



SUPPORT_ERS

WP 3: Assessment of Administrative Structures and Procedures

Leader of the work package



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1. SUMMARY

The report is the results of the work within the Working Group 2 – Administrative Structures (WG 2) established in order to fulfill the objectives of the working package 3 (WP 3) – Assessment of Administrative Structure and Procedures.

The main objective of the work package is the assessment of the situation relating to the administrative structures and procedures involved in the preparation and permitting of RES projects. The assessment process will focus on the administrative barriers for large installation for RES-E technologies, but also for larger installations for RES-H in the partner countries.

The scope of work for the WG 2 consists in:

- Assessing administrative procedures and barriers hindering the efficient implementation of existing support schemes for RES-E and RES-H
- Identifying specific administrative barriers in the partner countries and common obstacles as basis for the upcoming activities.

The report consists in 3 main chapters covering the following items:

- Existing information and data related to administrative barriers for renewable energy sources (RES)
- Interviews on administrative barriers
- General conclusions and recommendations.

Related to existing information and data related to administrative barriers for renewable energy sources, the report presents data regarding to:

- Studies on administrative barriers for different renewable energy sources in more than one EU country
- Studies focusing on administrative barriers for a specific renewable energy source or technology
- Studies on administrative barriers for renewable energy sources on country and regional level
- Gap analysis for data on administrative barriers for renewable energy sources
- Institutions in charge of RES programs implementation

Based on identified information and available data, it was found that there are studies on administrative barriers for different or specific RES in more than one country of the EU. Within these studies, the administrative barriers were globally analyzed and even it were proposed solutions to reduce the impact of administrative barriers under development of RES project, the barrier still exist and they need deep and specific analysis and finally find a unique solution to solve them.

In order to assess the administrative structures and procedures a minimum of 10 expert interviews per country was performed. During the interviews the following aspects were addressed: Number of involved institutions and coordination between them; lead times of

application for funding; lead times for necessary permits; access to information about support schemes; transparency of administrative procedures; awareness of benefits of RES in involved administrations; integration in planning procedures.

The report presents an evaluation of interviews results for each partner countries.

Based on interviews results, the following conclusions could be draw up:

- Even the experience in RES promotions is higher in some countries, interviews results show that there is still potential for optimizing the support scheme;
- Different support schemes are applied in different country and the obtained results are direct influenced by the applied support scheme;

In order to reduce the administrative barriers for RES projects implementation, the following recommendation can be draw up:

- Increase or fix the existing financial support schemes for a longer period of time;
- Establish individual support-schemes for different technology;
- Establish a special authority for RES projects, where all relevant people from institutions involved in permitting process would meet at regular occasions (i.e. once a week) to resolve potential issues among themselves and investors;
- A better coordination between the involved authorities is recommended.

2. EXISTING INFORMATION AND DATA RELATED TO ADMINISTRATIVE BARRIERS FOR RENEWABLE ENERGY SOURCES

The analysis will offer an overview of existing information and data related to the administrative barriers for renewable energy sources. There will be presented data regarding:

- studies on administrative barriers for different renewable energy sources in more than one EU country
- Studies focusing on administrative barriers for a specific renewable energy source or technology
- Studies on administrative barriers for renewable energy sources on country and regional level
- Gap analysis for data on administrative barriers for renewable energy sources
- Institutions in charge of RES programs implementation

The review summarizes the main findings of the studies.

Studies on administrative barriers for different renewable energy sources in more than one EU country

The main studies elaborated at the EU level, related to the administrative barriers for renewable energy sources in more than one country, are presented below.

<i>Title of the study</i>
Optres Report (D8) “Analysis of barriers for the development of electricity generation from renewable energy sources in the EU-25”
<i>Date of study</i>
Conducted in March - June 2005/ Published in May 2006
<i>Author / Commissioned by:</i>
The analysis was carried out as part of the Optres Project “Assessment and optimization of renewable support schemes in the European Electricity market” on behalf of the European Commission / Directorate-General for Energy and Transport. Authors: Rogier Coenraads, Monique Voogt, Attila Morotz, ECOFYS
<i>Countries covered by the study:</i>
24 EU countries (no response from Slovakia)
<i>Method:</i>
<ul style="list-style-type: none"> - Combination of qualitative (180 questionnaires and 30 interviews) and quantitative (180 questionnaires) methods - Extensive stakeholder (project developers and investors) consultation that consisted of a web-based questionnaire (March-May 2005) and follow-up interviews (May-June 2005)

<ul style="list-style-type: none"> - The respondents were divided in two groups according to their level of involvement in RES_E investments: <ul style="list-style-type: none"> - project developers, manufacturers, generators, suppliers, industry associations, banks, insurers (This group completed questionnaires with a focus on risk perception and risk mitigation strategies) - consumers, consumer organizations, regulators, network operations, national authorities, energy agencies, NGOs i.a. (This group completed a shorter questionnaire)
<p>Data base and sources of information:</p>
<ul style="list-style-type: none"> - Stakeholder consultation: 533 entries from 251 organizations representing 260 activities - Questionnaires received: from EU-15 (62%), EU-10 (14%) - Questionnaires received: from electricity generation companies (25%), NGOs (12%), industry associations (10%), energy agencies (7%)
<p>Summary of findings:</p>
<ul style="list-style-type: none"> - Administrative and regulatory barriers were identified as main barriers for the development of renewable energy projects. Other severe barriers can be of grid, social and financial nature. - Administrative problems are perceived to be highest for hydropower-projects and on-shore wind - Categories of administrative barriers were: <ul style="list-style-type: none"> - high number of authorities involved - lack of coordination between different authorities - long lead-times to obtain necessary permits - RES insufficiently taken into account in spatial planning - low awareness of benefits of RES of local and regional authorities - Proposed solutions for improvement were: <ul style="list-style-type: none"> - Reduce the number of local, regional, national administrations involved - Standardize procedures particularly administrative requirements and application forms - Guidelines for authorization procedures - Anticipate development of future RES projects - Grid related obstacles for installing new capacities strongly depend on the national situation and are identified as: <ul style="list-style-type: none"> - insufficient availability of grid capacity - non transparent procedure of grid connection - insecure objectiveness - high costs of grid connection - long lead-time to obtain grid connection authorization - As social barriers the opposition from local public and authorities, low awareness of RES benefits have been identified. As financial obstacles the lack of trust of investors and banks and the low predictability of capital subsidies and cash flow are named.
<p>URL: http://www.optres.fhg.de/results/OPTRES_D8_barriers.pdf</p>

<i>Title of the study</i>																															
Administrative Barriers to Renewable Electricity - Barriers related to regional/local competences and practices																															
<i>Date of study</i>																															
Results presented in June 2007																															
<i>Author / Commissioned by:</i>																															
The results of the study were presented by Christine Öhlinger, O.Ö. Energiesparverband																															
<i>Countries covered by the study:</i>																															
11 European regions : Andalusia, Castilla y Leon, Copenhagen, Liguria, Navarra, Oberösterreich, Rhône-Alpes, Saarland, Västra Götaland, Slovenia, Wales.																															
<i>Method:</i>																															
The methodological base of the study was a combination of quantitative (the partners gathering information procedure) and qualitative, expert knowledge from partners from all regions involved being used. The partners are presented in the table below:																															
	<table border="1"> <thead> <tr> <th>Region</th> <th>Project partner</th> </tr> </thead> <tbody> <tr> <td>Andalusia</td> <td>SODEAN</td> </tr> <tr> <td>Castilla y Leon</td> <td>EREN</td> </tr> <tr> <td>Copenhagen</td> <td>DTI</td> </tr> <tr> <td>Liguria</td> <td>ARE Liguria</td> </tr> <tr> <td>Navarra</td> <td>Gov. Navarra</td> </tr> <tr> <td>Oberösterreich</td> <td>ESV</td> </tr> <tr> <td>Rhône-Alpes</td> <td>RAEE</td> </tr> <tr> <td>Saarland</td> <td>AZES</td> </tr> <tr> <td>Slovenia</td> <td>ULFME</td> </tr> <tr> <td>Västra Götaland</td> <td>STEM</td> </tr> <tr> <td>Wales</td> <td>MWEA</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td>EU</td> <td>FEDARENE</td> </tr> <tr> <td>EU</td> <td>EREF</td> </tr> </tbody> </table>	Region	Project partner	Andalusia	SODEAN	Castilla y Leon	EREN	Copenhagen	DTI	Liguria	ARE Liguria	Navarra	Gov. Navarra	Oberösterreich	ESV	Rhône-Alpes	RAEE	Saarland	AZES	Slovenia	ULFME	Västra Götaland	STEM	Wales	MWEA			EU	FEDARENE	EU	EREF
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<i>Data base and sources of information:</i>																															
Each partner provided information regarding the region he represented.																															
<i>Summary of findings:</i>																															
<p>1. difficult to generalize situation</p> <ul style="list-style-type: none"> • situation in each region usually fairly complex • situation within each region varies strongly with each technology • legal framework had a specific evolution in each country • major problems -> no installations <p>2. challenges</p>																															

<ul style="list-style-type: none"> • find the right balance between complicated & lengthy administrative procedures & too restrictive requirements and the desire to have "high quality plants" • high planning costs • high influence of single experts (technical referees) • problem of project changes/adaptations after permission • high (political) influence of (small) group of opponents • spatial planning (rededication) • low interest in legal aspects <p>What actions are needed?</p> <p>Regional level:</p> <ul style="list-style-type: none"> • permission requirements to be made clear publicly • overall COP (coefficient of performance) instead of electricity only • adaptation of procedures following technical development • involving all parties from the beginning <p>National level:</p> <ul style="list-style-type: none"> • training & information for technical referees • strong political support for RES-e • stable legal framework <p>European level:</p> <ul style="list-style-type: none"> • communication of Europe-wide best practice examples • consequences for failing in the implementation of EU-Directives • time frame for permission procedures • interregional cooperation <p>URL: www.esv.or.at</p>
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<i>Title of the study</i>
Workshop on administrative barriers to renewable electricity - An industry point of view
<i>Date of study</i>
June 2007
<i>Author / Commissioned by:</i>
Oliver Schaefer, Policy Director of EREC
<i>Countries covered by the study:</i>
General approach at the European level
<i>Method:</i>
Analysis of the existing situation for RES E in EU countries, based on information submitted by representatives of different industry sectors.
<i>Data base and sources of information:</i>
<i>Summary of findings:</i>
1. There is a general lack of transparency regarding authorization and certification procedures.

