RES-e Regions

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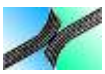
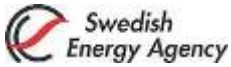
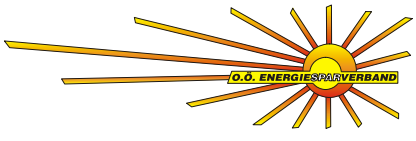
Publishable result-orientated report

O.Ö. Energiesparverband







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1 Executive summary

Background & objectives

Local action is essential to achieve the European targets for electricity from renewables (RES-e): not only are many initiatives for new RES-e installations started on local level but also some of the main obstacles can only be overcome regionally and locally.

The project aimed at boosting renewable electricity production in 11 European regions (Andalusia, Castilla y Leon, Copenhagen, Liguria, Navarra, Oberösterreich, Rhônes-Alpes, Saarland, Slovenia, Västra Götaland, Wales) by defining regional RES-e targets and developing and implementing regional RES-e strategies. The main barriers identified (such as administrative obstacles, public opposition, grid access, lack of information, frequent changes in funding regimes) were addressed by well targeted information and promotion activities, leading to a significant increase in regional RES-e shares.

Additionally, a number of activities to further interregional co-operation were implemented, including an international conference, site-visits to other project regions and a declaration confirming the commitment of European regions to sustainable energy production and use.

Main activities

The main project activities dealt with the following issues:

- Regional RES-e targets & public opinion
- Administrative procedures
- RES-e in municipalities
- Technology specific promotion
- Interregional co-operation

In total, more than 3,300 regional and international stakeholders participated in over 60 events (seminars, conferences, regional meetings and workshops) held in the course of the project. More than 30,000 copies of 30 different publications were printed and disseminated to target audiences on local, regional, national and European levels. In the framework of the surveys, the hotline and the advice sessions, the project partners were in direct and personal contact with a total of more than 5,000 persons, exchanging information on views or technical expertise.

The following activities and deliverables were implemented and finalised between January 2005 and April 2007:

Regional RES-e & Public Opinion (Work Package 1)

- 11 regional RES-e maps
- 11 surveys
- 10 high-quality publications
- 9 regional targets and strategies
- 11 regional seminars
- 133 articles published
- 11 RES-e hotlines established, 650 enquiries answered

Grid access and administrative procedures (Work Package 2)

- 11 surveys and regional transposition reports
- 1 European workshop
- 9 regional information meetings
- 11 project developers leaflets
- 11 lists of planners
- 9 planners platform meetings
- Summary report

RES-e in municipalities (Work Package 3)

- 10 surveys and analyses reports "RES-e in municipalities"
- 23 trainings for local actors
- 8 guides “RES-e in/for municipalities“
- 42 advices to local RES-e projects
- 7 competitions carried out
- Summary report

Technology specific promotion (Work Package 4)

- 8 technology selection reports (national and English language)
- 64 face-to-face project advices
- 16 support tools
- 7 benchmarking tools
- Summary report

Interregional cooperation (Work Package 5)

- Project website www.res-regions.info, more than 85,000 visitors
- 4 project newsletters developed and disseminated
- project publication
- international conference "Green electricity for Europe's regions"
- Declaration "Regions for RES" signed by 79 regions
- 8 study tours

Project Management (Work Package 7)

- 4 project meetings
- progress reports, interim & final report completed

All deliverables can be downloaded from the project website: www.res-regions.info

As a result of the activities carried out, the following main conclusions can be drawn:

The role of the regions/municipalities

The role of regions the in the decision making process concerning RES-e electricity is on the one hand quite significant, on the other hand very limited. If the overall financial framework for RES-e (usually decided at national level) is inadequate to allow for a significant RES-e development, then there is little regions can do (except for political action on the level of presidents of the regions). Also - in the other extreme - if the financial framework is extremely encouraging, then the need for action on regional level may also be less urgent.

However, at present, the situation in the large majority of Member States is neither of both, but somewhere in the middle: the funding conditions (either through feed-in tariffs, certificates or other mechanisms) are designed in a way to allow for market development, but very often only in a limited manner.

Here, the regions have a very important role to play:

- by taking a strategic approach and developing and implementing RES-e strategies and action plans (as many regions have already done for RES in general). In this way they can decide about the focus of the market development in their region, they can ensure that the necessary know-how is available and also improve longer-term planning from the side of the project developers and other stakeholders. This allows them to maximise the regional benefits - as can be shown from regions such as Navarra which have a track record of taking a strategic approach to RES-e resulting in significantly higher RES-e market shares than neighbouring regions with the same financial framework for RES-e and similar potentials. Very often regions are not aware of the whole range of instruments and options they have at their disposal which evidently limits their willingness to act.
- by tackling administrative barriers often found on regional or sub-regional levels. Quite often these barriers have their roots in the lack of specific knowledge of the involved authorisation bodies and the resulting caution, frequently also a lack of coordination can be detected. Here the regions and their activities can have a decisive role.
- by promotion and awareness raising: RES-e suffer - at least in the media discussion - sometimes from a bad image, here the role of regional and local bodies in correcting this picture can be important.
- presently, the increase of the RES-e shares are threatened by a sharp increase in electricity consumption in many regions and Member States, with the resulting risk that the increase in electricity consumption will overcompensate the growth in electricity

production from RES. Here the regions - due to their proximity to end consumers in private households, public bodies and companies - will have an important role in tackling the increase in electricity consumption and thereby increasing the RES-e shares.

Administrative procedures

Administrative permission procedures for RES-e installations in the participating regions present a highly fragmented picture, differing often between technologies within the same region and differing strongly between regions, allowing relatively few universal conclusions on the present situation. However, the project was able to identify Best Practice approaches, such:

- "One-stop-shop" procedures where all or at least several procedures are combined into one permission procedure in which all (or several) relevant issues are tackled and one decision is taken. This is a very important simplification for planners, project developers as well as the authorisation bodies.
- Procedures should be differ according to the scale of plants. An interesting solution in this respect is an approach of "permitted development" where small-scale plants are exempt from (some or all) permission procedures. This is based on the assumption that (very) small plants also do not represent any major risks against which an administrative procedure must protect.
- The publication of official guidelines issued by the regional authorities for potential RES-e plant owners/operators that clearly outline the required permissions and the procedures (included estimated timeframes) can also be a very useful instrument in speeding up procedures.
- An environment which promotes contacts between authorities, project developers and other stakeholders from the very beginning is very helpful to solve problems at an early stage.
- An instrument that forces authorities to act within a certain period of time helps to speed up procedures, e.g. by "devolution" (if an authority does not take a decision within 6 months, then the project developers have the right to take the procedure to the next administrative level).

One big challenge in this context is to find the right balance between complicated and lengthy procedures, imposing requirements which are too strict and too expensive versus the justified protection of other important interests and rights. Administrative procedures have - among others - also the function of trying to find a compromise between the interests of project developers and the interest of neighbours (in being protected against visual intrusion, noise, smell etc.). Ideally, such compromise results in plants with a higher acceptance and this is also in the long-term interest of the RES-e market development. However, such an ideal solution is hard to find.

Public opinion

Contrary to what one might assume from reading press articles in many European countries and regions, the public opinion on RES-e in the participating regions is overwhelmingly positive. Similar results have been achieved by other representative surveys, however, as negative campaigning persists, so must those who know that they can prove the opposite. The positive regional survey results were also especially useful to convince regional politicians and civil servants that the support for RES-e does not only exist on abstract European or national levels, but also very concretely in their own region.

Nevertheless, it became quite evident that there are significant gaps in concrete knowledge - most people associate wind energy with RES-e, many are less familiar with biogas and PV. The future potential is mainly seen in solar energy and biomass. Also a clear need for information on potentials and shares - the knowledge on the contribution of RES-e to the electricity generation in the region is very scarce in all participating regions and often leads to an underestimation of the contribution RES-e can make.

RES-e have also a very positive image in many municipalities and again the general awareness is quite high. The experiences with existing plants are generally very good and RES-e is a topic of discussion in many municipalities. However, very often there is a high discrepancy between awareness and action (meaning that local authorities are aware of the RES-e option and would like to have more RES-e plants in the village, but only few are presently planning RES-e plants).

2 Project data

Local action is essential to achieve the European targets for electricity from renewables (RES-e): not only are many initiatives for new RES-e installations started on local level but also some of the main obstacles can only be overcome regionally and locally.

The project aimed at boosting renewable electricity production in 11 European regions (Andalusia, Castilla y Leon, Copenhagen, Liguria, Navarra, Oberösterreich, Rhônes-Alpes, Saarland, Slovenia, Västra Götaland, Wales) by defining regional RES-e targets and developing and implementing regional RES-e strategies. These identified the main barriers (such as administrative obstacles, public opposition, grid access, lack of information, frequent changes in funding regimes) and addressed them by well targeted information and promotion activities, thereby significantly increasing regional RES-e shares.

Additionally, a number of activities to further interregional co-operation were implemented, including an international conference, site-visits to other project regions and a declaration confirming the commitment of European regions to sustainable energy production and use.

Objectives

- Boosting electricity production from renewable energy sources and the use of green electricity in 11 European regions by defining concrete regional RES-e targets and developing and implementing regional RES-e strategies.
- Identifying main barriers and address them by well targeted information and promotion activities

Duration: 28 months (01.01.2005 - 30.04.2007)

Project consortium:

The project consortium which is coordinated by O.Ö. Energiesparverband (ESV), Upper Austria, consisted of 13 partners, representing the following 11 regions with over 28 mio inhabitants plus 2 two European networks, FEDARENE and EREF:

Region	Capital	Inhabitants	Present RESe %	Project partner
Andalusia	Sevilla	7.4 mio	5.2	SODEAN
Castilla y Leon	Leon	2.5 mio	41.7	EREN
Copenhagen	Copenhagen	1.7 mio	6	DTI
Liguria	Genova	1.7 mio	1.4	ARE Liguria
Navarra	Pamplona	0.5 mio	60	Gob.Navarra
Oberösterreich	Linz	1.4 mio	70	ESV
Rhônes-Alpes	Lyon	5.6 mio	24.5	RAEE
Saarland	Saarbrücken	1.0 mio	1.8	AZES
Slovenia	Ljubljana	2.0 mio	30.6	ULFME
Västra Götaland	Vänersborg	1.5 mio	34	STEM
Wales	Cardiff	3.0 mio	3	MWEA
		28.3 mio		

The project partners were:

- O.Ö. Energiesparverband (ESV), Upper Austria, www.esv.or.at
- Rhônalpénergie-Environnement (RAEE), Rhônes-Alpes, www.raee.org
- Agenzia Regionale per l'Energia di Liguria (ARE Liguria), Liguria, www.areliguria.it
- Danish Technological Institute (DTI), Copenhagen, www.solenergi.dk
- University of Ljubljana, Faculty of Mechanical Engineering (UL-FME), Slovenia, www.fs.uni-lj.si
- Mid Wales Energy Agency (MWEA), Wales
- Ente Público Regional de la Energia de Castilla y Léon (EREN), Castilla y Leon, www.jcyl.es
- Agencia Andalucia de la Energía (AAE), Andalusia, www.agenciaandaluzadelaenergia.es
- Gobierno Navarra (G.N.), Navarra, www.cfnavarra.es
- Swedish Energy Agency (STEM), Västra Götaland, www.opet.se
- IZES gGmbH (IZES), Saarland, www.izes.de
- FEDARENE, European Union, www.fedarene.org
- The European Renewable Energies Federation (EREF), European Union, www.eref-europe.org

Project structure & deliverables

WP 1 Regional RES-e targets & public opinion:
- Assessment of present RES-e situation in each region
- Definition of RES-e targets & a strategy for each region
- Representative survey of public opinion on RES-e

Deliverables:
- 11 RES-e maps
- 11 surveys
- 10 high-quality publications
- 9 RES-e targets and strategies
- 11 regional seminars
- 133 articles and press releases published
- 11 RES-e hotlines established, 650 enquiries answered

WP 2 Grid access - administrative procedure:
- Analysis of local conditions & targeted information activities
- European workshop with regulators & "planners platform"

Deliverables:
- 11 surveys and regional transposition reports
- 1 European workshop
- 9 regional information meetings
- 11 project developers leaflets
- 11 lists of planners
- 9 planners platform meetings
- Summary report

WP 3 RES-e in municipalities:
- Interviews & reports on how to best support RES-e in municipalities
- Events and guides "RES-e in/for municipalities" & competition of municipalities

Deliverables:
- 10 surveys and analyses reports "RES-e in municipalities"
- 23 trainings for local actors
- 8 guides “RES-e in/for municipalities“
- 42 advices to local RES-e projects
- Summary report

WP 4 Technology specific promotion:
- Selection of a technology/region & support facility for project developers
- Benchmarking investment and operation costs

Deliverables:
- 8 technology selection reports (national and English language)
- 64 project advices
- 16 support tools
- 7 benchmarking tools
- Summary report

WP 5 Interregional co-operation:
- Newsletter & international publication & international conference & 4 project workshops
- "Regions for RES" dialogue & catalogue of success factors

Deliverables:
- Project website www.res-regions.info, more than 85,000 visitors
- 4 project newsletters developed and disseminated
- project publication
- international conference "Green electricity for Europe's regions"
- Declaration "Regions for RES" signed by 79 regions
- 8 study tours

WP 6 Common dissemination activities:
- Contributing to the "common dissemination actions"

WP 7 Project Management:
- Ensuring effective co-operation between the partners & an efficient project management

Deliverables:
- 4 project meetings
- 3 progress reports, interim & final report completed

All deliverables (implemented from January 2005 to April 2007) can be downloaded from the project website: www.res-regions.info

Conclusions

The following main conclusions can be drawn:

- Regions have a very important role to play in increasing the market shares for RES-e and in achieving the European policy targets:
  - by taking a strategic approach and developing and implementing RES-e strategies and action plans
  - by tackling administrative barriers often to be found on regional or sub-regional levels
  - by promotion and awareness raising and involving regional stakeholders
  - by tackling the increase in electricity consumption and thereby increasing the RES-e shares.
- There is a significant interest and willingness among a number of European regions to act in favour of renewable energy sources, however, further European support and networking is needed to fully benefit from the contribution regions can make.
- For influencing people and thus the development of RES-e on local level, it is crucial to involve local & regional stakeholders and establish contacts among them.

