranteed by the mechanism of green certificates, the value of which is established by the green certificate market. In any event, GRTN (Italian grid authority) sets a fixed offer price when it places the certificates on the market each year. Furthermore, GRTN issues the Guarantee of Origin.

As regards the photovoltaic sector, the Ministry of Productive Activities in conjunction with the Ministry for the Environment and Protection of Natural Resources issued a decree on 28 July 2005 implementing Article 7 of the Legislative Decree no. 387/2003 defining the criteria for provision of incentives for the production of electricity by photovoltaic plants.

It is confirmed that the plants to be set up will be divided into three separate categories based on their size. The incentive feed-in tariffs per kWh will be issued for 20 years and will differ according to the capacity of the plant.

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Res-e Transposition & Implementation

According to the Communication from the Council and the European Parliament, Spain is in the first group of countries just as the probability of achieving the national targets for RES-e generation. That means Spain is on track concerning the implementations of Directive 2001/77/CE requirements. I should be noted that Spain is the second European country for wind power, although its biomass policy needs to be given higher priority.

On the other hand Castilla y León is the second region for wind power in Spain, with a total installed capacity of 1,713 MW. Some manufacturers of wind sector have been based in the region.

From the first Spanish Electricity Law (Law 54/97), two kinds of electricity production were defined according to "ordinary" and a "special" regulation. The "special regulation" makes reference to installations which use renewable energy sources, residues or cogeneration.

The great success of the RES-e market in all Spanish regions has been the feed-in tariffs system, where installations which do not exceed 50 MW of nominal capacity will given a special legal and economic processing. The best transposition of the Directive 2001/77/CE in order to boost and regulate renewable electricity market in the Spanish legislation is the Real Decree 436/2004 of March 12, which establishes that the procedures in this "special regime" have the right to connect their generator set to the electric grid and also to transfer energy surplus, whenever it is possible to allow absorption through the network. The first special regime regulation in the Spanish legislation showed up in 1994.

As Regions in Spain are the bodies in charge of managing and planning the strategies for RES-e, Castilla y León RES-e implementation has been focused on boosting RES-e through different strategic planning, such as PERCYL (1994-2000) which included also Energy Efficiency; Wind Power Plan (1999-2004); Solar Plan (2001-2006) and Biomass Plan (on track), following the lines from the national targets (Renewable Energies Plan 2005-2010, recently approved).

Although the Grid access and Administrative procedures in Spain are good,



according to The share of renewable energy in the EU (COM(2004) 366 final), some barriers have been detected from the stakeholders interviews:

- not enough capacity of evacuation on the part of the transport network.
- the Environmental procedure.
- not easy water concession in the case of Small Hydro and biomass.
- lack of regulation in medium voltage grid Connection (Solar PV and small Wind Power)

Some barriers such as land problems and social opposition have been already removed. But the very long administrative procedure still remains in Small Hydro.

Despite the barriers, renewable electricity generation seems to be a good option for business.

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Directive 2001/77/EC - Evaluation by the European Commission

The Directive 2001/77/EC on the promotion of renewable energies in the internal electricity markets obliges the EU 25 Member States to increase production of renewable electricity. Each member state has to publish their plan on how to reach the so-called indicative targets by 2010. Since submission of those plans to the Commission the indicative targets became Member State obligations.

It will be interesting to see if the European Commission will identify and press those countries who fail to reach their targets to come to terms with their promises when approaching 2010.

The Commission is required to publish this month its report following Article 4 of Directive 2001/77/EC. The Commission will present the experience gained with the application and coexistence of the different mechanisms used in Member States for supporting electricity from renewable energy sources (RES-e).

Furthermore according to Article 8 of the Directive, the Commission has to report on administrative barriers and grid issues and the situation of implementation of the guarantee of origin on renewable electricity.

Regarding renewable electricity support schemes, Commissioner Andris Piebalgs already underlined at the Amsterdam Forum mid October 2005 "at this stage it seems premature to propose a harmonised European support scheme. While gaining significant experience in the EU with renewable support schemes, competing national schemes could be seen as healthy at least in a transitional period. On the short and medium term, however, we need to coordinate the existing systems on European level."

The Commission report for the Amsterdam Forum also made it clear that only Member States with feed-in systems have witnessed a dramatic increase of RES electricity, and quote/tendering schemes were in general more costly than feed-in systems.

At the end of September the European Parliament adopted an amendment which asked that in the future a harmonised European incentive system should have the following main criteria:

- contribute to the achievement of both the current targets and more ambitious future targets,
- be part of a systemic approach towards the development of renewable.....
- promote the use of renewable energy sources in an effective way;
- internalise the external costs of all energy sources;
- include sufficient transitional periods for national support; considers that,... uniform Community legislation on European feed-in systems could make sense in the long term, but that a quota or tendering model could also be taken into consideration provided that the

current weaknesses of such models, can be eliminated.

Member States have to increase their effort. A recent formal answer by DG TREN of the Commission to a complaint submitted by EREF, the European Renewable Energies Federation, made it clear that Member States must reach their targets to increase the share of Renewables until 2010 as promised and based on actual overall consumption figures in 2010. Member States are not allowed to circumvent the indicative targets obligations by falling back on consumption figures for the calculation of indicative share in 2010, using a footnote declaration of the respective Member States in the Annex to the Directive.

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Conference "Green electricity for Europe's regions"

Regional and local action is essential to achieve the European targets in the field of renewable electricity production and use: not only are many initiatives for new green electricity installations started on a local level but also some of the main obstacles can only be overcome regionally and locally.

The conference "Green electricity for Europe's regions", which will be held on **3 March 2006** in **Wels/Austria** within the framework of the annual international conference **"World Sustainable Energy Days 2006"** will discuss how to increase the market development of electricity from renewables and how local governments take an active role and benefit from the positive economic development.

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Registration: <u>www.wsed.at</u>

Seminar on Electricity from renewables

Electricity from renewable energy sources is getting more and more competitive with increasing electricity prices, green electricity certificates and emission quotas. But which technologies and solutions shall we go for in Västra Götaland and what are the potentials and barriers? This seminar gives an overview on what is going on in the region and prospects for the future.

This seminar will be held on the 9 February 2006 in Trollhättan, Västra Götaland (SE) and the target group will be utilities, energy advisors, consultants, municipal and regional employees and politicians etc.

www.vgregion.se/energisession2006

Workshop "RES-e Regions"

This Workshop has, as its main objective, to give feedback from the regional level on real-life implementation of the RES-e directive. It also aims to present some examples of green electricity strategies adopted by different European regions and their implementation into regional policies. This meeting will also be used to gain a deeper understanding of the present and planned policies on European level.

This workshop "RES-e Regions" will be held in the office of Castilla y León, located Av. des Arts, 3-5, B-1210 Brussels, on the 24th January 2006.

1 Information & Registration:

http://www.fedarene.org/publications/Projects/Contrat/Res-e-Regions/Seminar.htm



intelligent/index_en.html

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