<ol style="list-style-type: none"> 2. The present situation demonstrates confused and imprecise procedures for the customer 3. There are too many administrators. 4. Administrators are very often not familiar with renewable energy issues. 5. Hence they are not able to transfer the relevant information to the applicant. 6. Administrators must be able to satisfy the technical requirements and concerns of the applicant. 7. The time required to obtain all the authorizations has a direct impact on the costs and economics of each renewable energy company. 8. The status of certification protocols (level of certification in each country) is not yet well applied in Europe. There are different levels of maturity and implementation among EU countries.
<p>URL: www.erec.org</p>

<i>Title of the study</i>
Drivers and main barriers for the development of renewable energies
<i>Date of study</i>
October 2007
<i>Author / Commissioned by:</i>
IBERDROLA RENEWABLE ENERGIES - Spain
<i>Countries covered by the study:</i>
EU
<i>Method:</i>
Analysis of main drivers and barriers for RES development in EU countries.
<i>Data base and sources of information:</i>
<i>Summary of findings:</i>
<p>According to surveys performed by the Spanish company, there are three main barriers to solve in order to reach the new renewable objectives :</p> <ol style="list-style-type: none"> 1.Economic: an adequate support system is the main factor to develop renewable energies 2.Technical:interconexions and integrate of renewable in the system 3. Administrative: different administrative procedures objectives. <p>The figure below illustrates main findings for each analyzed RES.</p>

Generation technology	Capacity installed, EU (MW)	EU potencial up to 2020 (MW)	Current situation	Main barriers
Wind	40,000	180,000	****	<ul style="list-style-type: none"> Integration in the electrical system and advance in the prediction
Mini-hydro	12,000	20,000	**	<ul style="list-style-type: none"> Administrative procedures, rehabilitation of infrastructures and social acceptance needed
Solar photovoltaic	1,800	15,000	***	<ul style="list-style-type: none"> Costs reduction needed and silicon availability
Solar thermoelectric	0	3,000	***	<ul style="list-style-type: none"> Technological development and experience needed Hybridation required
Biomass	5,000	16,000	**	<ul style="list-style-type: none"> Guarantee of raw material and involve other sectors such as agriculture (Common Agrarian Reform)

Title of the study
Report on the Implementation of the Acquis on Renewables in the Energy Community Contracting Parties
Date of study
May-November 2007
Author / Commissioned by:
Energy Institute Hrvoje Pozar, Zagreb, Croatia / EC Secretariat, Vienna, Austria
Countries covered by the study:
Albania, Bosnia and Herzegovina, Croatia, The former Yugoslav Republic of Macedonia, Montenegro, Serbia and UNMIK
Method:
<p>The first step represents collection of the information on energy sector data and in particular on the implementation, completion timeframe, and reference documents/status of the action regarding the implementation of the following EU Directives:</p> <ul style="list-style-type: none"> 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market and 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport. <p>Based on the collected information, in the second step the current situation is reviewed, the implementation plans for the RES-E and Biofuels Directives are evaluated, all findings are reported and recommendations are made for future actions and plans in order to assist the Contracting Parties to reform and strengthen their RES energy sector.</p>
Data base and sources of information:

The collection of information was focused on publicly available data, but the Contracting Parties and their respective national responsible authorities were also contacted in order to validate the collected data and provide the most relevant ones for each particular Contracting Party. In addition, information has been gathered from implemented and ongoing EC research projects within the Sixth Framework Program and other relevant sources.

Summary of findings:

The main aspects of the two EU Directives (RES-E and Biofuels) are explained first, followed by a brief description of the EU objectives stated in the latest Commission's strategic policy documents from January 2007. The Energy Community aspects are reflected then by notifying current situation regarding obligations from the Treaty in respect to adoption and implementation of the EU RES acquis. At the end, recent developments related to fulfilment of the RES commitments in the Contracting Parties are notified, as well as the link between these commitments and this study.

The most important barrier for a wider introduction of RES in the Contracting Parties is the lack of stable legislative framework, which would define the obligatory targets as well as the support measures needed for the realization of these targets. Out of all the Contracting Parties, only Croatia has introduced such a legislative framework (in July 2007), although only for RES electricity. Consequently, the Contracting Parties have to clearly define their strategy and policy towards RES and, based on that, introduce a stable legislative framework.

URL: http://www.energy-community.org/portal/page/portal/ENC_HOME/DOCUMENTS

Studies on administrative barriers for a specific renewable energy source or technology

The main studies elaborated at the EU level, regarding the administrative barriers for specific renewable energy sources or technology, are presented below.

<i>Title of the study</i>
Administrative barriers – European Photovoltaic Industry Association
<i>Date of study</i>
IEEA workshop June 2007
<i>Author / Commissioned by:</i>
European Photovoltaic Industry Association
<i>Countries covered by the study:</i>
13 European key solar nations through their Energy Agencies and EPIA
<i>Method:</i>

Analysis of the existing situation for PV in 13 EU countries, based on information submitted by the Energy Agencies and EPIA
Data base and sources of information:
Data and info collected from partners
Summary of findings:
<ul style="list-style-type: none"> • Complex administrative procedures: <ul style="list-style-type: none"> ➢ High number of permissions (3 to 17) ➢ High number of authorities involved (in average 3- 4); ➢ Scarce preparation of the authorities to handle the cases; ➢ Permit duration (from 18 months to + 4 years!); ➢ Decentralization: different rules in different regions; ➢ Lack of transparency (e.g. Portugal number of permission required not known) • Insufficient grid access • Missing or restrictive building sector regulations • Restrictions discouraging the installation of PV systems on roof or in buildings <p>What are the preoccupations from the point of view of politicians?</p> <ul style="list-style-type: none"> ➢ Limitation of expenses ➢ Protection of the national economy ➢ Increasing of the national produced value <p>What are the preoccupations from the point of view of the industry?</p> <ul style="list-style-type: none"> ➢ Constant conditions ➢ Protection of the national economy <p>Recommendations for effective EU and national legislation on renewable</p> <ul style="list-style-type: none"> • One step authorization procedure • Strict requirements on transparency of procedures • Effective monitoring • Including PV in the revision of the EPBD as an option to fulfill the Directive • Different technical requirements for safe and grid-compatible plant commissioning and operation according to power categories
www.pvpolicy.org

Title of the study
Main Policy Barriers for Wind Energy – European Wind Energy Association
Date of study
Author / Commissioned by:
Dr. Nicolas Fichaux, EWEA Policy Department
Countries covered by the study:
Poland, France, Italy, Spain

Method:
Lessons learned from projects implementation
Data base and sources of information:
Dissemination info from association members.
Summary of findings:
<p>Policy Barriers main topics:</p> <ul style="list-style-type: none"> • Grid <ul style="list-style-type: none"> – Authorizations for Grid connection – Grid Management & Improvement (country interconnections) • Environmental Impact Assessment (Protected areas) • Building Permits (Zoning, Radars, Noise) • Offshore <ul style="list-style-type: none"> – Administrative Zoning – Procedures for obtaining building permit – Connection to the Grid <p>Specific barriers:</p> <p>Poland:</p> <ul style="list-style-type: none"> • No clear assessment procedure for Grid Connection • Environmental Impact Assessment studies unclear • Protected areas changing: areas are waiting for Natura 2000 approval <ul style="list-style-type: none"> – No project in these “Shadow Areas” – No project in Natura 2000 areas <p>France:</p> <ul style="list-style-type: none"> • Dedicated Development Zones (local level) not implemented (no zone = no project) Radars - 2,2 GW stopped • Noise: new legislation – noise frequency analysis inside houses • Civil Aviation: sets the color of the turbines • Offshore: issues on all topics (planning, grid, authorizations ...) <p>Belgium</p> <ul style="list-style-type: none"> • Dedicated Development Zones (local level) not implemented (no zone = no project) • Natura 2000 areas forbidden for Wind • Radars: advice is given / unclear procedures • A map of exclusion exists for Walloon territory. This map is not public. • Co-visibility study: 15 km (1/50 of the Walloon territory) <p>What have to be done?</p> <ul style="list-style-type: none"> – A systematic survey is needed – An expert Group providing advices is needed – Implementation of these advices through a Mirror Group <p>The Technology Platform can help</p> <ul style="list-style-type: none"> – Article 6 of Directive 2001/77/EC has to be strengthened and enforced
www.ewea.org

Title of the study

Administrative barriers for small hydropower development in Europe
Date of study
June 2007
Author / Commissioned by:
ESHA
Countries covered by the study:
France, Italy, Spain, Sweden, Austria, Germany, Lithuania, Latvia, Estonia, Poland
Method:
Information gathered by ESHA through a survey to its members.
Data base and sources of information:
Information gathered by ESHA through a survey to its members. The paper also builds on the results of two IEE Projects: the Project SPLASH and the Project SHERPA;
Summary of findings:
<ol style="list-style-type: none"> 1. The main non-technical problem that constitutes an obstacle to the development of small hydro is the difficulty in obtaining the necessary authorizations to build a new site. Apart from the very long time required to process them, procedures vary strongly from one country to another, or even, for federal states, from one region to another. 2. Numerous institutional barriers exist, the main one being, in many countries, the difficulty in getting the concession to use and divert water from the river 3. Difficulties in gaining affordable connections to the grid are also common, as are very long procedures in order to get all permits since hydro operators have to deal with many administrations 4. Time limits for responses from the Administration are not usually respected. 5. Co -ordination between different administrative authorities is not working successfully as regards deadlines, reception and treatment of applications for authorization
www.esha.be

Studies on administrative barriers for renewable energy sources on country and regional level

This chapter is completed based on input data provided by partners and presents the main studies elaborated at the national and/or regional level of partners countries, regarding the administrative barriers for renewable energy sources or technology.

Only in a few of partners countries in the project were identified these kinds of studies.

2.3.1 Estonia

Title of the study
Analysis of Domestic and European Union Regulations for Bio-energy Market
Date of study
2007 May – 2008 March

Author / Commissioned by:
Ernst & Young Baltic AS
Countries covered by the study:
Estonia
Method:
Qualitative method was implied <ul style="list-style-type: none"> - Analyses of regulatory framework and support schemes - Interviews with stakeholders (investors, producers, market participants, government authorities, universities' energy experts, industry association NGOs) - Workshops with stakeholders (risk analyses)
Data base and sources of information:
- Stakeholder consultations (number of stakeholders interviewed is not revealed)
Summary of findings:
<p>The scope of study includes the whole bio energy sector (electricity, heat, biomass and bio fuels production).</p> <p>Analyses concludes the most critical risks affecting the Estonian bio energy field that are associated with raw materials, availability of land, low level of land utility and country's politics regulating of bio energy sector.</p> <p>The study identifies following administration-related barriers:</p> <ul style="list-style-type: none"> - Lack of standards (bio fuels) - Poor statistics - Support schemes are not addressed to achieve the targets set - Incoherence of politics and regulations with other fields - Not sufficient awareness, lack of information <p>Among 10 most critical risks, the administrative risks are considered by stakeholders as follows:</p> <p>3. Unstable politics, as a result regulations are often changed;</p> <p>8. Lack of responsibility by authorities which leads to low productivity;</p> <p>9. Government's skepticism toward bio energy, so the sector is overridden.</p> <p>http://www.bioenergybaltic.ee/bw_client_files/bioenergybaltic/public/img/File/EYMESRaport_Summary_in_English.pdf</p>

2.3.2 Slovakia

Title of the study
EPA-NR Survey: "National context and need for instruments", "Country reports on national context"
Date of study
May 2005
Author / Commissioned by:
<p>The analysis was carried out as part of the EPA-NR Project – "The Energy Performance Assessment of existing Non-Residential buildings". The project was supported by the Community's Intelligent Energy - Europe programme.</p> <p>Contact person – Popi Droutsas, Institute for Environmental Research and Sustainable</p>