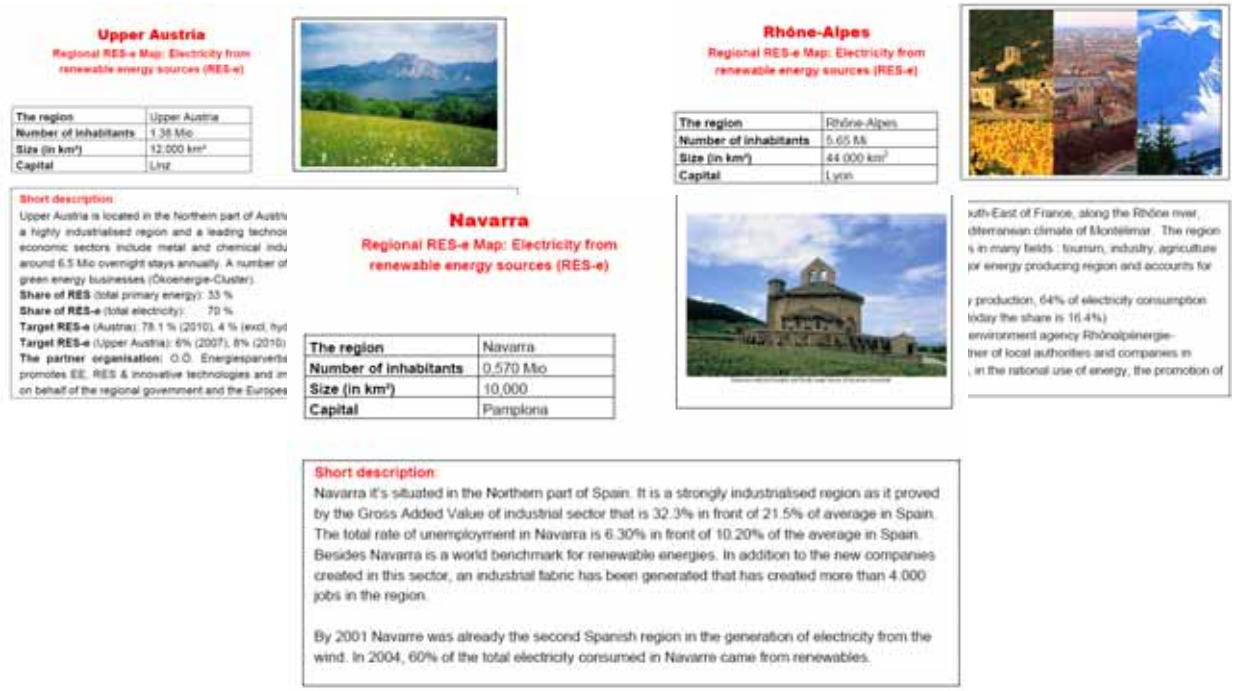
3 Focus areas of the project

3.1 RES-e & public opinion

In a first step, the present RES-e situation in each participating region (in terms of existing & planned installations, market potentials, important actors, public opinion etc.) was analysed and general awareness raising activities were carried out.

Regional RES-e map

For each participating region, a "regional RES-e map" was developed which lists - among others - the present market penetration of different RES-e technologies, the existing support mechanisms and the concrete barriers to further market development. The main market actors for RES-e technology dissemination were identified and conclusions for the project were drawn.

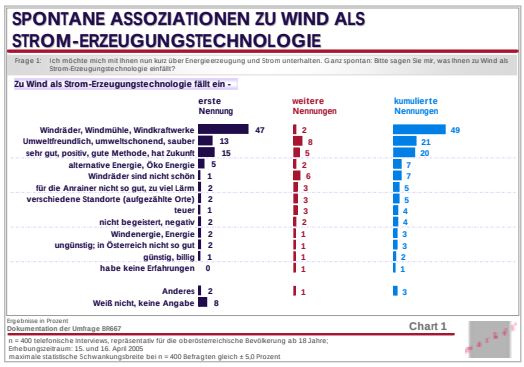


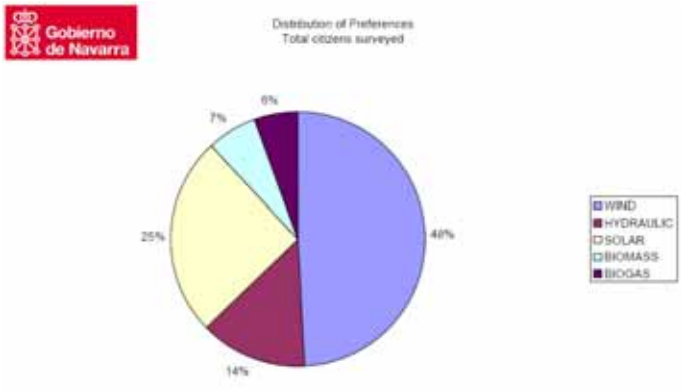
Representative survey

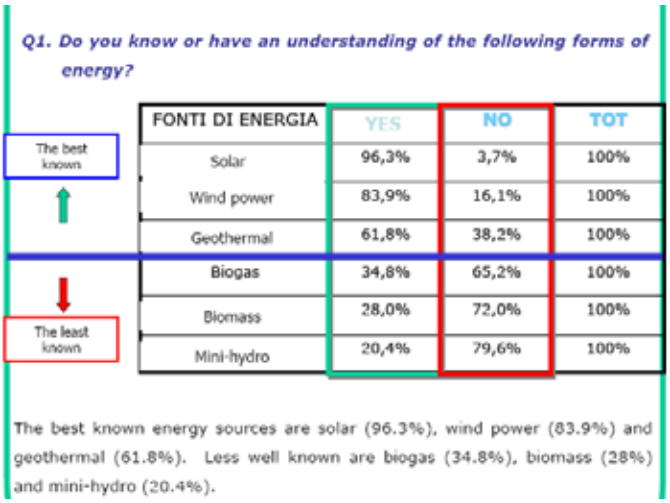
As a basis for the development of concrete promotional activities in each region, a representative survey on public opinion on different RES-e technologies was carried out. At the kick-off meeting, the survey was discussed and a first list of possible questions was developed between the partners. In an interactive process, the questions were further

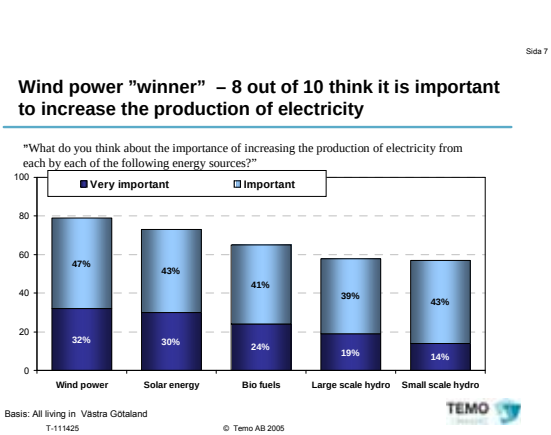
developed, a list of possible questions was put on the website (internal area) from which the partners could draw ideas for the development of their own surveys. The surveys and summary reports were completed, more than 3,800 persons were interviewed, mostly by phone.

Most people associate wind energy with RES-e, less familiar are biogas and PV. The future potential is mainly seen in solar energy and biomass. However, in all regions, the citizens show a strong lack of concerning the share of RES-e on the electricity production.









Regional seminars

As a promotional activity to increase general awareness about RES-e, a regional seminar was held in each participating region:

- **ESV:** The seminar "Energie-Zukunft 2030" targeted at regional stakeholders interested in the energy future of Upper Austria and was organised on the date of the 20th anniversary of the Chernobyl disaster (26 April 2006). It offered the possibility to discuss in the

framework of thematic workshops about the future trends of green energy, especially renewable electricity until the year 2030. 162 participants attended.

- **RAEE:** A one-day seminar was held on 15 February 2007 during the French Renewable Energy Exhibition in Lyon. The seminar was addressed to a wider audience and tackled both administrative and technical issues of all RES-e technologies. About 60 participants attended the event.
- **ARE Liguria:** The regional seminar of Liguria took place on 25 May 2006 and 89 participants attended. The seminar focused on the opportunities of renewable energy sources in the region of Liguria.
- **DTI**: In Copenhagen, the regional seminar took place on 25 August 2005 with information on photovoltaic systems in energy efficient buildings. More than 80 persons participated.
- **ULFME**: The regional seminar in Slovenia was held on 10 November 2005 with 70 participants. The seminar was targeted mostly at energy companies as well as other relevant stakeholders.
- **EREN:** The regional seminar focused on wind power and as a result of the positive feed-back received, it is foreseen to organise an annual Wind Power Day in the region.
- **AAE:** The regional seminar "Renewable Energy in Andalusia: Opportunities and New Projects" was organised on 5 October 2006 in the frame of the Renewable Energy and Water Conference and Exhibition in Almeria. The situation of RES-e in Andalusia was analysed in 3 working sessions focusing on initiatives, opportunities and new projects. The seminar was attended by about 120 participants.
- **GN:** The regional seminar "Sustainable development and electricity: the production outlook" was held on 22 March 2007 and attended by 37 participants. The focus was put on information about different RES-e technologies and R&D projects especially in PV and information about wind energy projects.
- **STEM** organised the regional seminar for Västra Götaland on 9 February 2006. It attracted 199 participants and 12 speakers. Plenary sessions, followed by technology specific sessions, were held.
- **IZES** divided the regional seminar into two half-day events. The first half-day seminar was held on 29 September 2005 with 95 participants. It was targeted to owners of big roof surfaces as well as crafts enterprises such as roofers etc. The second half-day regional seminar took place on 1 December 2005 and attracted 80 participants.

The event descriptions of the regional seminars held can be downloaded from the project website.

Publication "RES-e in our region"

In order to raise the general “RES-e awareness” and to present shining examples, a publication was developed and disseminated in each region. The following publications have been completed:

- **ESV**: 4,000 copies of a full-colour brochure on RES-e in Upper Austria were developed, printed and the dissemination started. One aim of the publication was to present RES-e technologies as attractive solutions which – if well planned- can be very well integrated in the landscape. The brochure covers all RES-e technologies by providing a short overview, the market development in the region and where appropriate information on support schemes.
- **RAEE:** The brochure "Electricité d'origine renouvable en Rhône-Alpes" is divided into four parts (wind energy, hydro power, photovoltaic, biomass) and includes best practice examples for each of these technologies. 2,500 copies were printed and widely disseminated.
- Shining examples of RES-e plants in Liguria are presented together with a short text and photos in a brochure which **ARE Liguria** developed.
- A 12-page brochure including pictures and short descriptions of different RES-e technologies was developed by **ULFME**. The brochure was printed (500 copies) and is available on the website.
- The publication developed by **EREN** includes information on the regional RES-e development and the most important technologies.
- **AAE:** The 32 pages brochure "Fuentes de Energiás Renovables conectadas a red en Andalucia" contains an updated table on installed capacity production, size and main financing mechanisms as well as short- and medium-term perspectives and main barriers.1,000 copies were printed and disseminated among market actors.
- **GN:** In Navarra, the brochure comprises information on production, R&D, capacity installed and electricity generation from RES. 500 copies were developed and disseminated among the main actors in the region.
- 1,000 copies of the publication were printed for Västra Götaland by **STEM** which was already disseminated widely, among others at the events held.
- The publication developed by **IZES** especially presents the initiators and/or owners of the plants.

Media campaign

Press releases and articles about the project, interesting RES-e developments within and beyond the participating regions and about the project events were published in regional magazines, newspapers and newsletters. In total, 133 articles were published.

RES-e hotline

The hotline numbers of the project partners were placed prominently on the project website and also on the regional project website of each partner. Throughout the project, the hotline was available in each partners' office. In total more than 580 enquiries were answered by the partners. The enquires came from all parts of the population: private citizens, experts from

different fields, journalists, teachers etc., ranging from those who had some basic "beginners" questions to those who were considering to become involved in a RES-e project to those already operating a RES-e installation. As expected, many questions were related to funding issues.

Steering group

The regional steering groups supported the project teams in defining priorities and gave important feedback on the actions. Members of the steering groups included for example representatives of different departments of the regional administration, project developers/operators and their organisations, electricity companies, consultants, professional associations, municipalities, research organisations etc.

3.2 Towards regional commitment

One of the main achievements of the project is the participating regions embarked upon a process of long term commitment towards RES and RES-e market development. The project partners are actively working towards the development of regional strategies and in involving as many stakeholders as possible in this process.

- In **Upper Austria**, the activities were focusing on developing a regional strategy for "2030" (as one for 2010 already exists). Within the RES-e project, this process was supported and special attention was drawn towards RES-e use and generation. Among others, the following activities were carried out: a dialogue platform including on-line questionnaires for stakeholders and the general public, a regional seminar (162 participants), a planners meeting and an international conference "Energy Future 2030". As a result of the process, a document summarising the regional strategy with its implications for RES-e was developed. The strategy is currently in the process of being adopted by the regional government.

- In **Rhône-Alpes**, a regional strategy for 2010 regarding energy efficiency and renewable energies had been already adopted by the regional authorities in April 2005. The time frame from 2010 to 2030 had not yet been investigated. An overview of the development trend for each type of energy source was developed as well as a list of measures for each technology. The "strategy paper" will be used as a general tool to strengthen the regional strategy for green electricity. The development of a RES-e strategy beyond the mere project duration represents a clear achievement of the RES-e project.

- In **Liguria**, the regional energy and environmental plan, approved in 2003, set a target for all renewable energy sources (7 % until 2010). So far, the region had no specific targets

for RES-e (except for the national RES-e target of 25 % of the total national electricity production until the year 2010). An intensive stakeholder dialogue was implemented which is supported by the regional action plan document developed as a part of the project.

- In **Slovenia** the following RES-e targets had been set: increasing the share of renewables from 32% in 2002 to 33.6% in 2010. In order to achieve this target, for each RES-e technology, the potential was outlined and sub-targets were proposed. Targets in the field of green electricity production, measures for reaching those targets and calculated theoretical potentials for green electricity production from different sources are presented in the strategy document.

- In the region of **Castilla y León**, the regional strategy foresees an electricity production from renewable energy sources of up to 32 % by 2010 (not including electricity from large hydro power plants). Additionally, other RES & EE targets are included and measures as for example installing PV systems in most regional administration buildings until 2010. The Res-e strategy document developed in this project will form the basis for the Res-e section of the "General Strategy in Castilla y León". This document is being prepared in order to be approved by the regional Parliament at the end of the 2007. The results from the surveys, the analysis of hotline questions and other technical documents from the Res-e Region project helped to elaborate the Res-e strategy in Castilla y León.

- With the creation of the Andalusian Energy Agency (AAE) by the regional government, the region of **Andalusia** expressed the importance of regional energy policy. The regional strategy document sets regional targets and provides the baselines for the new Andalusian Plan of Sustainable Energy 2007-2013.

- In **Navarra**, project partner GN has been very active in the development of the "Energy Planning of Navarra 2005-2010". This strategy, which was already adopted, is aiming at maximising the use of renewable energies as one of its cornerstones and includes a detailed analysis of every RES-e technology concerning potential, costs existing obstacles and possible measures.

- In **Västra Götaland**, a regional energy strategy was already in place with the time frame until 2007. A new revised version will be compiled during 2007 with for the period of 2008-2011. All the findings and deliverables of the RES-e project were shared with the regional authorities and administration thus the project has had an active role in the first stages of a regional energy plan. This will be continued until the plan is completed in 2008.