Development, National Observatory of Athens
Countries covered by the study:
Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Slovakia, Slovenia, Spain, Sweden, UK, Italy
Method:
<ul style="list-style-type: none"> - Consultancy approach - Interview
Data base and sources of information:
<ul style="list-style-type: none"> - Not available
Summary of findings:
<ul style="list-style-type: none"> - The project was aimed at the energy performance of buildings, one part of the conducted studies concerns the barrier identification in particular states - Slovakia: - Barriers related to the policy, legal and regulatory framework – lack of precision of the Energy Act, lack of the integration of energy in public procurement laws, lack of regulation/legislation on certain technologies (CHP, heat pumps, RES), difficult to import procedures for certain energy technologies, lack of organization within the energy sector; - Barriers relevant for the institutional framework – lack of co-ordination between different institutions, lack of monitoring and evaluation of programs and policy, lack of dedicated teams within the relevant authorities, lack of state commitment to support a national energy agency, unsuccessful local and regional energy planning; - Barriers related to fiscal, taxation and pricing issues – energy prices, low level of utilization of the existing tax exemption systems, lack of internationalization of external costs; - Barriers concerning access to public or private funding – in the tertiary sector, and mainly in public buildings, the source of funding for investment and management generally comes from the state or the municipal budget. Building managers are allocated a certain amount on annual basis, but as any unused part of the budget goes automatically back into the general state budget they cannot benefit from energy savings (bureaucratic schemes for state support funding, lack of interest from banks, underdevelopment of energy contracting and limited scope for investment from ESCOs, incompatibility between the budget guarantee and contract duration terms); - Barriers concerning the level of awareness and access to information – lack of information among users about consumption and energy costs, lack of information on the availability and reliability of EE and RES technologies, lack of awareness of additional benefits, lack of information on available funding opportunities at national and European levels;
URL: www.epa-nr.org

<i>Title of the study</i>
Concept of RES Utilization
<i>Date of study</i>
April 2003
<i>Author / Commissioned by:</i>
The analysis was carried out by the Ministry of Economy. It is the general documents concerning the RES utilization in Slovakia. Among others it encompasses the barriers identification.
<i>Countries covered by the study:</i>
Slovak Republic
<i>Method:</i>
<ul style="list-style-type: none"> - Consultancy approach - Interview
<i>Data base and sources of information:</i>
<ul style="list-style-type: none"> - Not available
<i>Summary of findings:</i>
<ul style="list-style-type: none"> - Insufficient personal capacities implementing the European programmes <ul style="list-style-type: none"> • As a result the utilization of financially incentive programmes was about 50% (study conducted in 2003) - The quality and availability of information <ul style="list-style-type: none"> • low awareness of local authorities, public, private and public sector - Low level of project evaluation and preparation <ul style="list-style-type: none"> • The first phase of projects is in many cases undervalued which is the barrier for the project realization and financial support - Risk <ul style="list-style-type: none"> • Investors consider the RES technologies more risky comparing to the traditional energy sources - Impact on environment <ul style="list-style-type: none"> • Some of the RES have side-effects (hydro power plants are changing the biotops, wind turbines)
URL: : www.economy.gov.sk

<i>Title of the study</i>
Information about the progress in RES development inclusive the national indicative targets for RES
<i>Date of study</i>
April 2004
<i>Author / Commissioned by:</i>
The analysis was carried out by the Ministry of Economy, Ministry of Environment and Ministry of Education.
<i>Countries covered by the study:</i>

Slovak Republic
Method:
<ul style="list-style-type: none"> - Consultancy approach - Interview
Data base and sources of information:
<ul style="list-style-type: none"> - Not available
Summary of findings:
<ul style="list-style-type: none"> - Concerning the barriers in RES development: - Legislative barriers – most important in Slovakia; according to the old version of the Regulation Act in Network Industries (study conducted in 2004) there was no legislative basis to set-up the feed-in tariffs (the situation changed in 2004 when the Act was amended); - Technology barriers – there is a permanent need for further development of the RES technology, because the current status does not make possible to exploit whole RES potential - Information barriers – low public awareness - Market barriers – instable business atmosphere, missing guarantee of stable long-term prices, etc.;
URL: www.economy.gov.sk

Title of the study
Strategy of higher utilization of RES
Date of study
April 2005
Author / Commissioned by:
The analysis was carried out by the Ministry of Economy. It focuses on the RES potential, the barriers of its development, the measures and objectives.
Countries covered by the study:
Slovak Republic
Method:
<ul style="list-style-type: none"> - Consultancy approach - Interview
Data base and sources of information:
<ul style="list-style-type: none"> - Not available
Summary of findings:
<p>Specific barriers – Barriers for higher utilization of biomass –</p> <ul style="list-style-type: none"> - mistrust of new technologies (e.g. heating with pellets) - insufficient information about the energy costs relating to the heating with biomass, - missing state support by switching to heating with biomass, - insufficient state support of projects utilizing biomass.

Barriers for higher utilization of hydro potential –

- higher investment costs (connected to the long operating lifetime)
- longer payback period,
- activities of interest groups,
- restrictions in protected landscape areas,

Barriers for higher utilization of wind power potential –

- low knowledge of local climate conditions,
- strong dependency on wind climate conditions,
- low knowledge of the high wind energy share impact on the transmission system,
- unfavorable impact on the stability of the electricity transmission system,
- problem with the perception of the wind parks in the landscape,
- restrictions in protected landscape areas,
- low awareness about the hygienic and environmental impacts of wind parks.

Barriers for higher utilization of geothermal energy –

- low spring-discharge,
- low temperature of the geothermal water,
- chemical consistence of the water,
- slow development of the technology,
- high investment costs,

Barriers for higher utilization of solar energy –

- high investment costs,
- insufficient knowledge of the PV technology,
- low efficiency of the transformation of the solar energy into electricity,
- low ability of heat accumulation,
- absence of the national support schemes for installing solar collectors,

General barriers –

Market barriers –

- missing stable long-term conditions concerning the feed-in tariffs,
- missing support schemes for the public,

Technology barriers –

- technological development of the appliances utilizing the RES,
- RES dependence on the natural conditions,

Information barriers –

- insufficient knowledge of the public about the advantages and disadvantages of the RES,
- insufficient preparation of the specialists in the RES field,
- insufficient implementation of new findings into praxis and education,
- missing regional RES development conceptions.

Legislative barriers –

- missing stable long-term conditions concerning the feed-in tariffs of the electricity,
- missing the obligation to buy-out electricity from RES defined in an Act.

Administrative barriers –

- many approval steps for planning, building and operation of the systems,
- many authorities involved

<ul style="list-style-type: none"> - missing standard procedure for applying - no transparency and discriminatory rules for the network entrance, - missing information on all levels,
URL: www.economy.gov.sk

2.3.3 Spain

<i>Title of the study</i>
Plan de energías renovables en España 2005 – 2010. Spanish Renewable Energy Plan 2005-2010
<i>Date of study</i>
August 2005.
<i>Author / Commissioned by:</i>
IDAE
<i>Countries covered by the study:</i>
Spain
<i>Method:</i>
<p>IDAE coordinated meetings with the main stakeholders to identify barriers.</p> <p><u>Electricity and gas companies and transmission system operator:</u> Endesa, Unión Fenosa, Hidroeléctrica del Cantábrico, Generación especiales, Iberdrola, UNESCO, FECSA, ERZ, GESA, EHN, Red Eléctrica, UNESA.</p> <p><u>Different Administrations and research centres:</u> Ministry of Industry and Energy, Ministry of Agriculture, Ministry of Infrastructure, Ministry of Environment, Ministry of Economy, Centre of Research of energy and Environment Technologies (Ciemat), Centre for the Development of Industrial Technology (CDTI), Institute for Technologies and Renewable Energies (ITER), Technology Institute of Canary Island (ITC).</p> <p><u>Financial Entities:</u> Cajamadrid, Spanish Council of Saving Entities (CECA), Argentaria, Warburg Dillon Read, La Caixa, Ahorro y Cooperación Financiera, KPMG, ICO, BBVA, Société Générale.</p> <p><u>Wind:</u> Association of small and auto-producers from renewable energy sources (APPA), Galician Wind Association (APEGA), Association of wind turbines producers of Spain (AFAE), MADE, GAMESA, DESA, Ecotecnia, Bornay, Taim-TFG.</p> <p><u>Solar:</u> Spanish association of solar and alternative energies companies (ASENSA), Association of photovoltaic industry (ASIF), MADE, Atersa, Isofoton, BP, ESE, LKN, Alwec, Silvasol, PMP, solar Energy Institute.</p> <p><u>Biomass:</u> Agro-energy Group from the Agronomy Engineering School of the Polytechnic University of Madrid, Idom, Clading, SODEAN, Tragsatec, Technical Institute for Agriculture</p>

Management (ITGA), Polytechnic University of Comillas, University of Valladolid.

Hydro: Association of small and auto-producers from renewable energy sources (APPA), Civil engineering from the Madrid Polytechnic School.

Data base and sources of information:

Experience for the main stake holders.

Summary of findings:

The Spanish Renewable Energy Plan (*Plan de Energías Renovables en España*, PER) for 2005-2010 represents a revision of the Spanish Promotion Plan for Renewable Energy (*Plan de Fomento de las Energías Renovables en España*) 2000-2010 in force. The aim of this revision is to maintain the commitment to meet at least 12% of total energy use from renewable sources by 2010, while incorporating other indicative targets — 29.4% of electricity generated from renewable sources and 5.75% of transport fuel needs to be met from biofuels by 2010 — adopted after the previous Plan came into effect.

The document includes an exhaustive analysis of the different considered technologies in which different types of barriers are exposed: technological, regulatory, economical, social and administrative barriers.

Some of the administrative barriers are:

- Lack of harmonization for the normative development of regional scope.
- Long and complicated concession application procedure.
- Administrative slowness in authorizations and reports of the regional government.
- Problems with local City councils.
- Necessity of diffusion to City councils.
- Necessity of dissemination and formation to city councils.

Measures:

- Homogenization of administrative procedures between the regional governments.
- Elimination of moratoriums of application in some regions.
- To activate the transaction and resolution of confessional administrative files.
- To clarify the situation of the paralyzed concession files in the Hydrographical Confederations and Organisms of River basin.
- Regularization of stopped hydroelectric concessions.
- Approval of Technical Building Code (Código Técnico de la Edificación).
- Municipal Solar bylaws.

http://www.idae.es/uploads/documentos/documentos_Plan_de_Energias_Renovables_en_Espana_completo_49e2ac7d.pdf

Gap analysis for data on administrative barriers for renewable energy sources

This chapter identifies lack in information and data as a basis for the further activities in the SUPPORT_ERS project (e.g. stakeholder interviews, administrative assessment report).

Based on existing information and available data on administrative barriers for RES promotion, we can say the following:

- There are some studies and analyses available on administrative barriers for different renewable energy sources in more than one country of the EU. These studies and analyses identified as main barriers for RES projects implementation administrative and regulatory barriers. These barriers are related especially to the following aspects:
 - High number of authorities involved
 - Lack of coordination between different authorities
 - Low awareness of benefits of RES of local and regional authorities
 - Legal framework specific evolution for each country
- Other barriers are related to:
 - Grid connection
 - Social implications
 - Financial issues
- There are some studies and analyses focusing on administrative barriers for a specific RES or technology like small hydro, photovoltaic technology, or wind technology. The main identified barriers are similar with the main barriers identified for RES projects in general.

However the above mentioned barriers were globally identified and analyzed and even some solutions to pass them were proposed, the barriers still exist and they need deep and specific analysis and finally find a unique solution to solve them.

Therefore one of the goals of our study is to identify based on specific questionnaires the proper way to eliminate the barriers in RES projects promotion at the level of all partner countries.

In this respect the questions have to be addressed to the following players in the field:

- Representatives of national authorities responsible for RES project implementation
- Regional and local authorities
- Renewable energy industry associations
- Project developers including those for large scale pilot projects
- Consumer protection organizations.

Institutions in charge of RES programs implementation

This chapter identifies name, contact address and main competences of the institutions in charge of RES programs implementation and governance in the SUPPORT_ERS partner countries.

2.5.1 Austria

NATIONAL

Authority
Federal Ministry of Agriculture, Forestry, Environment and Water Management
Contact data
www.lebensministerium.at Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) Postal address: Stubenring 1, 1012 Vienna, Austria Phone: (+43 1) 711 00-0 Fax: (+43 1) 711 00-2140
Main competences of the Authority
Responsible for environmental protection, including climate change and emissions from combustion. In concrete responsible for the following instruments: <ul style="list-style-type: none"> • Environmental Support Scheme for Austrian Enterprises (in the frame of the Environmental Support Act) • Klima:Aktiv • Financial Incentives for Rural Biomass Energy Generation

Authority
Kommunalkredit Public Consulting GmbH
Contact data
www.public-consulting.at Kommunalkredit Public Consulting GmbH Türkenstraße 9 1092 Wien Tel: +43 (0) 1/31 6 31 Fax-Ext: 104 E-Mail: kpc@kommunalkredit.at
Main competences of the Authority
Managing Authority of the Environmental Support Scheme for Austrian Enterprises on behalf of the Federal Ministry of Agriculture and Forestry, Environment and Water Management.

Authority
Federal Ministry of Finance

Contact data
http://english.bmf.gv.at/ Ministry of Finance Hintere Zollamtsstraße 2b 1030 Vienna Tel. +43(0)1-51433-0
Main competences of the Authority
Responsible for setting energy taxes and therefore responsible for tax incentives for investment in residential renewable generation and residential efficiency.

Authority
Climate and Energy Fund
Contact data
http://www.klimafonds.gv.at/ Klima- und Energiefonds Gumpendorferstraße 5/22 1060 Wien Tel.: (+43 1) 585-03-90 DW20 Fax.: (+43 1) 585-03-90 DW 11 E-Mail-Adresse: office[at]klimafonds.gv.at
Main competences of the Authority
Responsible for the Subsidy Campaign for Biomass Heating Plants for Residential Use.

REGIONAL

Authority
Regional Governments of all 9 Provinces (Upper Austria, Lower Austria, Vienna, Burgenland, Styria, Carinthia, Tyrol, Salzburg, Vorarlberg)
Contact data
http://www.land-oberoesterreich.gv.at/cps/rde/xchg/SID-3DCFCFC3-23E40C0E/ooe/hs.xsl/15186_DEU_HTML.htm http://www.noe.gv.at/English/Topics-in-English.html http://www.wien.gv.at/english/ http://www.burgenland.gv.at/buergerservice/energie http://www.steiermark.at/cms/ziel/5047872/EN/ http://www.ktn.gv.at/ http://www.tirol.gv.at/international/ http://www.salzburg.gv.at/en/en-index http://www.vorarlberg.at/
Main competences of the Authority

The regional governments of the nine states are responsible for:

- Support Scheme for Residential Buildings
- Direct or loophole subsidies
- Subsidies for Biomass District Heating Plants
- Subsidies for Private Companies
- Subsidies for sports complexes
- etc.

LOCAL

Authority
Austrian municipalities
Contact data
Main competences of the Authority
In addition to the federal and regional support instruments, a lot of Austrian municipalities do offer investment grants for the use of renewable energy sources (e.g. solar thermal, heat pumps) for heating.

2.5.2 Bulgaria

Authority
Ministry of Economy, Energy and Tourism
Contact data
- Address - URL
Main competences of the Authority
The Ministry of Economy, Energy and Tourism was established in July 2009 as successor of the Ministry of Economy and Energy, which was incorporated by decision of the Bulgarian Parliament in August 2005 through the merger of the Ministries of Economy and Ministry of Energy and Energy Resources.
The Ministry of Economy, Energy and Tourism is working on the development of the economic and energy policy of the Bulgarian state. The common trends in this policy are increasing the competitiveness of the national economy and the various institutions, encouraging investments, innovations, entrepreneurship, exports, modernization of the industrial base, stimulating measures on energy efficiency in the industry and the use of renewable energy resources. It also takes part in the implementation of the integration policy and effecting foreign economic cooperation.
The Ministry of Economy was established with the merger of the Ministry of Industry and the Ministry of Trade and Tourism in December 1999 by Decision of the National Assembly.

The Ministry of Economy develops the objectives and priorities of the state strategy and implements the state policy in the field of industry, trade, tourism, privatization and state interest management in these fields. It participates in the implementation of the integration policy and the foreign economic cooperation.

It is organized into specialized and general Directorates and an Inspectorate, which support the Minister of Economy in performing his duties, provide technical assistance to his activity and administrative servicing to legal persons and citizens.

The Ministry of Economy, Energy and Tourism is responsible for the development and implementation on the RES policy in Bulgaria.

Authority
Ministry of Environment and Water (MOEW)
Contact data
- Address - URL
Main competences of the Authority
<p>According to Decree N873/19.06.1976 of the State Council the environmental preventing activity was set apart from Ministry of forestry and environmental protection and an Environmental Protection Committee /EPC/, attached to the Council of Ministers /CM/, was created.</p> <p>An order N126/19.06.1976 of CM determined the goals and approved the numbers and the structure of EPC. The basic tasks of EPC were defined as follows: A/ Organize and coordinate the elaboration of environmental protection regulatory system; B/ Coordinate and control the National environmental protecting program; C/ Coordinate and control the rational utilization of natural resources; D/ Implement a special control on environmental protection;</p> <p>By Decree N89/29.10.1976 CM adopts a Regulation of EPC's functions and goals.</p> <p>Following Resolution N173 of the National Assembly, published in State Gazette N14/16.02.1990, the EPC was transposed into Ministry of Environment.</p> <p>Following Resolution N173 of the National Assembly, published in State Gazette N41/23.05.1997, the Ministry of Environment was renamed as Ministry of Environment and Waters.</p> <p>The overall activity of the Ministry of Environment and Water is under the management of the Minister for Environment and Water. He is responsible for the implementation of the state environmental policy. The Minister manages, coordinates and controls the development and the implementation of state policy in environmental protection, prevention and use of water and earth resources. He realizes his competences pursuant to the Environmental Protection Act and other relevant Acts and regulations. The Ministry of Environment and Water comprises of 15 directorates (3 directorates in the common administration and 12 directorates in the specialized administration). The following independent units are also functioning within the MOEW:</p>

Authority
State Energy and Water Regulatory Commission (SEWRC)
Contact data

<ul style="list-style-type: none"> - Address - URL
<p>Main competences of the Authority</p> <p>The State Energy Regulatory Commission (SERC) was established in 1999 by the Energy and Energy Efficiency Act with 87 staff members. As of February 2005 it became the State Energy and Water Regulatory Commission (SEWRC), 118 staff members. The Commission has thirteen members (6 responsible for energy sector and 6 for water supply and sewage sector) inclusive of the Chairman and two Vice Chairmen nominated by a Council of Ministers' resolution and appointed by the Prime Minister for a five-year period (may be re-appointed for one more term). SEWRC is responsible for tariff setting and quality of services of enterprises in the gas, electric, district heating and water supply and sewage sectors. SEWRC is also responsible for licensing of enterprises in the gas, electric and district heating sectors and issues permits for construction of transit gas or oil pipelines.</p> <p>SEWRC is financed from the fees collected under the Energy Act and the Water Supply and Sewage Services Regulation Act.</p>

<p>Authority</p> <p>National Electricity Company (Nationalna Elektricheska Kompania [NEK])</p>
<p>Contact data</p> <ul style="list-style-type: none"> - Address - URL
<p>Main competences of the Authority</p> <p>Natsionalna Elektricheska Kompania EAD (NEK EAD) is a single-owner joint-stock company, 100% held by the State. Its seat of business is in Sofia.</p> <p>NEK EAD Main Scope of Activities: Generation and transmission of electrical energy; Centralized purchase and sale of electrical energy; Supply of electrical energy to customers connected to the transmission network; Import, export of electrical energy; Construction and maintenance of power generation and transmission facilities; Investment; Introduction and promotion of energy efficiency in the generation and transmission of electrical energy.</p> <p>Licenses issued to NEK EAD by the SERWC:</p> <ul style="list-style-type: none"> • Power Transmission License; • Public Power Supply License; • Power Generation from HPP and PSHPP License • Power Trade License

The single-owner rights are exercised by the Minister of Economy and Energy. The management body of the joint-stock company is a five-member Board of Directors.

Authority
Energy Efficiency Agency (EEA)
Contact data
- Address - URL
Main competences of the Authority
<p>The Energy efficiency agency (2002) is a successor of the following institutions:</p> <ul style="list-style-type: none"> • Section, created in 1992 within the Ministry of energy for implementation of projects on the program "PHARE" of the EU, related to the efficient use of the energy; • National energy efficiency agency at the Council of ministers (1997); • State energy efficiency agency (1999). • Implementing Agency to EE MEER - 25/02/2002 <p>The Energy efficiency agency is a juridical person, supported by the budget with headquarters in Sofia and has a statute of an executive agency to the Minister of Economy Energy and Tourism. EEA cooperates actively with ministries and departments, industry bodies, regional administrations and local authorities and the operators, allowing them to provide expertise:</p> <ol style="list-style-type: none"> 1. develop programmes and projects to improve energy efficiency 2. technology transfer, knowledge and experience in the field of EE 3. providing funds for financing the programmes and projects under section 1 of the EU programmes and funds for economic and social cohesion as well as other national and international programmes, sponsors and institutions 4. implementation of projects to improve EE 5. participation in project development for regulations, harmonized with European legislation, methods of assessment and marks related to rational use of energy 6. propose the development and improvement of standards in the field of EE in order to harmonize them with EU norms and promote energy efficiency improvement in energy consumers 7. contribute to the development of training in EE 8. organizing seminars, conferences and workshops. <p>EEA is also responsible for:</p> <ul style="list-style-type: none"> - confirm the amount of energy savings - preparation of model contracts for the provision of energy services - project preparation and conclusion of voluntary agreements and subsequent monitoring of their - creating and maintaining a national information system on the state of EE, incl. by territorial units. <p>Executive Director of the EEA monitoring and coordinating programmes for EE, developed by the EEA. Their results and analysis are used for statistical purposes and the Ministry of Economy, Energy and Tourism in conjunction with the establishment of the national energy balance.</p>