- In **Saarland**, discussions with representatives from the energy department in the Ministry of Environment were held, also strongly involving municipalities. Targets for each RES-e technology by 2007 and 2015 (e.g. 150 MW wind, 32.5 MW PV, 22.6 MW biomass, 17 MW hydro power by 2015) were elaborated by IZES with the support of the project

steering group and involving representatives of the ministry of environment. A number of concrete measures were developed to meet these targets.

3.3 Implementing the RES-e Directive

The RES-e Directive 2001/77/EC recognises that access to the grid and administrative procedures represent important barriers in RES-e market implementation and therefore places specific obligations on the Member States in these respects. The project it was aimed to analyse and describe the day-to-day situation regarding the authorisation procedures for the different RES-e technology in each region.

The following activities were carried out:

1. **Survey and analysis of regional conditions in each region:**
   The basis for the regional reports on transposition for each participating region was a brief survey to the relevant actors in each region who have knowledge and an insight into the real situation. In each region, relevant actors were selected with whom interviews are conducted. As a result of the survey, regional reports on conditions for grid access and administration were prepared ("transposition reports").

2. **European workshop:**
   A European workshop was held on 24 January 2006 in Brussels for the project partners as well as relevant European stakeholders, discussing the conclusions of the regional interviews and reports. The aim of this seminar was to discuss the real-life implementation of RES-e Directive - both from the European and the regional perspective - and to propose solutions for removing identified barriers.

3. **Meetings with planners (planners platform):**
   To discuss the special needs and concerns of planners, the following meetings were organised:
   - **ESV:** On 13 July 2006 a round-table event was organised to which electricity suppliers and other stakeholders were invited. The event was also part of the input in the regional strategy.
   - As the small hydro power still has quite attractive development potentials in Rhône Alpes, **RAEE** dedicated the planners platform meeting to this technology. A meeting between project developers and representatives of the administrations in charge the authorisations was organised on the 4 July 06.
   - **ARE:** In November 2006, a meeting between the Industrial Association of La Spezia and other companies specialised in planning and promoting biomass plants in Liguria was organised to discuss the procedures to install such plants in the region.

- **Ulfme:** The meeting "Solar and wind energy" was held on 25 October 06, where the potentials in Slovenia were presented and information about planning issues was provided and discussed.
- **EREN** organised the meeting on 2 December 2005 with the aim to define guidelines for a centralised regional office for wind power.
- **AAE:** The planners platform meeting was held on PV on 26 February 07 with 15 main market actors of the region attending. It included a debate of grid connection issues, as well as technical and legal and financial issues.
- **GN:** The meeting for planners on 22 March 07 aimed at discussing the special needs and concerns of planners of RES-e installations. It brought together promoters, companies selling equipment as well as engineering companies, all of them concerned with grid connection issues.
- **IZES:** contacts with planners were established and 2 preparatory meetings with representatives from utilities were held in summer 2005.

4. **Regional information meetings:**
   In addition to the planners platform, the following meetings for regional actors involved in issues related to grid access and administrative procedures were held:
   - The regional info meeting on 17 March 2006 organised by **ESV** focused on the renovation of small hydro power plants ("Kleinwasserkraft – Ökologische Revitalisierung"). The meeting offered an overview of legal, financial, technical and ecological aspects of retrofitting small hydro power plants. It met with very high interest, more than 260 participants, mainly plant owners, attended.
   - **RAEE:** The regional info meeting on small hydro power was held on 30 March 07 with 20 of the main regional players attending. The aim was to identify the major difficulties which slow down small hydro power projects.
   - **ARE:** The meeting organised in co-operation with Regione Liguria and Enel (grid operator) focused on the main issues in administrative procedures and grid access for mini-hydro power and biomass power plants.
   - **Ulfme:** A meeting on PV plants was held on 24 January 07 with 32 participants and 4 experts presenting the present situation regarding grid access and administrative procedures.
   - **EREN** put the focus of the regional info meeting on the perspectives of wind power development in Castilla y León. The meeting was held on 16 January 2006 and was attended by 27 participants.
   - **AAE:** The working forum "Biomass Market for Electricity Generation Plants in Andalusia" was held on 1 February 07 which was attended by 17 participants.
   - **GN:** The meeting took place on 22 March 07 with 74 participants attending. The level of development of RES-e, especially wind and PV, was discussed.
   - **Stem:** A different approach was followed in Vastra Götaland: instead of having one seminar, 3 events in cooperation with farmer groups and related organisations were held (attended by about 200 persons). STEM presented potentials, benefits, technical

information about biogas and highlighted administrative barriers as well as related solutions.

- **IZES** organised the regional info meeting on 21 June 2006 with the aim to inform planners and installers of RES-e plants on permission procedures. More than 30 planners and operators of plants and well as craftsmen and representatives of municipalities attended.

Based on the regional analyses, a set of targeted information and dissemination activities for different stakeholders were implemented:

- **ESV** put a focus on small hydro power and produced a leaflet on retrofitting small hydro power station. The 6-page folder includes information on permission procedures, technical, ecological and economic aspects and 4 best practice examples. 3,000 folders were printed and, among others, disseminated at the regional info meeting.
- **RAEE:** The focus was put on small hydro power plants, analysing the main difficulties and outlining best practice cases.
- The leaflet developed by **ARE Liguria** also focuses on small hydro power plants and mainly outlines the administrative procedures, whereas
- **DTI** developed a guide on how to implement PV systems. PV was also the RES-e technology selected by ULFME, GN and EREN.
- The leaflet of **ULFME** contains the main implementation steps from a planning flowchart to the contract for selling the electricity.
- **EREN** provided specific information on PV - how it works and what is needed for a well-functioning installation.
- **AAE:** 1,000 copies of a 20 page full colour brochure "Guide for PV-installations connected to the grid in Andalusia" were developed and disseminated.
- **GN** developed a reference guide to help promoters with the authorisation and other administrative procedures.
- Biogas CHP was the RES-e technology selected by **STEM**, the leaflet contains information on the requirements and administrative procedures.
- **IZES:** A leaflet was developed that will help developers to shorten procedures and to save money in the planning and construction phase.

Summary of the regional transposition reports

The RES-e Directive 2001/77/EC recognises that access to the grid and administrative procedures represent important barriers in RES-e market implementation and therefore places specific obligations on the Member States in these respects.

WP2 aimed at analysing and describing the day-to-day situation regarding the authorisation procedures and the grid access for the different RES-e technology in each region and to give

a feed-back on the actual transposition of the Directive from the perspective of the regional level.

These conclusions drawn in this report are based on the results of following activities in each of the 11 regions:

- survey and analysis of regional conditions in each region
- European workshop
- meetings with planners (planners platform)
- regional events

The RES-e regions project included regions with widely differing levels of RES-e installation and support. Transposition of the directive into national and regional law was therefore far more difficult in some cases than others, and has affected the regions differently.

The regional situation likewise varies significantly with each technology. Although it is impossible to obtain a perfectly accurate picture of the situation in each region, interviews with people working in the sector helped to portray a more realistic assessment than bare official regional or national statistics, and this was one of the particular strengths of the RES-e project.

Another strength was the sharing of knowledge of different administrative systems in different European regions. Project partners were able to learn from Best Practice from across the continent, here the discussions in the framework of the study tours to partner regions were particularly helpful.

Main findings

The main findings from analysing the partners' results can be seen as follows:

- Administrative permission procedures for RES-e installations present a highly fragmented picture ("patchwork"), differing often between technologies within the same region and differing strongly between regions, allowing relatively few universal conclusions on the present situation. However, the project was able to identify Best Practice approaches which are listed below.
- One big challenge is to find the right balance between complicated and lengthy procedures, imposing requirements which are too strict and too expensive versus the justified protection of other important interests and rights. Administrative procedures have - among others - also the function of trying to find a compromise between the interests of project developers and the interest of neighbours (in being protected against visual intrusion, noise, smell etc.). Ideally, such compromise results in plants with a better acceptance and this is also in the long-term interest of the RES-e market development. However, such an ideal solution is hard to find.

- Among the Best Practice solution which emerge, "one-stop-shop" procedures where all or at least several procedures are combined meaning that decisions are taken within the one single procedure, are a very important simplification for planners and project developers.
- Procedures should be different according to the scale of plants. An interesting solution in this respect is an approach of "permitted development" where small-scale plants are exempt from (some or all) permission procedures, which is based on the assumption that (very) small plants also do not represent any major risks against which an administrative procedure must protect.
- The publication of official guidelines issued by the regional authorities for potential RES-e plant owners/operators that clearly outline the required permissions and the procedures (included estimated timeframe) can also be a very useful instrument in speeding up procedures.
- Good contacts to authorities and including all stakeholders from the very beginning, e.g. a platform for all actors to meet could be part of the procedures, are very helpful to solve problems at an early stage.
- An instrument that forces authorities to act within a certain period of time would help to speed up procedures.

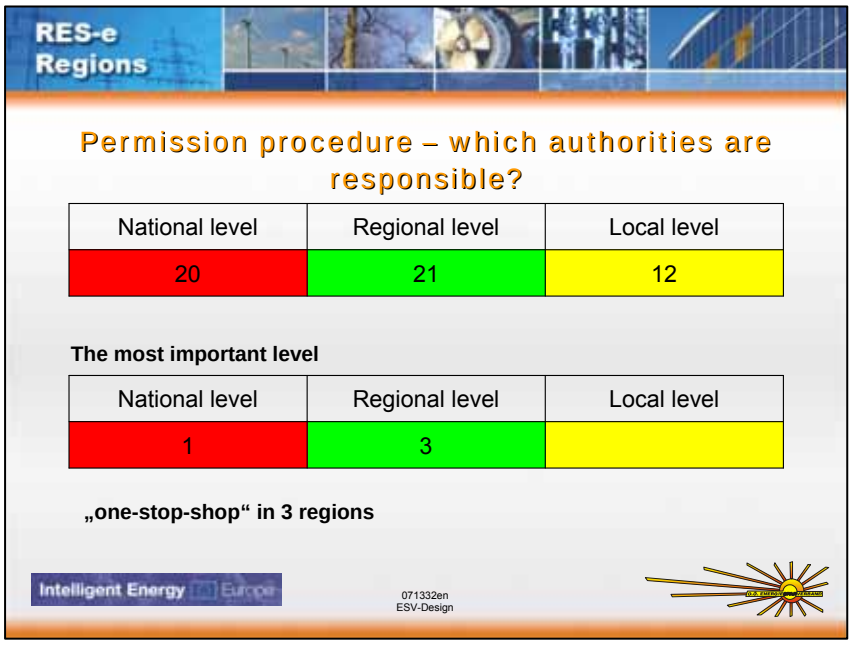
Simplification of administrative procedures

One important question for the simplification of procedures is which authorities on which levels are in charge of the most important and frequent permission procedures for RES-e plants. The graph below tries to quantify the distribution of responsibilities, so the national and regional levels seem to be equally important and also the local level is quite relevant (keeping in mind that in many countries, more than 3 administrative level can be found). As a consequence of this situation, there are many, many different actors.

Permissions required in the partners region include for example:

- spatial planning
- electricity permits
- water permits
- grid access
- environmental impact
- energy

Only few regions stated that installations below a certain size do not need permission or at least a simplified procedure is applied.



However, again this is different and depends on the technology:

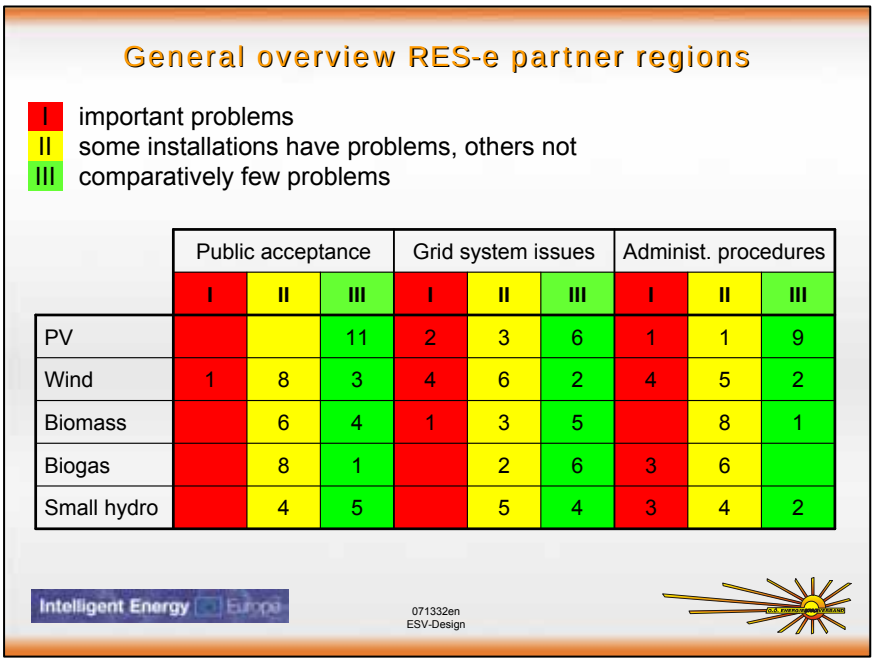
- in Saarland only for PV no permission on domestic properties is needed, but this is not valid for other technologies
- in Upper Austria for installations < 30 kW no permission is required
- in Copenhagen simplified procedures for plants below 19 MW are carried out, plants from 200 kW – 10 MW only have to be notified (except wind)
- in Navarra for plants < 100 kW simplified procedures are applied

Three regions mentioned a "one-stop-shop" procedure where all or at least several procedures are combined meaning that decisions are taken at the same time and trials are combined.

Main challenges

The main challenges encountered in the partners regions are:

- high planning costs
- finding a balance between the interest of project developers and the interests of neighbours in being protected against negative impacts from the plants (noise, small, visual intrusion)
- high influence of single experts & administration officials (who tend to overrate risks and safety issues)
- high (political) influence of (small) groups of opponents
- spatial planning
- very limited knowledge of legal issues of project developers



	Public acceptance			Grid system issues			Administ. procedures		
	I	II	III	I	II	III	I	II	III
PV			11	2	3	6	1	1	9
Wind	1	8	3	4	6	2	4	5	2
Biomass		6	4	1	3	5		8	1
Biogas		8	1		2	6	3	6	
Small hydro		4	5		5	4	3	4	2

This graph makes an attempt at summarising the main barriers for RES-e technologies (by number of regions - these reflect the opinions and evaluations of the project partners). In general, most problems are encountered by wind, followed by biogas and small hydro.