2.5.3 Croatia

Authority
Ministry of Economy, Labour and Entrepreneurship (MoELE)
Contact data
<p>www.mingo.hr Ministry of Economy, Labour and Entrepreneurship Ulica grada Vukovara 78 10 000 Zagreb Croatia Phone: +385 1 6106 111 Fax: +385 1 6109 110</p>
Main competences of the Authority
<p>For construction of a new RES plant, main competence of MoELE are:</p> <ul style="list-style-type: none"> - Preliminary energy approval and - Energy approval

Authority
Ministry of Environmental Protection, Physical Planning and Construction (MoEPPPC)
Contact data
<p>www.mzopu.hr Ministry of Environmental Protection, Physical Planning and Construction Ulica Republike Austrije 20 10 000 Zagreb Croatia Phone: +385 1 3782 444 Fax.: +385 1 3772-555</p>
Main competences of the Authority

MoEPPPC is responsible for:

- Location permit
- Construction permit
- Usage permit

Authority
Croatian Energy Regulatory Agency (HERA)
Contact data
<p>www.hera.hr Croatian Energy Regulatory Agency (HERA) Ulica grada Vukovara 14 10000 Zagreb Croatia Phone: +385 1 6323 777, Phone: +385 1 6323 700 Fax: +385 1 6115 344</p>
Main competences of the Authority
<p>HERA is responsible for:</p> <ul style="list-style-type: none"> - Preliminary decision on acquiring eligible producer status - Decision on acquiring eligible producer status - Licence for energy activity

Authority
Croatian Energy Market Operator (HROTE)
Contact data
<p>www.hrote.hr Croatian Energy Market Operator (HROTE) Miramarska 23 10000 Zagreb Croatia Phone: +385 1 63 06 700 Fax: +385 1 63 06 777</p>
Main competences of the Authority
<p>Main competences of the HROTE are:</p> <ul style="list-style-type: none"> - Contract on electricity purchase

Authority
Transmission System Operator (TSO)
Contact data
<p>http://ops.hep.hr/ops HEP Transmission System Operator (Member of HEP Group) Kupska 4 10000 Zagreb Croatia Phone: +385 1 63 22 317 Fax: +385 1 61 70 442</p>
Main competences of the Authority
<p>TSO is responsible for:</p> <ul style="list-style-type: none"> - Preliminary electric energy approval - Contract for grid connection (preliminary contract is also stipulated) - Electric energy approval - Grid user contract - Proofs from verification test

Authority
Distribution System Operator (DSO)
Contact data
<p>www.hep.hr/ods HEP Distribution System Operator (Member of HEP Group) Ulica grada Vukovara 37 10000 Zagreb Croatia Phone: +385 1 63 22 111 Fax: +385 1 63 22 797</p>
Main competences of the Authority
<p>DSO is responsible for:</p> <ul style="list-style-type: none"> - Preliminary electric energy approval - Contract for grid connection (preliminary contract is also stipulated) - Electric energy approval - Grid user contract - Proofs from verification test

2.5.4 Estonia

Authority
Ministry of Economic Affairs and Communications
Contact data
<ul style="list-style-type: none"> - Address: Harju 11, Tallinn 15072 - URL www.mkm.ee
Main competences of the Authority
<p>The Ministry of Economic Affairs and Communications has overall responsibility for the energy sector, it elaborates and implements the state's economic policy and economic development plans in Energy sector.</p> <p>The responsibilities include also coordinating the development of research and development and innovation, metrology, standardization, certification, accreditation, licensing, registers, competition surveillance, consumer protection; measures regional development and investment, related administration of minimum stocks of liquid fuel and drafting the respective legislation bills.</p>

Authority
Estonian Competition Authority
Contact data
<ul style="list-style-type: none"> - Address: Auna 6, 10317 Tallinn - URL http://www.konkurentsiamet.ee
Main competences of the Authority
<p>Implementation of regulatory provisions in energy sector under the provisions of the Electricity Market Act, District Heating Act, Natural Gas Act and Liquid Fuel Act, The ECA issues decisions (e.g., approval of prices, issuing of licenses) and precepts (upon violations of law by market participants).</p> <ul style="list-style-type: none"> • approval of prices for electricity network services, methodologies for connecting with electricity networks, weighted average price for electricity sold to non-eligible customers, and standard terms and conditions of contracts for electricity network services and electricity supply for non-eligible customers; • issuing and revocation of activity licenses for provision of network services, generating and sale of electricity; • monitoring the adequacy of prices for the balance energy sold by the TSO and the conditions of balance contract; • supervising of compliance with regulations by market participants (e.g., fulfillment of unbundling obligations, disclosure of information, third-party access, etc); • extra-judicial settlement of disputes between market participants; <p>and</p> <ul style="list-style-type: none"> • issuing precepts and initiation of misdemeanor procedures in cases of violation of law.

Authority
Põhivõrk OÜ (Transmission System Operator - TSO)

Contact data
<ul style="list-style-type: none"> - Address: Kadaka tee 42, 12915 Tallinn - URL: www.pohivork.ee
Main competences of the Authority
<p>OÜ Põhivõrk is Estonian transmission system operator working under electricity Market Act and the the Grid Code.</p> <p>Main functions are:</p> <ul style="list-style-type: none"> • Transmitting electricity at voltages of 6–330 kV to distribution networks and corporate consumers • Developing and operating a 110–330 kV electrical power network of Estonia • Ensuring the reliability of Estonia’s electrical power system in conjunction with the power systems of the neighboring countries • Maintaining the capacity balance of the electrical power system and managing the power system across Estonia in real time • Ensuring the Estonian energy balance and operating the balance settlement for the balance providers. <p>Manages connection applications to national Grid. Prepares connection offers (includes a scheme for connecting the customer's electrical system to the National Grid, parameters, and a calculation of expenses and the estimated size of the connection fee) to applicants within 90 days. The offer remains valid for 12 months of receiving it.</p> <p>Maintains waiting lists: if a customer wishes to join an operator's network in a district where capacity is restricted due to supply offers tendered by other customers, the network operator shall maintain a waiting list for realizing the connection offers. Network operators shall make connection offers to customers when the capacity of the grid is freed up. The connection application shall be entered on the waiting list as of the day it is received by the network operator.</p> <p>The network operator will sign a connection agreement with the customer whenever a customer's electrical system is being connected to the grid or the consumption and production conditions change.</p>

Authority
Environmental Investment Centre
Contact data
<ul style="list-style-type: none"> - Address: Rävåla pst 8 10143 TALLINN - URL: www.kik.ee
Main competences of the Authority
<p>Responsible for implementing financial incentives for environmental and energy sectors: capital grants, soft loans, co-financing grants on the bases of “National Environmental Programme” (state budget funds received from the environmental fees pursuant to the Environmental Fees Act) and “The National Strategy for the Use of Structural Instruments 2007-2013”.</p>

The EIC processes the received applications, monitors the implementation of projects and verifies the expenses and realizations of the projects.

Authority

Rural Development Foundation

Contact data

- Address: R.Tobiase 4, 10147 Tallinn
- URL: www.mes.ee

Main competences of the Authority

Implementing agency for the "Biomass and bio-energy development plan for the years 2007-2013".

Funding of research and development: e.g. assessing land resources available for energy production; assessing available biomass resources; energy crop studies; technology studies; analyzing of bio-energy policy tools.

2.5.5 Romania

National

Authority

The Ministry of Economy (ME)

Contact data

Bucharest 010096, 152 Calea Victoriei, district 1
 Phone: +4021 202 51 52
 Fax: +4021 202 51 08
<http://www.minind.ro>

Main competences of the Authority

The main competences of the authority are the following:

- elaboration of strategies in the energy field
- elaboration of regulations regarding fuels quality
- elaboration of specific legislative frame, including issues regarding transposition of Acquis Communautaire in the Romanian economy
- approval programs for energy efficiency improvement and utilization of RES

Authority

Ministry of Environment (MM)

Contact data

Bucharest, 12 Libertatii Blvd, district 5
 phone +4021 316 02 15
<http://www.mmediu.ro>

Main competences of the Authority

The main competences of MM are the following:

- elaborating the Government Strategy regarding the environmental protection
- coordinating the implementation of this strategy, in order to assure a sustainable development
- coordinating and monitoring the programs and investments for the environmental protection
- coordinating the Governmental policies regarding the environmental impact and protection, climate changes

Authority
Romanian Agency for Energy Conservation (ARCE)
Contact data
Bucharest 010093, 118 Calea Victoriei, district 1 Phone: +4021 314 59 29 Fax: +4021 312 31 97 Email: contact@arceonline.ro http://www.arceonline.ro/
Main competences of the Authority
The Agency is subordinated to Ministry of Economy and has the following main goals: <ul style="list-style-type: none"> - promoting the energy efficiency use - based on companies energy balance sheet identifies the suitable measures to increase the energy efficiency - promoting measures for increasing the rational use of primary energy resources

Authority
Romanian Energy Regulatory Authority (ANRE)
Contact data
Bucharest 020995, 3 Constantin Nacu Street, district 2 Phone +4021 311 22 44 +4021 327 81 01 Fax: +4021 312 43 65 http://www.anre.ro
Main competences of the Authority
The main goals of the Authority regarding the RES programs implementation, are the following: <ul style="list-style-type: none"> - monitoring and reporting regarding the evolution of the electricity market - periodical reports regarding the evolution of the green certificates market - periodical reports regarding the evolution of the origin guaranties

2.5.6 Slovakia

Authority
Ministry of Economy
Contact data
<ul style="list-style-type: none"> - Ministerstvo hospodárstva Slovenskej republiky Mierová 19, 827 15 Bratislava - www.economy.gov.sk
Main competences of the Authority
<ul style="list-style-type: none"> - Ministry is not directly involved in any permitting procedure concerning the RES - It is a central body of the state administration, in the field of energy responsible for: <ul style="list-style-type: none"> o heat and gas manufacture, o exploitation and treatment of solid fuels, exploitation of oil and natural gas, exploitation of ore and non-metallic resources and searching, survey and exploitation of radioactive materials, - It is a source of Acts regulating RES, setting-up general framework and responsibilities;

Authority
Regulatory Office for Network Industries
Contact data
<ul style="list-style-type: none"> - Úrad pre reguláciu sieťových odvetví, Bajkalská 27, P.O.Box 12, 820 07 Bratislava - www.urso.gov.sk
Main competences of the Authority
<ul style="list-style-type: none"> - The Regulatory Office is issuing a business license in the energy sector, - The Business Activity in the Energy Sector includes the following important issues: <ul style="list-style-type: none"> o Generation, transmission, distribution and supply of electricity, o Production, transportation, distribution, storage and supply of gas - The Regulatory Office regulates the price policy of the heat production, supplies and distribution, - The Regulatory Office regulates the price policy of the electricity production, supplies and distribution - The Regulatory Office indicates the feed-in tariffs for the electricity produced from RES and in the CHP plants, - The competences of the Regulatory Office are based on the Regulation Act in Network Industries Nr. 658/2004 Coll

Authority
Slovak Innovation and Energy Agency - SIEA
Contact data
<ul style="list-style-type: none"> - Slovenská inovačná a energetická agentúra Bajkalská 27, 827 99 Bratislava 27 - www.siea.gov.sk
Main competences of the Authority
<ul style="list-style-type: none"> - Competence centre for energy efficiency, energy innovations and renewable energies - SIEA activities focus on the decrease of energy consumption and negative impacts of power generation, power distribution and power consumption on the environment - Implementation body for Structural Funds concerning the energy field - Responsible for the Operational Program – Competitiveness and Economic Growth – Priority Axis 2 – Energy Sector - The status of the Agency is defined in the Act No. 70/1998 Coll – tasks, responsibilities, area of business

3. INTERVIEWS ON ADMINISTRATIVE BARRIERS

Scope of interviews

In each country of the consortium, a minimum of 10 expert interviews per country was required. Interview partners include representatives of national ministries, regional administrations, industry associations, project developers (European, national, regional), large-scale pilot projects, consumer associations or consumer Protection Organisations.