One big challenge in the field of administrative procedures is to find the right balance between complicated and lengthy procedures, imposing requirements on the project developers which are too strict, too lengthy and too expensive versus the justified protection of other important interests and rights. Administrative procedures have - among others - also the function of trying to find a compromise between the interests of project developers and the interest of neighbours (in being protected against visual intrusion, noise, smell etc.). Ideally, such compromise results in plants with a better acceptance and this is also in the long-term interest of the RES-e market development. However, such an ideal solution is hard to find.

From the experiences in the different regions, the "one-stop-shop" solution described above is potentially able to make a good contribution to both interests.

Another interesting solution is an approach of "permitted development" where small-scale plants are exempt from (some or all) permission procedures, which is based on the assumption that (very) small plants also do not represent any major risks against which an administrative procedure must protect. The Greater Copenhagen Region, for example, has a permitted development system for household wind turbines which do not require a building permit for turbines up to 25m in height or 13m in rotor diameter. In Saarland, domestic properties may install PV systems without seeking permission. A similar system for example is in place in Upper Austria where plants up to 30 kW require no permission according to the electricity legislation.

Another helpful approach is an independent body (a watchdog) to oversee disputes, particularly regarding fees charged for the connection to the grid. The Swedish Energy Agency has the regulatory ability to investigate the cost of fees for accessing the grid, which is helpful in resolving disputes in the Västra-Götaland region. In Wales, network operators are required to allow third parties to bid for the connection to the grid. In most instances this has the potential to make grid connection more rapid and less costly. In some other regions, the electricity regulator takes over this role.

Lengthy permission procedures are frequently also the result of a lack of experience of the administrative staff which act with excessive caution. A planning body with experienced staff members who are used to dealing with issues relating to RES-e installations is highly important for the RES-e market development, but this particular strength cannot be implemented by legislative changes and is a consequence of practical experiences with this type of work. However, in the course of this project, significant effort was made in increasing the levels of know-how and understanding of respective administrative bodies, e.g. by targeted events and site-visits.

Success factors

Based on the reports and stakeholder dialogue in the participating region, an 'ideal' administrative/grid-access/financial environment situation for optimal RES-e market development would include the following elements:

- Good grid infrastructure:
  Particularly important for large RES-e installations, notably wind and hydro. Many regions which have the best potential for wind and hydro are at capacity and limited predominantly by grid access (the Spanish regions, Slovenia and Wales are good examples of this).

- Adequate feed-in tariffs:
  These should be targeted at each RES-e technology individually, and guaranteed for a length of time which ensures a reasonably stable financial framework for potential investors.

- Guaranteed and competitively priced grid access:
  This is a problem in several regions. Many RES-e installations which are border-line in terms of economic viability will not be carried out if the price quoted for grid access is unreasonably high. An independent body to oversee disputes of this kind is helpful. The regulations in Wales state that the grid operator is obliged to allow a third party to bid for, and carry out the work, provided they have the necessary qualifications. This guarantees some level of competition and forces prices down, and could be a useful model for other regions.

- Simple administrative procedures:
  Complex procedures seem to be the rule rather than the exception in most of the regions. From the perspective of micro-generation, this is probably the main limiting factor in installations, along with the economics. "One-stop-shop" procedures and simplified planning procedures for small-scale plants (permitted procedures) would be a solution.

- Instruments that force authorities to act:
  An instrument that forces authorities to act, which means that they can not delay projects over a longer period simply by not acting. In Upper Austria this instrument is called "Devolution" and means that if the responsible authority does not act within 6 months, the owner/operator can appeal for permit to the next higher authority.

- Permission guidelines:
  An official document issued by the regional authorities for potential RES-e plant owners/operators that clearly outlines the required permissions and the procedures. It should also include an estimated timeframe depending on the technology and size of the planned projects.

- "Flexible procedures":
  In order to find the right balance between strict requirements leading to well functioning plants and high acceptance and simplification of procedures, the procedures should be flexible in a sense that they could be easily adapted to technological improvement. More mature technologies probably do not require such strict requirements any longer.

- Intermediary:
  An independent body, which has good contacts to both sides and which can act as an intermediary in difficult cases, would be helpful to mitigate conflicts.

- Including all stakeholder:
  Procedures should foresee a platform for all actors to meet and to be included.

- Good contacts to authorities:
  very often problems can be solved at an early stage of the project development especially if good contacts are established before the procedures start.

3.4 The role of local administration and political decision makers

Municipalities/local governments have a key role to play in the market penetration of RES-e in their different roles:

- as owners and operators of public buildings and facilities (especially office buildings, schools, homes for retired, sports facilities, service buildings, public lighting installations etc.) which could function as role models and be used for production of green electricity
- as authorities (often responsible for building/planning permissions)
- as first contact points for citizens and SMEs (especially in rural areas)
- as important electricity consumers (and therefore potential users of green electricity)
- and sometimes as (co-)owners of municipal energy companies (e.g. electricity, district heating etc.)

Municipalities can either be drivers of local RES-e development (by installing plants themselves and thereby giving a "good example", by actively informing citizens or even by providing financial incentives) or the opposite.

The role of municipalities in the permission procedures varies between countries and regions, in most cases their official role is limited. However, it is unlikely that a RES-e plant will be built against the expressed wish of a majority of local decision makers.

The partners supported municipalities by organizing seminars, site visits, by giving some advices on the planning and realization of RES-e plants or by implementing local support programmes. Municipalities are more and more involved in RES-e projects where they are owners or investors (France, Austria).

The type of RES-e technology which is mostly encouraged depends first on the availability of the resource and on the added value for the economy. In Upper Austria, biomass, biogas and small hydro power are the most welcomed RES-e technologies. In many other regions, PV projects receive the strongest support (Slovenia, Copenhagen, Saarland). In Rhône-Alpes, feed-in tariffs for PV, biogas, wind energy and small hydro have been recently increased but, by the moment, the strongest development concerns PV projects.

The following activities were implemented and support tools were developed, to encourage local level authorities:

Analysis

The first activities were dedicated to a brief analysis of the special situation and needs of municipalities in relation to the RES-e. The aim was to identify their level of knowledge and requirements, so that the results will be used to turn the future support activities toward their special needs. Each partner selected a number of municipalities in their regions for interviewing them and developing a brief analysis. The selection represents different types of municipalities (smaller/larger, low or no RES-e activities, etc.).

The questionnaire aimed at giving a view of the opinion and wishes of municipalities regarding production and consumption of renewable electricity. Based on the survey to selected municipalities, a short report was developed for each region which analyses the special situation and needs of municipalities in relation to the RES-e: The results outlined in these reports will be used to turn the future support activities toward their special needs.

Trainings for local actors

Each participating region organised two trainings for local actors:

- In **Upper Austria**, the first training for municipalities was organised on 23 May 06 in Linz. It was arranged as an info event called "Bürgermeister-Frühstück" (breakfast for mayors). targeted mainly at mayors. The aim was to inform and train them about the possibilities of modern RES-e technologies and of developing local RES-e strategies. Best practice examples were presented. The second training was organised on 19 October 2006 in Linz and targeted at persons responsible for energy matters in municipalities. Local actors were informed about all energy related aspects concerning public buildings, a focus was put on electricity, especially different possibilities of RES-e utilisation and production.
- **RAEE:** The first training was organised on 17 April 07 and dealt with grid connection procedures. More than 30 participants attended the training and entered into a lively discussion. The second training was arranged on 26 April 07 and included a visit of small hydro power plants in Switzerland.
- **ARE:** The trainings were organised as half-days information meetings with representatives of local bodies. 8 such meeting were carried out from 22 February to 29 March 2007 and in total 121 participants from 87 municipalities attended.
- **DTI** organised the training on 25 August 2005 for the region of Copenhagen. The one-day seminar was targeted at municipalities, consulting engineers, architects and local companies. The aim of the event was to inform local actors at all levels, newcomers as well as experienced players about the incentives and possibilities to integrate PV in buildings. Latest news from EU and Denmark were presented. In addition, a half-day workshop "Visions for solar energy & sustainable energy systems for cities" was organised targeting at local actors on 18 April 2007. The workshop was attended by about 100 participants.
- The first training for local actors of **UL-FME** was held on 12 April 2005. The event was organised as a one-day excursion and was targeted at local actors of the commune Ilirska Bistrica where a wind power plant with 47 wind mills is planned. The aim of the training seminar was to show the actual situation and the possible measures for this plant. The second training was held in cooperation with the Slovene District Heating Association and focused on wood biomass co-generation systems that are connected with district heating.
- **AAE:** the 2 training courses with 40 hours each were held on 13 November – 4 December 2006 (in Granada) and from 20 November to 11 December 2006 (in Cádiz) with a total of

56 municipal experts attending. Additionally a third working session was organised on 19 December 06.

- In the region of Västra Götaland, **STEM** held its first training for local actors on 23 November 2005 in Gothenborg. This half-day training seminar on PV. Among the participants were representatives of municipalities, architects, technicians, consultants and personnel from utilities and universities. The aim was to provide an overview of the technical, financial, planning and esthetical aspects of different kinds of PV technologies and applications on buildings. The second training focused on "RES-e in local energy planning" and was held on 22 March 06.
- **IZES** organised both seminars on the topic “PV – sustainable investment from the roof” (8 March & 8 June 2006, Saarbrücken). In each training event, which put a focus on technology and economical viability, more than 30 persons participated.

Guide

The following guides "RES-e in/for municipalities" were developed:

- **ESV**: A guide for municipalities was developed which focuses on best practice examples, presenting 10 municipalities which already have RES-e technology projects implemented. 2,000 copies of the full-colour brochure (4 pages) were printed and disseminated.
- **RAEE**: RAEE dedicated one part of the guide to electricity production and the other part to efficient use of electricity.
- **ARE Liguria**: The publication includes a description of the main RES-e technologies applicable in Liguria, namely mini-hydro, PV and biomass. The focus is put on technical and financial aspects and some “shining examples” are included as well.
- **ULFME**: The guide describes the state of the art of electricity production from RES and the main technologies. Best practice examples are included as well as contacts for further support.
- **AAE**: 1,000 copies of a 26-pages brochure "Guide on Renewable Energies connected to the grid in municipalities" were developed and disseminated. The guide informs on energy plans for municipalities, the legal framework, incentives, analysis of investment per technology and practical information on RES-e.
- **STEM**: The full-colour brochure describes the roles and instruments municipalities can utilise for the promotion and support of RES-e installations and development.
- **IZES**: the 12-page full-colour brochure puts the focus on the most important technical and financial topics regarding small-scale RES-e plants.

Advice to local projects

- In **Upper Austria**, ESV held 5 advice sessions. Due to the positive framework conditions, all of the advice sessions focused on the renovation of small scale hydro power plants. In

each case, the adviser evaluated the situation on-spot with respect to renovation of plants. Afterward, a written report was provided including details on costs and financing.

- **RAEE** completed 5 advices for RES-e projects of regional municipalities. The studies dealt with small hydro power plants, PV and wind energy.
- **ARE Liguria** gave technical support to municipalities and carried out advice sessions and feasibility studies in 5 municipalities and evaluated the possibilities of PV plants on public administration buildings.
- **ULFME** carried out 5 advice sessions on the implementation of a municipal biogas plant and a biomass CHP plant and gave input into local energy plan in 3 cases with a focus on local RES-e production potential.
- **AAE** carried out 5 face-to-face meetings in 3 regions and 2 town halls covering 49 municipalities. The advices focused on: overall energy situation including RES-e technologies (Almonte & Pilas), biomass gasification facility (Nijar), PV installation (Peal de Becerro, Sierra Mágina and Ecija).
- **STEM** held 5 advice, including advice for the Fyrbodal regional expert group on energy development which comprises 14 regions and the Fyrbodal Association of Municipalities consisting of 14 municipalities.
- The advices of **IZES** were realised in a two-step procedure: at first, municipalities participating in the regional competition, were informed about their opportunities on RES-e production. Secondly, concrete and individual advice was given to environmental and construction officers in the 12 competing municipalities. In addition, site-visits were made. Almost all advices focused on PV. For 3 municipalities, advices on 9 RES-e plants were given, one biogas and 8 PV plants.

Regional competition

In each region, a competition for RES-e in municipalities was carried out:

- The regional competition of **ESV** was organised as a regional solar league (“Solar-Landesliga”). The competition ranked municipalities according to their installed solar capacity within one year. For practical reasons, not only PV but also solar thermal installations were included. A promotion folder was developed, printed (3,000 copies) and disseminated via direct mailings to all Upper Austrian municipalities. The award ceremony was organised on 1 March 2007 in the frame of an evening event including a key note address by Franz Alt, a prominent environmental journalist.
- **RAEE** launched the competition in November 2006 and addressed municipalities which recently connected PV systems to the grid. 12 municipalities participated and at 5 February a board selected the winners in 2 categories (more or less than 1,000 inhabitants).
- **ARE** launched the competition "Electricity for the Sun" at the end of 2006. The competition addressed municipalities that had installed PV plants by 31 October 2006. The winner was the municipality of Bergeggi.

- **ULFME** organised a school photo competition for green electricity production in different municipalities. The competition met with high response with 62 registrations. Finally 30 students from 21 different municipalities submitted their contributions. Five first places were selected by the jury, the winner received a prize of 200 €.
- **AAE** together with the Andalusian Regional Ministry of Innovation, Science and Enterprise launched the "Awards for Local Entities 2006" calling for best examples of RES-e installations implemented between 1 January 2003 and 31 December 2006. 2 different awards were given: Award for the best promotion of RES-e and Award for the best RES-e project.
- **STEM** organised a request for "Best practice RES-e projects in municipalities". 5 best practice RES-e projects were submitted which are of great interest for other municipalities and which cover different approaches and situations on how municipalities can promote the development of RES-e.
- **IZES** organised the regional competition in two price categories: one for the municipalities with the highest additional kW power per capita during this year; the second for the municipality with the highest kW power per capita in total. The attractive prices were two 1 kW PV plants (donated by a private company) and free advice. 12 municipalities (out of 52 of the region) participated. The price giving ceremony took place in November 2006.

3.5 Technology specific promotion

The market development for different RES-e technologies varies significantly, even in neighbouring regions with similar conditions. Each region therefore selected a RES-e technology or application which is underperforming compared to its potential (taking into account the existing financial framework) and carried out targeted dissemination and promotion. The selections were based on a regional analysis over the barriers and opportunities. Each participating partner compiled a brief 2-page report describing their technology selection.

The technology selections of the regions are:

Region	Technology selection
Upper Austria	Small scale hydro and biogas
Liguria, Italy	Small scale hydro and biomass CHP
Greater Copenhagen Region, Denmark	Photovoltaic systems
Slovenia	Biomass CHP
Wales, UK	Domestic/Community-scale wind
Navarra, Spain	Photovoltaic systems
Västra Götaland, Sweden	Biogas CHP
Saarland, Germany	Medium-sized PV

A "support facility" for project developers was made available, which consists of:

- 2 support tools, i.e. checklists, FAQ, guidelines, short information leaflets etc
- Advices to individual projects in each region. Each project advice includes at least 1 face-to-face meeting as well as a 1 page summary for each project.
- Benchmarking of existing plants: an Excel table was developed in which key project costs (e.g. costs for plant design, cost for permission procedures, costs for main components, cost for maintenance) for at least 10 installations of a specific technology were listed and used for comparisons and proposals for cost reductions.