Scope of evaluation

The scope of the evaluation was to find out the main aspects regarding the followings:

- Number of involved institutions and coordination between them;
- Lead times of application for funding;
- Lead times for necessary permits;
- Access to information about support schemes;
- Transparency of administrative procedures;
- Awareness of benefits of RES in involved administrations;
- Integration in planning procedures (e.g. spatial planning)

Structure of the interview

The interviews were structured as follows:

Identification of interview partner

Experience in the RE sector

Evaluation questions related to:

- Political framework

- Public awareness

- Legal background

- Administrative procedures

- Financial support schemes

Conclusions and recommendations

Interview assessment

Austria

List of interview partners
<p>In Austria 10 interviews were carried out. The interview partners include:</p> <ul style="list-style-type: none"> • a representative of the Ministry of Environment • a representative of the regional government of Carinthia • a representative of the Climate Protection Office of the City of Vienna • the general manager of the LandesEnergieVerein Styria • a representative of the Austrian solar thermal industry • a representative of the Chamber of Commerce • a representative of the Austrian organisation for small hydro power plants • two representatives of energy supplying companies • an owner of a building company
Experience in the RE Sector
Political framework
<p>Although most of the interviewees do see barriers hindering the realization of RES-E and RES-H projects, barriers are quite different for the various renewable energy sources. While for examples the barriers for solar thermal are relatively low, barriers for biomass projects are high. On the one hand the feed-in-tariffs for biomass plants are non-sufficient and on the other hand industrial companies and energy supplying companies are in competition regarding the demand for biomass. Therefore a biomass resources concept seems necessary, because at the moment the price for biomass seems not to be stable in the long term.</p> <p>Regarding the political and legal framework European politics and directives are seen only as a minor barrier for not reaching RES targets. Some interviewees think that a directive on renewable energy should have been implemented years ago. Nevertheless the draft directive on renewable energy seems quite necessary. For hydro power plants the water framework directive builds a barrier. Especially effected are owners of existing small hydro plant who have to invest (e.g. for fish ladders) although the production will decrease. In that case it is necessary that national support schemes consider these problems. Sometimes EU-directives are contradictory: while the targets for renewable energy are very ambitious, the water framework directive constrains the use of hydro power.</p> <p>The national political and legal framework is much more criticized by the interviewees than the European one. Regarding RES-E the Austrian green electricity act is seen as a considerable barrier for realizing RES-E projects. Feed in tariffs are much too low (especially for PV) and the guaranteed payment period is seen as too short. Some interviewees think that the influence of industrial companies and consumer protection organisation do not allow any</p>

improvements of the existing green electricity act. Nevertheless they ask for a modification of the existing law, which makes the operation of a eco power plants more cost-effective. That includes also that feed-in-tariffs will be provided for the heat from renewable energy plants. Further on, in Austria renewable energy sources are only used supplementary to fossil energy sources. A strict renunciation of fossil energy sources (e.g. by using a quota-system, prohibitions or excluding from supporting systems) is currently not conceivable. Regarding the implementation of solar thermal plants in multiple dwellings the rent law builds a barrier. Currently it is not regulated how the investment costs can be shifted to the rental fee. Further on, there is still some potential to improve the range of education and on-the-job-trainings. Consequently more qualified specialists for RES would be able to install RES plants efficiently. As on-the-jobs training may be very cost-intensive for small companies (because of the lacking labor time), these trainings should be subsidies by public authorities. Besides that R&D for RES technologies should become a political priority. Moreover the certification-system for qualified specialist should be accelerated. In case of hydro power projects nature conservation aspects seems to be more important than energy or climate change aspects.

On the **regional level** the waiting period for getting the necessary permits for realizing RES projects can be seen as a barrier, especially for hydro power projects. Even the regional pre-evaluation instruments (which should help to increase the planning reliability) do not improve the situation. Further on the building regulation of the federal states is a barrier for RES. Through the building regulations the demand for fossil energy sources could be limited and heating systems based on RES could be supported. The land use regulation is especially a barrier for wind projects.

On the **local level** protest e.g. from abutters or environment protection organizations can be barriers for renewable energy sources such as wind or small hydro power plants. Further on chimney sweepers or oil traders are able to prevent district heating plants. Generally the influence of the local political and legal framework is very limited. Sometimes the local awareness for the advantages of renewable energy projects is too low.

Public awareness

Some of the interviewees think that the current public awareness for RES-E and RES-H has to be increased. Besides the already existing activities (such as klima: aktiv) broad renewable energy campaigns on radio or on TV could help to disseminate information. Further on, the realization of public pilot projects such as a “solar quarter” in Vienna or the initiative “sun for Vienna” is able to stimulate the private demand. Very important is also that politicians do speak about the advantages of renewable energy as much as possible.

Legal background

Administrative procedures – permits and institutions

The Austrian permit system is rated between good and not sufficient by the interviewees. Some projects (e.g. wind) require a lot of permits with a lot of different (national, regional, local)

authorities involved but without any coordination between the authorities.

Most of the interviewed project managers feel satisfied with the management of the permit system. But the system is also complex and bureaucratic.

Financial support schemes

The Austrian support scheme for RES-projects is rated between good and not sufficient. Especially the green electricity act is not satisfying (low feed-in-tariffs → no investment incentives, very confusing, etc.). Nevertheless there are a lot of substantial support instruments, but the whole Austrian support scheme is not concerted. There are too many support schemes with too many organizations involved. Therefore the system is a bit confusing for people looking for support instruments. The advisory service could be improved.

The interviewed project developers/managers (companies) think that some of the existing support instruments do not offer sufficient incentives to boost investments in RES (especially the Green Electricity Act). Best practice examples – stated by the interviewed project managers - are the German “EEG” and the Swiss and Italian feed-in-tariffs.

Further on not all – but most of the interviewed project managers feel informed sufficiently about existing support instruments. The lead time of finding the relevant support instrument/subsidy is between low (< 1 day) and medium (max. 1 week). The lead time of applying for funding lasts max. 1 week. The administrative authorities manage the request for funding very well. Employees of the administrative authority responsible for managing the Environmental Support Scheme for Austrian Enterprises seem to be qualified, cooperative and aware of the benefits of RES. In contrast to that employees of the regulatory authority (E-Control) responsible for feed-in-tariffs are assessed to be not aware of the advantages of RES.

Conclusions and recommendations resulted from interviews

Most of the interviewees see potentials for optimizing the Austrian RES support scheme. Suggestions for improvements are:

- higher subsidies/feed-in-tariffs to make investments more profitable
- stronger integration of land use planning aspects: e.g. the efficiency wind power plants is highly dependent on the location
- concentration of the various support instruments and funding in the frame of the “Finanzausgleich” (financial compensation transfer).
- each federal province should have one organisation responsible for support instruments which is centrally organized by the Ministry of Environment

3.4.2 Bulgaria

List of interview partners

In Bulgaria 11 interviews were carried out. The interview partners include:

1. Representative from the Ministry of economy, energy and tourism.
2. Representative from the ministry of environment and water.

3. One representative from the Energy Efficiency Agency.
4. Representative from NGO – “Za Zemjata”.
5. Representative from NGO – “Sofena”.
6. Representative from the Black Sea Regional Energy Centre – state organization.
7. Representative from private company – project developer.
8. Representative from NGO - Dobrich Local Agency for Energy.
9. Representative from United nations development programme Bulgaria to the Ministry of regional development and public works.
10. Representative from ESD Bulgaria.

Experience in the RE Sector

- Lack of enough administrative and practical expertise in the field on RES under the new social and economic conditions in Eastern Europe.
- Necessity of lots of permits and licenses for development on RES heat and electricity projects.
- The procedure for obtaining a concession for water use is very complicated and time consuming. In some cases, the investors have to finance complex preliminary geological and hydro geological study without having guarantee for gaining the concession after completing the procedure.
- The Government policy is encouraging customers for a cascade use but these requirements increase additionally investor’s expanses often change their business plans.
- Lack of enough free financial resources – state, municipal and private.
- Lack of enough information regarding the possibilities on all kind on RES heating and energy.
- Low awareness of benefits RES at local and regional level.
- Long procedure for the grid connection.
- Authorization procedures, including the ones for spatial planning are not clearly coordinated and determined and are not with transparent terms for making decisions under applications for coordination of projects and construction permits
- There is no public register and no entire information is provided needed for processing of the applications for permit, certificates and licenses for installations generating electricity for renewable energy sources and for the available support for the applicants
- For the small projects and decentralized facilities for electricity generation by renewable energy sources no simplified and facilitated procedures are established for obtaining of permit for design and construction.

Political framework

The European policy is determined on the first place. Also national legislation is good ranked as framework, but there are barriers, related to the number and time consuming on the permits.

Public awareness

The public awareness is not a barrier for the RES project, but still this awareness is not on the needed level.

Legal background

The Bulgarian State policy on Renewable Energy is stated in the Renewable and Alternative Energy Sources and Biofuels Act, coming in force in June 2007.

The law is transposing the European legislation in the field of renewables and biofuels – the Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market and Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport.

The main goals of the law are as follows:

- Support of the development and utilization of technologies for production and consumption of RES and AES energy and consumption of biofuels;
- Reduction of the expenses for energy resources import;
- Increase of the capacity of the small and medium enterprises, RES and AES energy producers and biofuels producers;
- Diversification of energy supply;
- Creation of conditions for achievement of sustainable development on local and regional level and
- Environmental protection.

In order to support the RES electricity production a twelve year period for obligatory purchase of this electricity on feed-in tariffs set by the State energy and water regulatory Commission is established. This will allow the investors to forecast more secure and accurate their cash flows by years and respectively to better forecast the return rate, as the period covers a full investment cycle for construction of an installation.

The new RES installations are obligatory connected to the electricity grid with a high priority. This means that the RES producer will be preferentially connected to the electricity grid before the producer of any other conventional electricity.

The Bulgarian State policy on energy efficiency is stated in the Energy Efficiency Act – adopted by the Parliament in February 2004.

The Energy Efficiency Law defines the main activities on the Energy Efficiency Agency and came into force on the 5th of March 2004 and was last amended in November 2008. It represents a new Law, which settles the public relations with regard of the implementation of the state policy for raising the energy efficiency and providing energy effective services. The objective of the Law is to encourage the energy efficiency via a system of measures and activities on national, branch, regional and municipal level as a basic factor for increasing the compatibility of the economy, the reliability of electric power supply and the environment protection. It is based on the Energy Strategy of Bulgaria, as well as on the normative

regulations of the European Union countries, the directives of the European Parliament and European Council, concerning the energy efficiency, the European Energy Charter (the Protocol to the Energy Charter concerning the energy efficiency and related to it environmental aspects) and the Kyoto Protocol to the Frame UN conventions on climate change.

The main accents of the Energy Efficiency Law are the following:

- To define the subject and targets of the Law and the state support for the improvement of energy efficiency as a national priority;
- To settle an administrative system for the realization of the policy on energy efficiency improvement, that combines the powers of the central and local executive power bodies and of the other state institutions;
- To give a detailed description of the Minister of economy and energy rights and powers in the area of energy efficiency, the statute of the Energy Efficiency Agency as an executive agency to the Minister of economy and energy and the rights and powers of its executive director;
- The national indicative target for raising the end use efficiency of fuels and energy is defined by the Minister of Economy and Energy and is formed as a percentage of the total end use of fuels and energy in the country, except the use by the persons referred to in Art. 131a, Para 2 of the Law of Preservation of Environment, on the basis of data for the previous 5-year period and shall be expressed in an absolute value GWh or a relevant equivalent.
- For achievement of the national indicative target the Council of Ministers adopts Action plans regarding the energy efficiency. The Action plans contain measures for achieving the national indicative target, terms for implementation, assigned responsibilities and financial support.

Following the order on the Minister on economy and energy the Energy Efficiency Agency elaborates National long term program for supporting RES 2005-2015.

Administrative procedures – permits and institutions

This topic is determined as one of the biggest barriers from the interviews – lots of permits, long time duration for receiving them and lot of institutions, involved in the procedure until starting the project.

Financial support schemes

National long term program for supporting RES 2005-2015

General description

The National long term program for supporting RES 2005-2015 was elaborated in 2005 from the Energy Efficiency Agency and adopted by the council of Ministers on 26.10.2006. Main task on the program is to reach the indicative target for producing electricity by RES in 2010 11%.

1. Evaluation on the existing RES potential in Bulgaria.

RES	REACHABLE POTENTIAL		
	-	-	ktoe
Hydro energy	26 540	GWh	2 282
Biomass	113 000	TJ	2 700
Solar energy	4 535	GWh	390
Wind energy	3 283	GWh	283
Geothermal energy	14 667	TJ	350
Total	-	-	6 005

2. Forecast for the electricity produced by RES until 2010 and 2015 compared with 2002.

RES	Forecast for the electricity produced by RES			
	до 2010 г.		до 2015 г.	
	GWh	ktoe	GWh	ktoe
Biomass (including biogas)	418	36.0	849	73.0
Hydro energy (including micro hydro)	2 976	256.0	2 988	257.0
Wind energy	8	0.7	256	22
PV	7	0.6	43	3.7
Geothermal energy	15	1.3	30	2.6
Total	3 426	294.6	4 166	358.3
Increase compare to 2002	56% or 7% annually		95% or 7% annually	

3. Forecast for the thermal energy produced by RES until 2010 and 2015 compared with 2003.

RES	Forecast for the thermal energy produced by RES			
	2003 г.		до 2015 г.	
	GWh	ktoe	GWh	ktoe
Biomass (landfill gas)	8 244	709	14 233	1227
Solar thermal collectors	39	3	239	21
Geothermal energy	419	36	1081	93
Total	8 698	748	15 593	1 341

Increase compare to 2003

over 1.8 times ; ~ 6.6% annually

Now we have the New National long term program for supporting RES 2005-2015, which is elaborated according the Energy Law and is like a strategy for developing on the RES potential in Bulgaria.

By 31 March 2010 the State Energy and Water Regulatory Commission has set the feed-in tariffs for hydro power plants, biomass electricity, wind power energy and photovoltaic energy. The state regulatory commission will set up the feed-in tariffs for other sources when the request from an investor has been made.

Resource	Technology	Support level [BGleva/ kWh]	Duration [years that an investor is entitled to support]
Wind	onshore	148,79 лв./ MWh.	15 years
Wind	Installed capacity over 800 kW:• With working hours per year up to 2250	190,59 лв./ MWh.	15 years
Wind	Installed capacity over 800 kW:• With working hours per year over to 2250	174,44 лв./ MWh.	15 years
Solar PV	Installed capacity up to 5kW	792,89 лв./ MWh.	25 years
Solar PV	With installed capacity over 5kW	728,29 лв./ MWh.	25 years
Small Hydropower plant up to 10 MW	up to 10 MW	110,79 лв./MWh.	15 years
Biomass and waste for producing electricity		between 119,34 and 272,29 лв./ MWh., depending on the art of used biomass and waste.	15 years

The Commission has set the feed-in tariffs for small hydro power plants with installed capacity up to 5MW new price as following:

- For low pressure axes hydro power plants – 152,59 лв./ MWh, without VAT or 78 Евро/MWh.
- For low pressure apron hydro power plants – 200,09 лв./ MWh, without VAT or 102,3 Евро/MWh.

The exchange rate is following - 1 Euro - 1, 95583 Bg leva. VAT is excluded from the above prices.

For the first time of the legislative history in Bulgaria, a supporting mechanism for the heat and

cooling energy from RES is introduced by the law. It is envisaged issuing of guarantees of origin which can on a later stage be used as a trading document, proving the production of green energy.

By this means will be achieved a complex utilization of the RES, not only for electricity but for heat and cooling energy production also. The replacement of the conventional fuels thus will lead to a significant reduction of the harmful emissions by the conventional heat production, which will subsequently lead to improvement of the environment and life quality.

Conclusions and recommendations resulted from interviews

Main conclusion from the interviews is that there exists a legal framework for RES in Bulgaria, which has to be up dated. Main problems are the quantity of permits and the time consuming. Recommendations are more for educational campaigns for RES possibilities and reducing the existing barriers mentioned above.

3.4.3 Croatia

List of interview partners

In Croatia 10 interviews were carried out. The interview partners include:

- One representative of Ministry of Economy, Labour and Entrepreneurship (MoELE),
- One representative of Transmission System Operator (TSO),
- One representative of Distribution System Operator (DSO),
- One representative of Croatian Energy Regulatory Agency,
- One representative of Croatian Association for Solar Energy,
- Four representatives of developer/investor companies in the sector of wind energy,
- One representative of Energy Institute Hrvoje Pozar – a consultant for wind farm developers.

Experience in the RE Sector

Sector of experience for all interviewed persons is electricity generation from renewable energy sources. The interviewed developers' experience varies a lot from investors who started in 2007, to investors who have background outside Croatia and have started the development in 2001/2002. All the other participants in the questioner – representatives of the institutions that implement a part of the procedure – are well acquainted with the procedure, especially the part of the procedure that their institution is responsible for.

Political framework

The representatives of the institutions in charge of conducting the parts of the procedure mostly perceive the **European politics** to be supportive (strong or weak). It is found that the EU has

initiated the realization of the legal framework for RES in accordance with EU directives. EU has also provided funding to establish the structural/institutional support needed to conduct the procedure for RES. However, it is also stated that in practice, the implementation of the EU measures (as predicted by the directives) is going slower than expected. The developers would very much welcome investment subsidies on the EU level.

The **national policy** measures (from June 2007) are perceived to be in the range from low barriers to weak support. Before, the procedure was not established, and the old legal framework was a strong barrier for RES development. The new legal framework has been established in form of five new by-laws which are individually supportive, but these acts are not very well synchronized with each other and with the broader legal framework that regulates construction and energy facilities issues. The procedure requires a huge amount of paperwork, permits and administration. According to the interviews, since most of the problems have been identified shortly after the by-laws have been put in force and there is necessity for improvements and adjustments, which should be carried out in the forthcoming period.

The **regional policy** is regarded as weak support. There is a number of regional energy agencies, but they are all in the early stage of development and are focused on informing the public. It is important to mention that according to the Energy law, every region should make its energy strategy. But since there is no adopted energy strategy on the national level, there are no regional energy strategies at the moment. In terms of regional policy, some barriers have also been identified in form of physical plans – since there are a lot of parties interested in changing the physical plan (and the interests collide), the changes are often very time consuming and unpredictable.

On the **local policy** level, it was very hard to define whether the measures are supportive or creating barriers. In some cases local communities are in favour of RES and support the RES projects (speeding up physical plans changes, providing the necessary infrastructure/land for free or at low cost). But there are also examples where a lot of local interests in the end result in time consuming and no transparent decisions, mostly due to superficial understanding of RES project development. Regarding the physical plans, the same problem occurs on the local level as on the regional. Finally, the land use / ownership rights turn out to be a significant problem in a number of cases.

Public awareness

Public generally accepts RES projects, although there are some opponents to such projects mainly by green organizations (small hydro projects). There is also opposition from traditionally oriented engineers in various institutions, who do not clearly see the benefits of RES and consider them to be an obstacle in energy system (variable generation creating system unbalance, need for additional conventional power etc.).

Although there is an overall positive attitude towards RES, the public/small investors are not properly informed with the procedure which is very complicated even for bigger

investors/developers who can afford counseling. Besides the overall lack of proper information about the procedure, a large or even prevailing number of investors/developers (especially for systems under 1 MW) are, due to their lack of technical knowledge, over-optimistic about RES projects which results in lack of seriousness leading to a large number of not feasible projects.

To overcome the mentioned barriers, the information about the procedures should be made understandable to the small investors. Regional energy agencies are a positive step in that sense. Together with the regional energy agencies, the Ministry of Economy, Labor and Entrepreneurship (MoELE) should also have an information office.

In terms of RES technologies broader public and “large scale conventional” engineers should be properly informed in order to get an objective perspective: in case of broader public – not to be over optimistic, and in case of “traditional” engineers – to be more aware of the RES benefits and open to new solutions that would allow higher penetration of RES in the system.

Legal background

In most cases the interviewees are partially informed about the EU directives and well informed about the national laws and by-laws, whereas in Croatia there is no special regional and local legal regulation.

The information sources are mostly national gazette, internet, business correspondence, workshops etc.

Besides the already mentioned comment that the legal framework is too complicated, it is also stated that the background information (data used for assumptions, forecasts of adequate quality...) are missing in order to completely understand the by-laws.

Regarding the laws/regulations that are building a barrier for RE activities, it can be generally stated that the individual legal acts in most cases do not pose a barrier for RES project, but the unavoidable interaction of legal acts that are not properly harmonized/adjusted creates many barriers. Some of the problems are described in more detail as follows:

1. RES and cogeneration (*Ordinance on Use of Renewable Energy Sources and Cogeneration (OG 67/07)*, *Ordinance on Acquiring the Status of Eligible Electricity Producer (OG 67/07)*)
 - The new by-laws are regulating mostly the issues regarding large scale wind energy applications, whereas the procedure for smaller applications is too complex for its size.
 - For wind-parks it is clear that the exact positions of the turbines, roads, transformer station, power-lines etc. are not known in the starting phase of the project, before the measuring campaign has even started. However, it is expected (but not necessary) to give a list of all parcels where the wind park will be built. Later, based on the Preliminary energy approval,

the Central Government Office for Governing State-owned Land issues the land-use rights only for the parcels listed in the Preliminary energy approval. Most of the investors in the application for Preliminary energy approval state only the parcel for the measurement mast, and then after the measurement and some project development apply for the Preliminary energy approval amendment with a list of certain parcels. Such procedure is too complicated.