These are the following support tools produced and disseminated:

Region	**Support tools**	
Upper Austria	Small hydro power FAQ	Info on fish ladders
Liguria	Biomass CHP	Small scale Hydro
Greater Copenhagen	Interactive PV	Check list
Slovenia	Info List - Biomass CHP	FAQ - Biomass CHP
Wales	Leaflet on micro Wind	Flowchart on micro Wind
Navarra	Flowchart – PV net connection	Flowchart on PV in buildings
Västra Götaland	FAQ – Biogas installations	Check list - Biogas installations
Saarland	FAQ on Medium PV	Checklist for PV installations

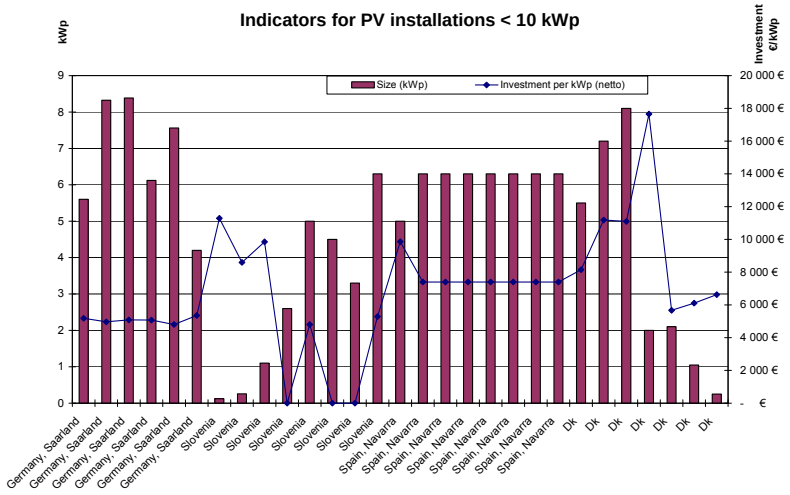
All support tools were disseminated regionally and can be downloaded from the project website.

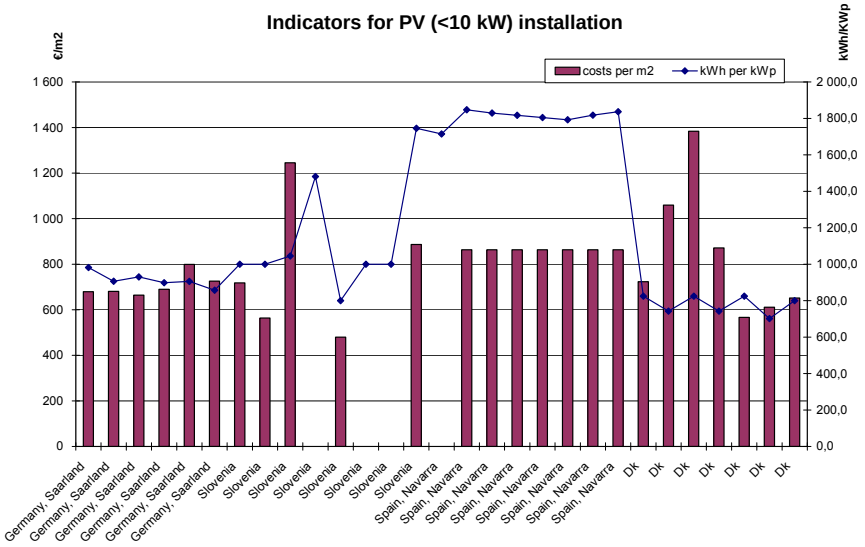
During the project a range of project advice sessions was held. For example nine face to face meetings have been held in respectively Västra Götaland, Upper Austria, Slovenia and Liguria, in total 64 projects were advised.

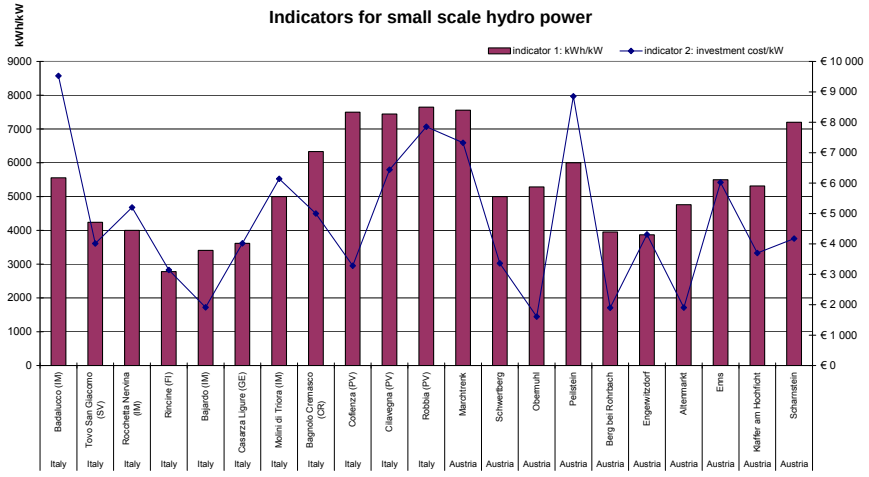
For the benchmarking activities in each region all the installation data were collected by the partners where compiled in one excel sheet per technology. Benchmarking data were developed for the following categories:

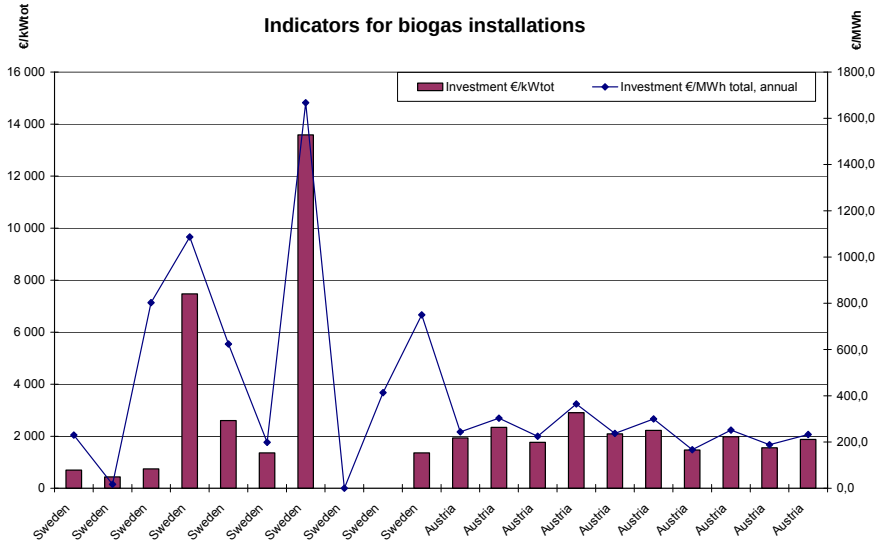
- PV < 10 kWp
- PV 10-40 KWp
- Biogas CHP
- Small scale hydro

Below are examples on benchmarking indicators for the different categories.


Indicators for PV installations < 10 kWp
kWp
Investment €/kWp
Size (kWp)
Investment per kWp (netto)
9
8
7
6
5
4
3
2
1
0
20 000 €
18 000 €
16 000 €
14 000 €
12 000 €
10 000 €
8 000 €
6 000 €
4 000 €
2 000 €
- €
Germany, Saarland
Slovenia
Spain, Navarra
Dk


Indicators for PV (<10 kW) installation
€/m2
kWh/KWp
costs per m2
kWh per kWp
1 600
1 400
1 200
1 000
800
600
400
200
0
2 000,0
1 800,0
1 600,0
1 400,0
1 200,0
1 000,0
800,0
600,0
400,0
200,0
0,0
Germany, Saarland
Slovenia
Spain, Navarra
Dk


Indicators for small scale hydro power
kWh/kW
indicator 1: kWh/kW
indicator 2: investment cost/kW
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
€ 10 000
€ 9 000
€ 8 000
€ 7 000
€ 6 000
€ 5 000
€ 4 000
€ 3 000
€ 2 000
€ 1 000
€ 0
Badalucco (IM)
Italy
Tovo San Giacomo (SV)
Rocchetta Nervina (IM)
Rincine (FI)
Bajardo (IM)
Casarza Ligure (GE)
Molini di Triora (IM)
Bagnolo Cremasco (CR)
Colfenza (PV)
Cilavegna (PV)
Robbia (PV)
Austria
Marchtrenk
Schwertberg
Obernuhl
Pelistein
Berg bei Rohrbach
Engerwitzdorf
Altenmarkt
Enns
Kefer am Hochficht
Schamstein



The work carried out was very straight forward and a number of contacts with key stakeholders were made, such as technology and know-how suppliers, existing and potential plant owners and operators and interested persons and organisations.

The benchmarking activities resulted in quite a lot of interesting data for a range of RES-e installations in the regions. However, when compiling the figures and analysing them by specific benchmarking indicators very few similarities could be seen between different regions and installation sizes. This most probably depends on the different stages of the market development, support schemes and other national, regional or local specific circumstances.

In addition, the provision of advice to concrete projects is an important part of the project and 64 face-to-face advice sessions have been carried out:

3.6 Cooperation & dissemination

Project website

Since mid-January 2005, a professionally designed project website (www.res-regions.info) is online and continually up-dated.

The project website is an important channel both within the project consortium - a special area is dedicated to internal communication - as well as to the regional, national and European stakeholders outside the project. All relevant project deliverables are placed on the website. In total more than 85,000 visitors (whole project duration) were counted.

Project newsletters

Four newsletters supported the dissemination of project results and focused on the following issues:

- interesting RES-e news from the participating regions
- RES-e activities in the participating project regions and upcoming events
- project results and best practice cases.

Project publication

To make the project and its activities better known to the European stakeholders, a common publication about the project was produced. The folder (full colour, 4 pages) includes information on the project and the project regions, it lists 11 exemplary RES-e installations in partners' regions and outlines success factors for regional RES-e market development. 3,000 copies were printed and disseminated among others, at the international conference and other events organised by partners. The folder is also available on the website for download.

International conference

The international conference "Green electricity for Europe's regions" was organised by ESV, with the input of the project partners, on 3 March 2006 in Wels/Upper Austria in the frame of the annual conference World Sustainable Energy Days. The conference was attended by 435 participants from 40 countries. 17 speakers were invited to offer an overview of different exemplary regional strategies in the field of RES-e, green electricity perspectives as well as technology solutions and regional benefits.

Simultaneous interpretation into English, German, Italian and Spanish was provided. First announcements (60,000 copies for the whole conference) and programme folders (40,000 copies including the whole conference programme) were developed and disseminated.

Charta (Declaration) "Regions for RES"

In the course of this project, the initiative "Declaration of European Regions for Renewable Energy and Energy Efficiency" was started. The aim of this action was, firstly, to increase the visibility of the commitment of European regions to sustainable energy both towards other regions as well as to local, national and European actors and, secondly, to encourage and motivate regions who have not set quantitative sustainable energy objectives to do so in the future.

Right from the beginning, it became evident that many European regions very appreciated this initiative. Between March 2006 and April 2007, 79 regions have expressed their commitment by signing the Declaration. This goes way beyond all the expectations of the project partners and can be considered a real success. This process will be continued after the project end and the next signature event has been fixed for December 2007, and - as a direct result of this project - a platform of cooperation has been established with the Committee of the European Regions and the Assembly of the European Regions.

Study tours

In each region a study tour for relevant RES-e actors was organised to another partner region:

- **ESV**: The study tour was organised to Castilla y León in September 2005. 11 stakeholders participated and the aim of the study tour was to foster the co-operation and technology transfer between Upper Austria and Castilla y León.
- **RAEE**: the study tour took place to Upper Austria in March 2007 and focused on biogas plants. 13 regional stakeholders attended the tour and six biogas installations were visited.
- **ARE**: the study tour was organised to Andalusia in October 2006. Important regional stakeholders attended the tour (for example the regional energy councillor) and the participants visited on shore wind turbines, biomass and solar installations.
- **ULFME**: ULFME organised a study tour to Upper Austria on 30 - 31 March 2006. 21 participants attended and, besides a seminar at ESV, the sites visited included the biomass CHP plant in Linz, a small hydro power plant, a biogas plant, a geothermal CHP plant and building-integrated PV plant.
- **EREN**: The study tour was carried out to Sweden in November 2005. The delegation of 16 stakeholders from Castilla y León visited Västra Götaland, the aim of the study tour was to promote the co-operation and transfer of technology between Castilla y León and Västra Götaland. The programme included a range of site visits and meetings with regional stakeholders.
- **AAE**: a study tour was carried out to Copenhagen in April 2007. 8 regional Andalusian market actors attended, the focus was on information on the Danish wind and biomass markets as well as contacting possible Danish business partners.
- **STEM**: the study tour was organised to Upper Austria to learn more about the small scale RES-e market. The study tour was arranged around the World Sustainable Energy Days to create added value for the participants.
- **IZES:** The study tour took place from 26 - 28 March 2006. Decision makers from Saarland participated in the tour to Upper Austria where they were able to profit especially from practical experiences of the plant operators. The participants plan to realise a biomass CHP with 1.5 MW electrical power on the basis of an innovative ORC process.

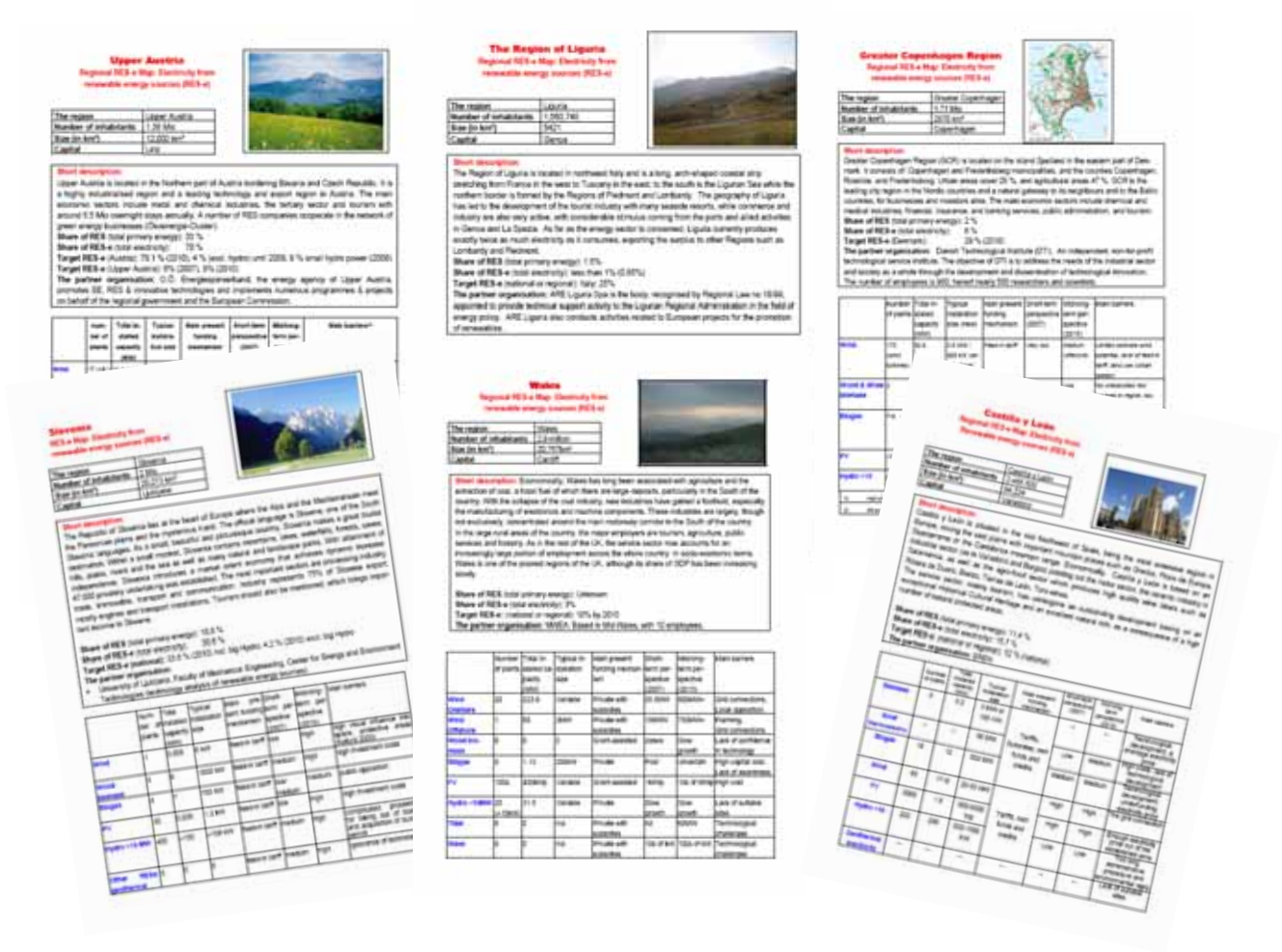
4 Main promotion tools

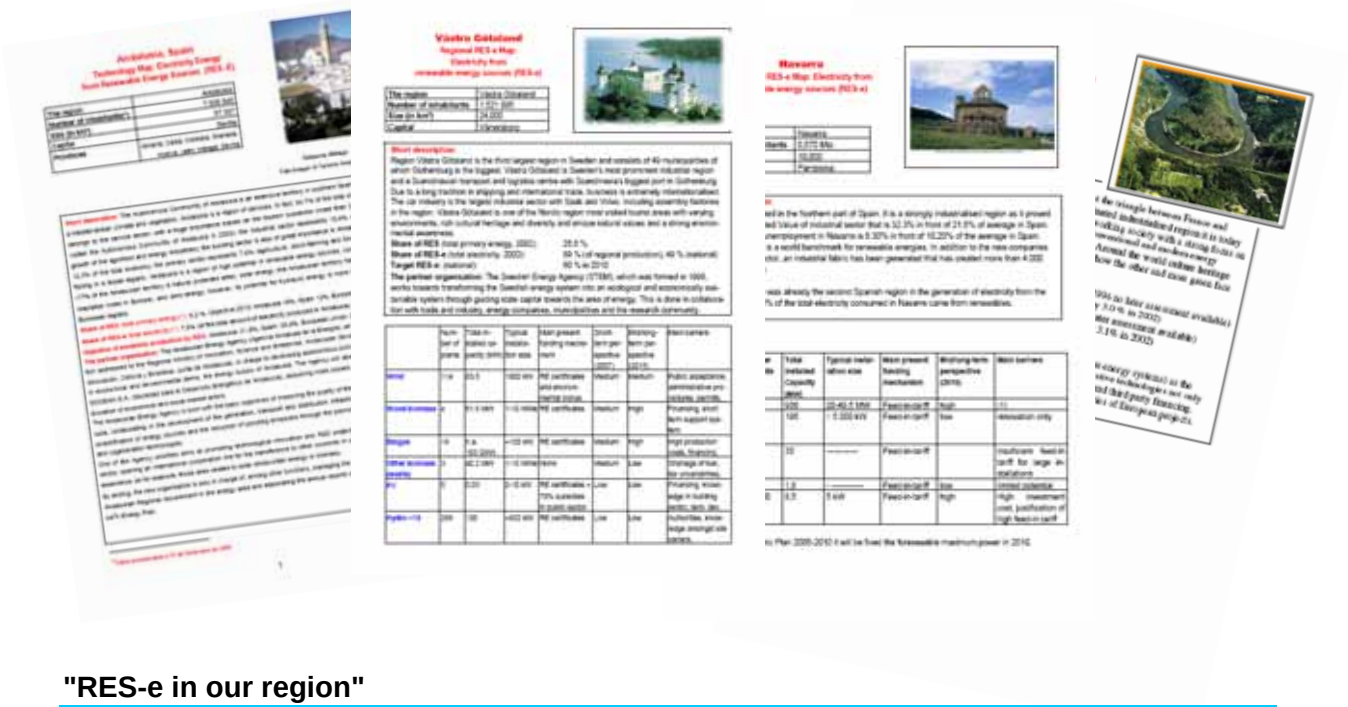
4.1 Publications

High quality and full-colour publications are an important promotion tool. In total, in the frame of the project, more than 30,000 copies of 30 different publications were developed and disseminated by the project partners.

Overview renewable electricity (Regional RES-e map)

The "Regional Res-e maps" among others provide an overview of the present market penetration of different RES-e technologies, the main financing mechanisms used, the existing support mechanisms, concrete barriers to further market development, identification of those target groups most likely to develop RES-e technologies.





"RES-e in our region"

High-quality publication, full-colour, to increase general awareness about RES-e and its benefits including shining examples which are likely to be received with special interest by the general public.

- Upper Austria, "Ökostrom in Oberösterreich",
- Rhône-Alpes, "L'électricité d'origine renouvelable en Rhône-Alpes",
- Liguria, "ELETTRICITÀ DA FONTI RINNOVABILI IN LIGURIA",
- Slovenia, "ELEKTRIČNA ENERGIJA IZ OBNOVLJIVIH VIROV ENERGIJE",
- Wales, "Renewable electricity in Wales",
- Castilla y León, "generación eléctrica a partir de energías renovables",
- Andalucia, "Fuentes de Energías Renovables conectadas a red en Andalucía",
- Navarra, "Navarra - ENERGÍAS RENOVABLES - Horizonte 2010 - Plan Energético",
- Västra Götaland, "Grön el i Västra Götaland",
- Saarland, "Wir im Saarland tun was für erneuerbare Stromerzeugung",

Project developers leaflet

The leaflet was part of targeted information and dissemination activities for different RES-e stakeholders especially involving project developers and local/regional authorities in charge of the different permission procedures, grid operators and regulators. The project developers leaflets outline relevant aspects relating to grid access and administrative procedures.

- Upper Austria, "Revitalisierung von Kleinwasserkraftwerken"
- Rhône-Alpes, "Petites centrales hydrauliques pour la production d'électricité: Difficultés et perspectives d'amélioration"
- Liguria, "PICCOLI IMPIANTI IDROELETTRICI - Elettricità da Fonti Rinnovabili in Liguria"
- Copenhagen, "NETTILSLUTTEDE SOLCELLE ANLÆG - EN LILLE HÅNDBOG FOR PROJEKTUDVIKLERE"
- Slovenia, "FOTOVOLTAIČNI SISTEMI VODNIK"
- Castilla y León, "Guía del Usuario - Energía Solar Fotovoltaica"
- Wales,"Small-scale wind systems - A Reference Guide"
- Andalucia, "Guía para INSTALACIONES FOTOVOLTAICAS conectadas a red en Andalucía"
- Navarra, "INSTALACIONES SOLARES FOTOVOLTAICAS CONECTADAS A RED"
- Västra Götaland, "Gårdsbaserad biogas för kraftvärme [Tillstånd och nätanslutning]"
- Saarland, "Leitfaden für Projektentwickler zu Genehmigungsrecht und Netzanschluss"

Guide "RES-e in/for municipalities"

Aim of the publication is to bring the process of "commitment and action" from the regional also to the local level. Municipalities are encouraged to set their own RES-e targets and strategies for which these guides offer practical support.

- Upper Austria, "Ökostrom in Gemeinden"
- Rhône-Alpes, "ÉLECTRICITÉ D'ORIGINE RENOUVELABLE - Collectivités locales : comment agir?"
- Liguria, "Elettricità da Fonti Rinnovabili in Liguria - GUIDA PER I COMUNI"
- Slovenia, "ZELENA ELEKTRIKA V OBČINAH VODNIK"
- Wales, "Renewable Electricity - A Guide for Local Authorities"
- Andalucia, "Guía sobre - energías renovables conectadas a red en municipios"
- Västra Götaland, "Guide till grön el - Kommunens roller och verktyg"
- Saarland, "Erneuerbare Energien rechnen sich Technologien, Finanzierungs- und Beteiligungsmodelle für "grünen" Strom"

RES-e project newsletters

Four project newsletters highlighted the most interesting project activities as well as other interesting "RES-e news" from the participating regions.

- Project newsletter No. 2, December 2005
- Project newsletter No. 1, May 2005
- Project newsletter No. 3, July 2006
- Project newsletter No. 4, April 2007

"Regions for RES-e"

The common project publication "Regions for RES-e" gives an overview of the project and exemplary RES-e installations in the partners regions.

- Project publication, "Regions for RES-e - Boosting renewable electricity in 11 European regions"

4.2 Events

Events are a well established tool either to reach a number of people or to focus on selected topics and target at specific stakeholders. Events were used in this respect in the project and in total more than 60 events were held reaching more than 3,300 regional and international stakeholders.

Regional Seminars

In order to support the development of regional RES-e targets & strategies and to start a stakeholders dialogue on regional level, one-day seminars for regional stakeholders was organised.

- Regional Seminar Upper Austria
  Title: "Energie-Zukunft 2030" ("Energy future 2030")
  Date & location: 26 April 2006, Linz
  Organiser: O.Ö. Energiesparverband
  Number of Participants: 160

- Regional Seminar Rhône-Alpes
  Title: Green electricity faced with European stakes
  Date & location: 15th February 2007, Lyon
  Organiser: Rhônalpénergie-Environnement
  Number of Participants: around 60

- Regional Seminar Liguria
  Title: ENERGETHICA - Workshop: Solar, Wind Power and Mini Wind Turbines: the most common technologies for energy from renewable sources.
  Date & location: 25th May, Genova
  Organiser: ARE Liguria, Legambiente Liguria, Environmental Department of the Regione Liguria
  Number of Participants: 89

- Regional Seminar Copenhagen
  Title: Photovoltaics and Energy Efficient Building
  Date & location: 25 August 2005, Copenhagen
  Organizer: DTI (Centre for Urban Ecology) and SolarCity Copenhagen
  Number of Participants: >80

- Regional Seminar Slovenia
  Title: National seminar: Resources and Technologies for green electrical energy production
  Date & location: November 10th 2005
  Organiser: University of Ljubljana, Faculty of Mechanical Engineering
  Partners: Energy Restructuring Agency (ApE d.o.o.), Gejzir d.o.o.
  Number of Participants: 70

- Regional Seminar Castilla y León
  Title: Wind Power Day: the future of Wind Energy
  Date & location: 20th September, 2006. Caja Rural de Soria. Soria (Spain).
  Organiser: Ente Regional de la Energía de Castilla y León (EREN) in collaboration of APECYL (Castilla y León Wind Power Association) and Caja Rural de Soria.
  Number of Participants: 83

- Regional Seminar Andalucia
  Title: “Renewable Energy in Andalusia: Opportunities and New Projects”
  Place: Congress & Exhibition Centre of Roquetas de Mar, Aguadulce, Almeria
  Date & time: Thursday, 5th October 2006
  Organisation: Agencia Andaluza de la Energía
  Participants: 120

- Regional Seminar Navarra
  Title: “Sustainable development and electricity: the production outlook”. RES-e Regions Project.
  Place: CENIFER. Imárcoain (Navarra) Spain.
  Date and timetable: Thursday, 22nd March 2007
  Organiser: Department of Industry and Technology, Commerce and Labour.
  Participants: 37

- Regional Seminar, Västra Götaland
  Title: Electricity from Renewables in Västra Götaland
  Date & location: 9 February 2006
  Organiser: STEM and the County of Västra Götaland
  Number of Participants: 199

- 2. Regional Seminar Saarland
  Title: Auswirkungen des EEG auf die Stromerzeugung aus erneuerbaren Energien. Effects of the Renewable Energy Act (EEG) on the power generation from renewable energies
  Date & location: 1st of December 2005, Göttelborn
  Organiser: IZES gGmbH
  Number of Participants: 80

- Regional Seminar Saarland
  Title: Fotovoltaik-Partnerschaften. Wege zum Solarstrom Photovoltaic partnerships. Ways to solar electricity
  Date & location: 29th of September 2005, Saarbrücken
  Organiser: IZES gGmbH
  Partners: craft guilds and the centre for the protection of the environment of the chamber of crafts
  Number of Participants: 95

European Workshop

In order to discuss the results of partner surveys and analysis of regional conditions of the RES-e implementation in each participating region, the European workshop " Boosting green electricity in 11 regions" was organised by Fedarene, ESV and Eref on 24 January 2006 in Brussels and attended by44 participants.

Regional info meeting

Information meeting for regional actors involved in issues related to grid access and administrative procedures were organised.

- Upper Austria
  Title: "Kleinwasserkraft – Ökologische Revitalisierung" (small hydro power plants – ecological retrofitting)
  Date & location: 17 March 2006, Linz
  Organiser: O.Ö. Energiesparverband
  Number of Participants: 260

- Rhône-Alpes
  Title: Small hydro: new legal framework and regional stakes
  Date & location: 30th March, Lyon
  Organiser: Rhônalpénergie-Environnement
  Number of Participants: 20

- Liguria
  Title*:* "Information Meeting: administrative procedures and grid access for minihydro and biomass power plants"
  Date & location: 15th March 2007, Genoa
  Organiser: ARE Liguria
  Number of Participants: 20

- Slovenia
  Title: Info meeting: Solar power plants – from the idea to the realization
  Date & location: January 24th 2007 & UL – Faculty of Mechanical Engineering
  Organiser: University of Ljubljana, Faculty of Mechanical Engineering
  Number of Participants: 32

- Castilla y León
  Title: Perspectives of Wind Power development in Castilla y León.
  Date & location: 16th January, 2006. "EREN BUILDING", León (Spain).
  Organiser: Ente Regional de la Energía de Castilla y León (EREN) – Junta de Castilla y León (SPAIN).
  Number of Participants: 27

- Andalucia
  Title: Information Meeting on the "Forum: Biomass Market
  for Electricity Generation Plants in Andalusia"
  Date & location: 1st February 2007, Sevilla
  Organiser: Agencia Andaluza de la Energía
  Number of participants: 17

- Navarra
  Title: Renewable Energies in Navarre
  Date & location: 22/03/07 Auditorium and Congress Centre of Navarra (Pamplona).
  Organiser: Government of Navarre
  Number of Participants: 74 participants

- Västra Götaland
  Title: Energy night for farmers
  Date & location: 16th March 2005, Järpås
  Organiser: LRF Järpås and the RES-e Region project
  Number of Participants: about 50

- Västra Götaland
  Title: Energy night for farmers
  Date & location: 14th March 2006, Tidaholm
  Organiser: FöreningsSparbanken Skövde, Hjo, Tibro, Karlsborg, Tidaholms Sparbank, LRF, LRF Konsult and the RES-e Region project
  Number of Participants: about 100

- Saarland
  Title: Hearing – Netzeinspeisung für Strom aus erneuerbaren Energien. Netzfragen und Genehmigungsrecht
  Hearing - Feed of electricity from renewable energies in public grids. Grid access and permit law
  Date & location: 21th June 2006, Chamber of Crafts in Saarbrücken
  Organiser: IZES gGmbH
  Partner: Center for the protection of environment of the Chamber of Crafts
  Number of Participants: 40

Planners platform

Companies specialised in planning and promoting RES-e projects are very important stakeholders: they are the ones which usually are practically obtaining the permits as well as doing the negotiations for grid access and have therefore valuable information and their input is crucial in understanding the day-to-day problems. Therefore a meeting for planners was organised where their special needs and concerns were discussed.

- Planners platform Upper Austria
  Title Round-Table Energieunternehmen / Round-table energy companies
  Date & location: 13.7.2006, Linz
  Organiser: O.Ö. Energiesparverband
  Partners: Energy companies
  Number of Participants: 15

- Planners platform Rhône-Alpes
  Title: Working group on administrative barriers towards small hydro power plants projects
  Date & location: 4th July 2006, Lyon
  Organiser: Rhônalpénergie-Environnement
  Number of Participants: 6 (2 professional representatives of the small hydro sector, 1 syndicates of energy who have hydro projects and 3 local representatives of the state administration in charge of the authorisations for hydro power plants)

- Planners platform Liguria
  Date & location: 20 November 2006, Genoa
  Organiser: ARE Liguria
  Participants: Paolo Tacchini (La Spezia Industrial Association vice chairman), Piero Grandoni (President of ArGo s.r.l.), Maria Fabianelli (ARE Liguria), Adriano Pessina (ARE Liguria), Franco Zunino (Regional councillor of Environment Dept.), Gianfranco Aresca (Manager of the Liguria Region Energy Policies Dpt.), Carlo Marzani (Liguria Region Environment Dept. office bearer), Renzo Castello (Manager of the Liguria Region Soil Defence Dept.).

- Planners platform Slovenia
  Title: Planners platform: Solar and wind energy
  Date & location: October 25th 2006 & Innovation development center Vransko
  Organiser: University of Ljubljana, Faculty of Mechanical Engineering
  Partners: Cluster TREE (Institution for sustainable development of energy and ecology)
  Number of Participants: 11

- Planners platform Castilla y León
  Title: Future of a Wind Power Control Centre (WPCC) in Castilla y León: tasks and duties
  Date & location: 2nd December, 2005. “EREN BUILDING” León (Spain)
  Organiser: Ente Regional de la Energía de Castilla y León (EREN) - Junta de Castilla y León (SPAIN).
  Number of Participants: 13

- Planners platform Andalucia
  Title: Planner´s Platform Meeting “Forum: Solar Photovoltaic Energy connected to the Grid in Andalusia”
  Date & Location: 26th February 2007, Sevilla
  Organiser: Agencia Andaluza de la Energía (Andalusian Energy Agency)
  Financed by: Agencia Andaluza de la Energía and the European Commission
  Number of participants: 15

- Planners platform Navarra
  Títle: Solar Photovoltaic Energy connected to the grid in Navarre
  Date & Location: 22nd March 2007, CENIFER, Imárcoain (Navarra) Spain
  Organiser: Department of Industry & Technology, trade and Labour of Government of Navarra.
  Number of Participants: 12

- Planners platform Västra Götaland
  Title: Annual meeting for Hushållningsgillet in Vårgårda
  Date & location: 20th February, Vårgårda
  Organiser: Hushållningsgillet Vårgårda and the RES-e Region project
  Number of Participants: about 50

- Planners platform Saarland
  Title: Problems for the net with grid connection from decentralized electricity producers
  Date & location: 27th of July 2005 at IZES premises in Saarbrücken, Saarland, Germany
  Organiser: IZES gGmbH
  Partners: university and utilities
  Number of Participants: 12

Training for local actors

Local administrations and political decision makers have a key role to play in the market penetration of RES-e. Therefore 2 trainings per region for local actors were developed and implemented.

- Upper Austria
  Title: Bürgermeisterfrühstück "Energiespar-Gemeinden" (breakfast for mayors)
  Date & location: 23 May 2006, Linz
  Organiser: O.Ö. Energiesparverband
  Number of Participants: 37

  Title: Trainingsseminar “Energie in Gemeinden“ (Training “Energy in municipalities“)
  Date & Location: 19 October 2006, Linz
  Organiser: O.Oe. Energiesparverband
  Number of participants: 30

- Rhône-Alpes
  Title: Half-day formation on electric connecting issues for green electricity installations
  Date & location: 17th April, Lyon
  Organiser: Rhônalpénergie-Environnement

  Title: Visit of small hydro power plants in Switzerland
  Date & location: 26th April, Lyon
  Organiser: Rhônalpénergie-Environnement

- Liguria
  Title: “Training for public administrations”
  Date & time: Genova 22/02/2007 & 14/03/2007, Savona 8/03/2007 & 12/03/2007, Imperia 22/03/2007 & 22/03/2007, La Spezia 27/03/2007 & La Spezia 29/03/2007
  Organisation: ARE Liguria, Regione Liguria
  Number of Participants: 121

- Copenhagen
  Title: Photovoltaics and Energy Efficient Building
  Date & location: 25 August 2005, Copenhagen
  Organizer: DTI (Centre for Urban Ecology) and SolarCity Copenhagen
  Number of Participants: >80

Title: Visions for Solar Energy & Sustainable Energy Systems for Cities
Date & location: 18 April 2007, Copenhagen
Organizer: SolarCity Copenhagen and DTI
Number of Participants: 98

- Slovenia
  Title: Educational excursion to expected location of wind power plants – commune Ilirska Bistrica
  Date & location: 12 April 2005, Ilirska Bistrica
  Organiser: UL-FME and Study group for energetics
  Number of Participants: 20

  Title: Training on wood biomass co-generation systems connected with district heating systems
  Date & location: 20 March 2007, Portorož, Slovenia
  Organiser: UL-FME and Slovenian District Heating Association
  Number of Participants: 44

- Andalucia
  Title: Training Session on “Renewable Energies and Energy Efficiency in Andalusia for Municipality experts and businesses of the sector”
  Date & location: 13th November 06 - 4th December 06, Salón de Actos, Edificio CIE, Diputación de Granada
  Organiser: Agencia Andaluza de la Energía

  Title: Training Session on “Renewable Energies and Energy Efficiency in Andalusia for Municipality experts and businesses of the sector”
  Date & location: 20th November 06 - 11th December 06, Empresarial CADE, Jérez de la Frontera (Cádiz)

  Title: Technical Meeting: “Renewable Energies & Energy Efficiency. Energy Management Tools for Municipalities”
  Date & location: 19th December 06, Pabellón de Italia, Isla de la Cartuja, Sevilla
  Organiser: Agencia Andaluza de la Energía

- Västra Götaland
  Title: PV – training seminar for public actors
  Date & location: 23 November 2005, Gothenburg
  Organiser: STEM, EkoCentrum, White Architects

Number of Participants: 42

Title: Efficient Energy planning and integration of RES-e
Date & location: 22 March 2006, Åmål, Västra Götaland
Organiser: Hållbar Utveckling i Väst and STEM/KanEnergi
Number of Participants: 15

- Saarland
  Title: Fotovoltaik - Nachhaltige Geldanlage vom eigenen Dach / Photovoltaic – Sustainable investment from the own roof
  Date & location: 8th of March 2006, municipality of Ensdorf, Saarland
  Organiser: IZES gGmbH
  Partner: the municipality of Ensdorf
  Number of Participants: 40

Title: Informationsveranstaltung: Fotovoltaik – nachhaltige Geldanlage vom eigenen Dach / Information event: Photovoltaic – Sustainable investment from the own roof
Date & location: 8th of June 2006, festival room of the town-hall in Saarbrücken, Saarland
Organiser: IZES gGmbH
Partner: the municipality of the capital Saarbrücken
Number of Participants: 50

International conference

The high level international conference "Green electricity for Europe's regions" was held on 3 March 2006 in Wels/Upper Austria in the frame of the international World Sustainable Energy Days. The conference was organised by the O.Ö. Energiesparverband and attended by 435 participants.

Study tours

Study tours for important RES-e actors were organised to another partner regions, which encompassed a programme of site—visits as well as meeting with relevant actors from the host region.

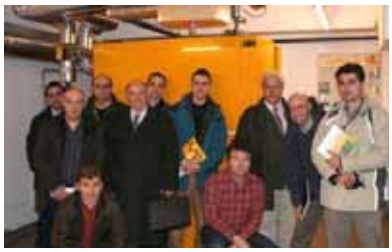
- Study Tour O.Ö. Energiesparverband to Castilla y Léon
  Title Study tour Castilla y León
  Date & location: 8-11 Sept. 2005, Castilla y León, Spain

Organiser: O.Ö. Energiesparverband
Number of Participants: 11

- Study Tour Rhône-Alpes to Upper Austria
  Title: Biogas installations in Upper Austria
  Date & location: 22-23 March, Upper Austria
  Organiser: Rhônalpénergie-Environnement

- Study Tour ARE LIGURIA to Andalucia
  PLACE: Seville
  DATE: 16th – 18th October 2006
  PARTICIPANTS: 5

- Study Tour ULFME to Upper Austria
  Title: Study tour to Upper Austria
  Date & location: 30th – 31st of March 2006, Linz, Upper Austria
  Organiser: UL-FME, Slovenia
  Number of Participants: 21



- Study Tour EREN to Upper Austria
  Date & location: 28 Feb-3 March, 2006. Upper Austria (Austria)
  Organiser: EREN-O. Ö. Energiesparverband
  Number of Participants: 16

- Study Tour EREN to Västra Götaland
  Date & location: 8-12 november, 2005. Vasträ Götland (Sweden)
  Organiser: EREN-Swedish Energy Agency
  Number of Participants: 16

- Study Tour Andalucia to Copenhagen
  Event: Study tour to Copenhagen, Denmark
  Date & region: 15th -18th April 07, Copenhagen, Denmark
  Organiser: Danish Technological Institute with the

collaboration of the Andalusian Energy Agency
Number of participants in the Andalusian Delegation: 8

- Study Tour STEM to Upper Austria
  Title: Swedish study tour to Upper Austria
  Date & location: 27.02.07 – 02.03.07
  Organiser: KanEnergi/STEM
  Number of Participants: 5

- Study Tour IZES to Upper Austria
  Title: Business tour to Upper Austria
  Date & location: 26.-28.03.06 Upper Austria
  Organiser: ESV and IZES gGmbH
  Number of Participants: 4

4.3 Advices & support tools

Besides publications and events, face-to-face advices are most benefical for supporting project developer and owner/operators of RES-e plants with individual support and concrete project advice. In total more than 100 face-to-face advices were given supporting RES-e project implementation. Together with specific support tools, project advice given within the project, supported especially municipalities and underperforming RES-e technologies.

Advices to local RES-e projects with community involvement

Partner	Municipality	Date	Technology
ESV	Friedburg	23.08.2005	Wind (water pumping)
	Gurten	31.1.06 & 22.06.06	Wind (water pumping)
	Kirchheim	22.06.06 & others	Small hydro
	Hofkirchen	7.7.06 & 15.09.06	Small hydro
	Windhaag	28.11.2006	Small hydro
RAEE	St. Julien	28.01.2007	Small hydro
	Aubenas	05.03.2007	Small hydro
	Saint Barthélémy Grozon (Ardèche)	13.03.2007	PV
	La croix du Bauon (Ardeche)	06.03.2007	Wind
	Val d'Ay (Ardeche)	21.05.2007	Wind
ARE	Carrodano	11.07.2006	PV
	Dolceacqua	18.07.2006	PV
	Arnasco	25.07.2006	PV
	Gorreto	04.09.2006	PV
	Carro	22.09.2006	PV

ULFME	Železniki	16.06.2005	Biomass
	Gornja Radgona	17.08.2005	CHP
	Žalec	04.04.2006	Small hydro
	Radovljica	25.07.2006	Biogas
	Murska Sobota	07.12.2006	CHP
AAE	Nijar	22.09.2005	Biogas
	Ecija	09-06-12.05	PV
	Almonte y Pilas	29.9.2006 & 2.2.2007	General Res-e info
	Peal de Becerro	12.06-03.07	PV
	Sierra Mágina	10.06-12.06	PV
STEM	Grästorp	05.10.2005	Res-e
	Tanum	29.08.2006	Wind and PV
	Dals-Ed	29.08.2006	Wind and PV
	Tröllhättan	20.09.2006	wind and biogas
	Tröllhättan	21.09.2006	wind and biogas
IZES	Illingen	31.08.2005	PV
	Bous	30.11.2005	PV
	Heusweiler	21.12.2005	PV
	Heusweiler	10.2005	Biogas
	Heusweiler	01.2006	PV
	Heusweiler	01.2006	PV
	Heusweiler	12.2005	PV
	Dilsburg	01.2006	PV
	Illingen-Uchtelfangen	10.2005	PV

Project advice to selected RES-e technology projects:

Partner	Technology	Location	Date
ESV	Biogas	Friedburg	16.03.2005
	Small scale hydro	Uttendorf	17.08.2005
	Biogas	Neukirchen a.d. Vöckla	20.09.2005
	Small scale hydro	Tragwein	02.01.2006
	Biogas	Walding	24.03.2006
	PV	Langenstein	24.03.2006
	Small scale hydro	Windischgarsten	27.04.2006
	PV	Wels	16.01.2007
ARE	Small scale hydro	Genova	19.04.2006
	PV	Genova	16.06.2006
	Small scale hydro	Pontinvrea	28.06.2006
	Hydro power	Rezzoaglio	03.07.2006
	Small scale hydro	Pornassio	12.07.2006
	Small scale hydro	Mendatica	17.07.2006
	Small scale hydro	Ceranesi	28.08.2006
	Small scale hydro	Vobbia	29.09.2006
	Small scale hydro	Sassello	21.10.2006
DTI	PV	Albertslund	21.05.2006
	PV	Ishøj	22.11.2006

ULFME	CHP	Železniki	14.06.2005
	PV	Lesce	21.10.2005
	CHP	IMP Promont–Montaža, d.o.o.	26.01.2006
	PV	Jarše	09.02.2006
	PV	Kranj	12.04.2006
	PV	Mavčiče	02.06.2006
	Biomass stirling engine	Kamnik	08.08.2006
	Biomass	Ljubljana	16.11.2006
	Biogas	Kranj	13.09.2006
GN	PV	Gobierno de Navarra - Tudela Solar, S.L.	03.03.2005
	PV	Gobierno de Navarra - Solartia – Falces	17.05.2005
	PV	Gobierno de Navarra - MB Solar	19.05.2005
	PV	Gobierno de Navarra - Aciona Solar	23.05.2005
	PV	Gobierno de Navarra - Opde	07.06.2005
	PV	Gobierno de Navarra - Ecotecnia, S.C.C.L.	23.06.2005
	PV	Gobierno de Navarra Solinvest	04.07.2005
	PV	Gobierno de Navarra - Solartia	11.09.2005
	PV	Gobierno de Navarra - ENADER-Tierrasolar	23.09.2005
	PV	Gobierno de Navarra - Ecotecnia, S.C.C.L.	11.11.2005
STEM	Biogas	Uddetorp	22.02.2006
	Biogas	Larv, Vara	28.02.2006
	Biogas	Rådde gård	16.03.2006
	Biogas	Töreboda	24.03.2006
	Biogas	Bygdegården i Hällsta	27.03.2006
	Biogas CHP	Tollered	19.04.2006
	Biogas	Skara	22.06.2006
	Biogas	Töreboda	15.08.2006
	Biogas	Falköping	23.08.2006
IZES	ORC	Saarbrücken	07.11.2005
	Biomass	Losheim/Saar-vertraulich	27.07.2005
	Biomass	Mettlach-vertraulich	17.11.2005
	Biogas	Homburg/Saar	10.2005
	Biogas	Dörrenbach/Saar	Spring 2006
	hydro	Homburg/Saar	04.2006
	PV	Dudweiler	Sum. 2005
	PV	Herrensohr	Sum. 2005
	PV	Lebach	Spring 2006

Support & benchmarking tools

Support and benchmarking tools for selected RES-e technologies were developed, which assist project developers.

Region	**Support tools**	
Upper Austria	Small hydro power FAQ	Info on fish ladders

Liguria	BiomassCHP	Small scale Hydro
Greater Copenhagen	Interactive PV	Check list
Slovenia	Info List - Biomass CHP	FAQ - Biomass CHP
Wales	Leaflet on micro Wind	Flowchart on micro Wind
Navarra	Flowchart – PV net connection	Flowcart on PV in buildings
Västra Götaland	FAQ – Biogas installations	Check list - Biogas installations
Saarland	FAQ on Medium PV	Checklist for PV installations

In addition, the benchmarking tools for the following categories were developed:

- PV < 10 kWp
- PV 10-40 KWp
- Biogas CHP
- Small scale hydro

5 Main results & conclusions

5.1 Main results and achievements

In total, more than 3,300 regional and international stakeholders participated in over 60 events (seminars, conferences, regional meetings and workshops) held in the course of the project. More than 30,000 copies of 30 different publications were printed and disseminated to target audiences on local, regional, national and European levels. In the framework of the surveys, the hotline and the advice sessions, the project partners were in direct and personal contact with a total of more than 5,000 persons, exchanging information on views or technical expertise.

The following activities and deliverables were implemented and finalised between January 2005 and April 2007:

Regional RES-e & Public Opinion (Work Package 1)

- 11 regional RES-e maps
- 11 surveys
- 10 high-quality publications
- 9 regional targets and strategies
- 11 regional seminars
- 133 articles published
- 11 RES-e hotlines established, 650 enquiries answered

Grid access and administrative procedures (Work Package 2)

- 11 surveys and regional transposition reports
- 1 European workshop
- 9 regional information meetings
- 11 project developers leaflets
- 11 lists of planners
- 9 planners platform meetings
- Summary report

RES-e in municipalities (Work Package 3)

- 10 surveys and analyses reports "RES-e in municipalities"
- 23 trainings for local actors
- 8 guides “RES-e in/for municipalities“
- 42 advices to local RES-e projects
- 7 competitions carried out
- Summary report

Technology specific promotion (Work Package 4)

- 8 technology selection reports (national and English language)
- 64 face-to-face project advices
- 16 support tools
- 7 benchmarking tools
- Summary report

Interregional cooperation (Work Package 5)

- Project website www.res-regions.info, more than 85,000 visitors
- 4 project newsletters developed and disseminated
- project publication
- international conference "Green electricity for Europe's regions"
- Declaration "Regions for RES" signed by 79 regions
- 8 study tours

All deliverables can be downloaded from the project website: www.res-regions.info

5.2 Conclusions & lessons learnt

As a result of the activities carried out, the following main conclusions can be drawn:

- Regions have a very important role to play in increasing the market shares for RES-e and in achieving the European policy targets:
  - by taking a strategic approach and developing and implementing RES-e strategies and action plans
  - by tackling administrative barriers often to be found on regional or sub-regional levels
  - by promotion and awareness raising and involving regional stakeholders
  - by tackling the increase in electricity consumption and thereby increasing the RES-e shares.
- There is a significant interest and willingness among a number of European regions to act in favour of renewable energy sources, however, further European support and networking is needed to fully benefit from the contribution regions can make.
- For influencing people and thus the development of RES-e on local level, it is crucial to involve local & regional stakeholders and establish contacts among them.

The lessons learnt include the following:

The role of the regions/municipalities

The role of regions the in the decision making process concerning RES-e electricity is on the one hand quite significant, on the other hand very limited. If the overall financial framework for RES-e (usually decided at national level) is inadequate to allow for a significant RES-e development, then there is little regions can do (except for political action on the level of

presidents of the regions). Also - in the other extreme - if the financial framework is extremely encouraging, then the need for action on regional level may also be less urgent.

However, at present, the situation in the large majority of Member States is neither of both, but somewhere in the middle: the funding conditions (either through feed-in tariffs, certificates or other mechanisms) are designed in a way to allow for market development, but very often only in a limited manner.

Here, the regions have a very important role to play:

- by taking a strategic approach and developing and implementing RES-e strategies and action plans (as many regions have already done for RES in general). In this way they can decide about the focus of the market development in their region, they can ensure that the necessary know-how is available and also improve longer-term planning from the side of the project developers and other stakeholders. This allows them to maximise the regional benefits - as can be shown from regions such as Navarra which have a track record of taking a strategic approach to RES-e resulting in significantly higher RES-e market shares than neighbouring regions with the same financial framework for RES-e and similar potentials. Very often regions are not aware of the whole range of instruments and options they have at their disposal which evidently limits their willingness to act.
- by tackling administrative barriers often found on regional or sub-regional levels. Quite often these barriers have their roots in the lack of specific knowledge of the involved authorisation bodies and the resulting caution, frequently also a lack of coordination can be detected. Here the regions and their activities can have a decisive role.
- by promotion and awareness raising: RES-e suffer - at least in the media discussion - sometimes from a bad image, here the role of regional and local bodies in correcting this picture can be important.
- presently, the increase of the RES-e shares are threatened by a sharp increase in electricity consumption in many regions and Member States, with the resulting risk that the increase in electricity consumption will overcompensate the growth in electricity production from RES. Here the regions - due to their proximity to end consumers in private households, public bodies and companies - will have an important role in tackling the increase in electricity consumption and thereby increasing the RES-e shares.

Administrative procedures

Administrative permission procedures for RES-e installations in the participating regions present a highly fragmented picture, differing often between technologies within the same region and differing strongly between regions, allowing relatively few universal conclusions on the present situation. However, the project was able to identify Best Practice approaches, such:

- "One-stop-shop" procedures where all or at least several procedures are combined into one permission procedure in which all (or several) relevant issues are tackled and one decision is taken. This is a very important simplification for planners, project developers as well as the authorisation bodies.
- Procedures should be differ according to the scale of plants. An interesting solution in this respect is an approach of "permitted development" where small-scale plants are exempt from (some or all) permission procedures. This is based on the assumption that (very) small plants also do not represent any major risks against which an administrative procedure must protect.
- The publication of official guidelines issued by the regional authorities for potential RES-e plant owners/operators that clearly outline the required permissions and the procedures (included estimated timeframes) can also be a very useful instrument in speeding up procedures.
- An environment which promotes contacts between authorities, project developers and other stakeholders from the very beginning is very helpful to solve problems at an early stage.
- An instrument that forces authorities to act within a certain period of time helps to speed up procedures, e.g. by "devolution" (if an authority does not take a decision within 6 months, then the project developers have the right to take the procedure to the next administrative level).

One big challenge in this context is to find the right balance between complicated and lengthy procedures, imposing requirements which are too strict and too expensive versus the justified protection of other important interests and rights. Administrative procedures have - among others - also the function of trying to find a compromise between the interests of project developers and the interest of neighbours (in being protected against visual intrusion, noise, smell etc.). Ideally, such compromise results in plants with a higher acceptance and this is also in the long-term interest of the RES-e market development. However, such an ideal solution is hard to find.

Public opinion

Contrary to what one might assume from reading press articles in many European countries and regions, the public opinion on RES-e in the participating regions is overwhelmingly positive. Similar results have been achieved by other representative surveys, however, as negative campaigning persists, so must those who know that they can prove the opposite. The positive regional survey results were also especially useful to convince regional politicians and civil servants that the support for RES-e does not only exist on abstract European or national levels, but also very concretely in their own region.

Nevertheless, it became quite evident that there are significant gaps in concrete knowledge - most people associate wind energy with RES-e, many are less familiar with biogas and PV.

The future potential is mainly seen in solar energy and biomass. Also a clear need for information on potentials and shares - the knowledge on the contribution of RES-e to the electricity generation in the region is very scarce in all participating regions and often leads to an underestimation of the contribution RES-e can make.

RES-e have also a very positive image in many municipalities and again the general awareness is quite high. The experiences with existing plants are generally very good and RES-e is a topic of discussion in many municipalities. However, very often there is a high discrepancy between awareness and action (meaning that local authorities are aware of the RES-e option and would like to have more RES-e plants in the village, but only few are presently planning RES-e plants).

5.3 Success stories

Declaration of European Regions

In the course of this project, the initiative "Declaration of European Regions for Renewable Energy and Energy Efficiency" was started. The aim of this action was, firstly, to increase the visibility of the commitment of European regions to sustainable energy both towards other regions as well as to local, national and European actors and, secondly, to encourage and motivate regions who have not set quantitative sustainable energy objectives to do so in the future. Right from the beginning, it became evident that many European regions very appreciated this initiative. Between March 2006 and April 2007, 79 regions have expressed their commitment by signing the Declaration. This goes way beyond all the expectations of the project partners and can be considered a real success. This process will be continued after the project end and the next signature event has been fixed for December 2007, and - as a direct result of this project - a platform of cooperation has been established between Fedarene, the Committee of the European Regions and the Assembly of the European Regions.

Hydro power initiatives in Upper Austria and Rhône-Alpes

Two regions, Upper Austria and Rhône-Alpes, put the focus of their activities on revitalisation of small hydro power.

In Upper Austria, when developing the “Regional RES-e maps”, it became clear that the short term potential for small hydro power (SHP) is high and that SHP would be the most promising RES-e technology during the RES-e project period. Whereas the potential for large hydro power is more or less exploited, renovation of small hydro power plants (i.e. plants up to 10 MW) could significantly contribute to increased RES-e generation. Presently, there are

590 SHP plants in operation with a capacity of over 120 MW and an annual output of 690 GWh.

In the last 2 years the framework conditions for renovation of SHP plants were very good: an increased feed-in tariff was available for renovated SHP plants and an investment subsidy additionally supported plant owners. However, financial support alone is not sufficient to significantly change investment behaviour of plant owners (especially as these are usually not energy companies or other professionals). That is why a promotional campaign was carried out, including free, on-spot energy advice: a number of information and promotional actions were implemented to make the best use of this window of opportunity, including for example: a regional info meeting with more than 260 participants (WP2), a leaflet for project developers (WP2), 2 support & a benchmarking tools (WP4). As a result of the campaign and the financial support, 202 plant owners invested in modernisation measures which on average led to an increased output of about 33%!

These promotional activities, which were only possible in the frame of RES-e project, contributed very much to the success and the following results could be achieved:

- 202 small hydro power plants renovated
- more 40 M€ investment (mainly regional economy)
- increase in electricity generation of on average 30% (~ 50 GWh/a)
- about 20,000 t CO_2-emission reduction.

Although small hydro power (SHP) used to represent an important resource in the region of Rhône-Alpes, there are a great deal of administrative problems which results in important delays in the realisation. Hence, a focus in RES-e Regions project was put on the improvement of the regional conditions for the development of small hydro projects.

A brochure was written to inform about the main problems and to propose some solutions. The steering group and the regional planners' platform gave RAEE the opportunity to meet the main persons concerned by SHP in Rhône-Alpes. Two of the five advices given to municipalities focused on SHP projects. And, as a training in WP3, a visit to Switzerland was organised to have a better knowledge of systems on water networks and new innovative hydro plants. This visit was a real success: the Swiss operator and the laboratory MHyLab, who hosted it, shared all their experience and gave many useful clues to the participants.

It is now planned to keep on supporting small hydro project in the region: future activities will be focused on small hydro power plants on drinking and waste water networks. As a result of the activities, RAEE was recently contacted by two municipalities to support them in the procedures towards local sanitary authorities. It is also likely that a national action concerning the improvement of the law as regards procedures for turbines on water networks will be started.

Study tours

On a practical level, the project partners found the study tours to other regions a particularly useful instrument to overcome regional barriers. Within the project for example 8 study tours were organised and very good feed-back was received from participants.

For example for the participants from Liguria, who went to Andalucia to get first hand information on innovative technologies and large-scale plants was very beneficial - the regional minister himself as well the Regional Director for Environmental Planning were able to see and hear first hand about the experiences of large-scale RES-e development. A delegation from Andalucia visited Copenhagen to learn more about biomass and off-shore wind developments.