- There is a limitation of 1 MW for photovoltaic solar systems. However, the prevailing opinion is that there should be no limitation.
2. Physical planning and construction with terms and conditions for grid users (*Physical Planning and Construction Law (OG 76/07)*, *General Conditions for Electricity Supply (OG 14/06)*)
 - In both legal acts there is very little difference in prescribed terms between the large power plants (RES or conventional) and simpler projects (like houses). The problem is a very short term (15 days), which is not enough for the DSO/TSO to make reasonable analysis and give binding decisions or recommendations for the grid connection (Preliminary electric energy approval).
 - It is not allowed to build wind parks on islands or less than 1000 m away from coastal line.
 3. Nature protection (*Nature Protection Law (OG 70/2005)*)
 - It establishes National ecological network, which covers around 40% of Croatian ground, most of it being on areas most suitable for wind parks and small hydro.
 4. Grid connection fee (*Ordinance on Determining the Grid Connection and Power Increase Fee (OG 28/06)*)
 - The by-law proscribes that the TSO/DSO (Operator) is to be the investor in grid connection infrastructure of any object connected to the grid operated by Operator. Under that it is understood that the investor should prepare all the technical and legal documentation (projects, permits, land use rights...) and finally construct the necessary grid connection infrastructure (transformer/switching station or a part of the station and if needed power line). All the costs that the TSO/DSO encounters are charged to the final user of the grid connection in the form of the grid connection fee. The Operator (or a company hired by the Operator) is obligated to follow the public procurement law which ensures that the grid connection fee will be fair in all the investments handled by the Operator. Such procedure is not suitable for larger power plants and creates problems in separating the documentation (projects, permits), investor responsibility and ownership issues (transfer of ownership, depreciation sum).
 5. Simple structures (*Ordinance on Simple Structures (OG 101/07)*)
 - The bylaw defines that the solar collectors can be installed without Location or Building permit (or equivalent permits). However, the bylaw is interpreted in a sense that it applies only to solar thermal systems and not PV systems which from the structure/construction point of view make very little difference. So, for the PV systems Location permit is required. Also other permits/acts are needed for installing and using the PV system (documents

equivalent to Building and Usage permits), which is often a very time consuming and complicated procedure for small private investors.

Administrative procedures – permits and institutions

Interviewees are mostly dealing with administrative procedures on national or regional level. Local level is included when dealing with spatial plans. European administrative level is not important so much for project developers, but it is important for national institutions and ministries involved in RES-E supporting scheme.

Permits

Generally speaking, the investors must obtain at least 18 types of permits:

1. Preliminary energy approval from MoELE¹ (in most cases has to be amended with a list of parcels)
2. Land-use rights for the met-mast from CGOGSL² (in most cases the investors are dealing with the state-owned land)
3. Approval from the Environmental commission (needed for the Location permit)
4. Preliminary electric energy approval from TSO/DSO³ (need for the Location permit)
5. Location permit from the Ministry of Environment, Physical Planning and Construction
6. Energy approval from MoELE
7. Contract for grid connection from TSO/DSO (an extra preliminary contract is also stipulated by the law)
8. Preliminary decision on acquiring eligible producer status from Croatian Energy Regulatory Agency
9. Contract on electricity purchase from Croatian Operator of Energy Market
10. Land-use rights for the wind park from CGOGSL
11. Construction permit (or equivalent permit) from the MoEPPPC⁴ or a regional office
12. Proofs from verification test (trial runs) from TSO/DSO
13. Proofs from the Construction commission inspection
14. Electric energy approval from TSO/DSO
15. Grid use contract from TSO/DSO
16. Usage permit from the MoEPPPC
17. License for energy activity from Croatian Energy Regulatory Agency
18. Decision on acquiring eligible producer status from Croatian Energy Regulatory Agency

The main permits are listed here. There are a lot of additional papers and proofs needed to apply for these permits. In total, the investor has to gather over 60 different documents in order to complete the procedure.

¹ MoELE - Ministry of Economy, Labor and Entrepreneurship

² CGOGSL - Central Government Office for Governing State-owned Land

³ TSO/DSO - Transmission system operator / Distribution system operator

⁴ MoEPPPC - Ministry of Environmental Protection, Physical Planning and Construction

Administrative institutions

The role of institutions involved in the RES-E supporting scheme is commented in the following text.

Ministry of Economy, Labor and Entrepreneurship (MoELE)

MoELE is responsible for issuing Preliminary energy approval and Energy approval. There is no Preliminary energy approval obligation for plants with installed capacity up to and including 30 kW. For such plants, the inscription in the Register of RES and cogeneration projects/plants is performed based on Energy approval. MoELE is responsible for administrating the Register. For plants that are not connected to the grid there is no need to obtain neither Preliminary energy approval nor Energy approval.

According to the interviewed experts, MoELE is aware of the RES benefits, supports the RES projects and is well informed about the legal framework for RES. However, due to the fact that the broader legal framework is not properly harmonized and due to the lack of staff, the procedures are very time consuming. Consequently, they are delaying the RES projects.

Comments are as follows:

- It takes a long time to receive Preliminary energy approval, necessary for the registration of project, without which wind measurements cannot be started.
- Before even making measurements of any kind (as it is not legally possible before receiving Preliminary energy approval), MoELE requires techno-economic analysis including physical planning data, cadastre data and grid connection data. That requires investments even before the start of the actual project, and the purpose of the analysis is not clear because (1) the analysis results are very uncertain since there are actual measurements at the time and (2) MoELE is not in charge for grid connection or physical plans, so they can not evaluate that document.
- It is not clear why the exact positions of the turbines and other infrastructure must be stated when it is certain that the wind turbine positions can be determined only after the wind study (based on the measurements) and other studies (soil inspection, environmental studies...) have been done.
- If there are cases of project area overlaps, MoELE avoids making a decision (rights on the location) as long as they can. MoELE usually waits for the opposing parties to agree.

Ministry of Environmental Protection, Physical Planning and Construction (MoEPPPC)

The Ministry has a role in issuing the Location, Construction and Usage permits. In case of smaller power plants, regional offices are in charge. Environmental and Construction commission's approval are also a part of the procedure regulated by MoEPPPC.

The Ministry is partially aware of the RES benefits and tends to treat RES projects as any other construction projects. In that sense it can be stated that Ministry of Environmental Protection is neutral towards RES. Comments are as follows:

- Procedure of environmental impact assessment takes a long time.
- For getting location permit for wind parks, it is not clear which documents are required. For wind parks, exact positions of turbines are required in an early stage (preliminary

project), and turbines at that time may still not be determined, as wind turbine manufacturers require at least location permit before signing the contract. If turbine positions change, then it is necessary to amend project documentation, go again through administrative procedure etc.

- PV systems should be installed without Location or Building permit, similarly as the solar collectors.

Transmission system operator (TSO) / Distribution system operator (DSO)

TSO/DSO is involved in many steps in the procedure, issuing the following documents:

- Preliminary electric energy approval,
- Contract for grid connection (preliminary contract is also stipulated)
- Electric energy approval,
- Grid user contract,
- Proofs from verification test.

The developers perceive that the TSO is a blocker for RES since it is not transparent how the preliminary energy approvals are handled and since there is still no transparent technical regulation on grid connection, especially for wind parks.

The PV systems developers are mostly in contact with the DSO. The procedure was quite new to a lot of regional DSO offices, so the procedures were time consuming for the first projects. That was also due to the fact that the legal acts are not synchronized with each other. It is developers' opinion that the procedure should be simpler with only one Electric energy approval needed instead of two.

Croatian Energy Regulatory Agency

Croatian Energy Regulatory Agency issues three documents in the procedure:

- Preliminary decision on acquiring eligible producer status,
- Decision on acquiring eligible producer status,
- License for energy activity.

There are no known problems in dealing with Croatian Energy Regulatory Agency. The only suggestion from the developers is to optimize the number of documents required for all the permits, as some proofs have to be given in two or more steps.

Croatian Energy Market Operator

There are also no problems in dealing with Croatian Energy Market Operator. The Contract on electricity purchase with Croatian Energy Market Operator is just one out of 18 steps in the procedure and that part of the procedure has so far posed no problems.

Central Government Office for Governing State-owned Land (CGOGSL)

The Office issues the land-use rights to the investors that plan to construct on the state owned parcels. In most cases only the land-use right is applied for, as opposed to selling the state owned land.

The investor has to have the land use rights in order to:

- set up the measurement mast,
- make a valid application for the building license.

Also CGOGLS issues a document used as a proof of legal interest that is necessary to complete the Location permit application documentation.

In principle, there is nothing wrong with the procedure, but the Office:

- issues the documents very slowly (no response for months)
- is legally not in charge for “municipality” land that still has not been administratively transferred to state owned land – so it is unclear who is entitled for issuing land use rights for such parcels of land.
- requires the investors to have Preliminary energy approval in order to apply for the land-use rights for the measurement mast. That slows down the procedure.

Financial support schemes

The developers find that on the European level there are available European funds, development banks and commercial banks. On national level there is available feed-in tariff system for electricity generation from RES, as well as financing of preparatory documentation by Croatian Bank for Reconstruction and Development (HBOR). There are no any regional or local supports schemes for electricity generation from RES.

Interviewees find financial support scheme to be sufficient for RES projects, except for PV projects where a 20 years period for guaranteed feed-in tariff is desired (instead of 12 years).

However, there is a risk of not entering the defined 5.8% quota (the targeted percentage of RES-E electricity in total electricity consumption for 2010). Some investors might invest a lot only to find out, in the advanced stage of the project, that they won't qualify for the feed-in tariff, because of exceeding indicative national target for 2010.

It is also not clear what happens with the realized projects after 12 years of operation. It is developers' opinion that the RES power plants should still be eligible in a sense of guaranteed power purchase, only no longer at a feed-in price, but at the market price. The financial responsibility for balancing of power and deviation from predicted production should be regulated. Repowering should also be regulated (no regulation at the moment).

The goals for years after 2010 are not set, which is not encouraging for development of new projects.

Conclusions and recommendations resulted from interviews

Recommendations for reducing administrative barriers and improving the existing financial support schemes:

- Establishment of special authority for RES projects, where all relevant people from institutions involved in permitting process would meet at regular occasions (i.e. once a week) to resolve potential issues among themselves and investors (information office in MoELE).
- Establishing a single 'cookbook' for small domestic projects, such as PV or small wind turbines which would contain all the information needed. Also, typical projects and

typical grid connection options should be defined. Permits such as Location permit, Construction permit and similar should not be needed for small projects.

- The completion of HITROREZ and e-Hrvatska programs (one stop shop) – that would simplify the procedures when dealing with state administration.
- Capacity building in national/regional institutions together with proper education.
- There should be something done to ensure that the developer/investor has been given basic information about the grid connection from DSO/TSO, before he gets into serious project phase. First phase project documentation regarding the grid connection should be done according to the DSO/TSO recommendations and in some way checked before the investor applies for the Location permit. So, the issuing of the Preliminary electric energy approval is just a formality.
- The registry of RES projects should be made available to public on the internet, as stipulated by the bylaws. At the moment, information about RES projects is available only on written request.
- One of the biggest limitations for higher wind-power penetration is the limited regulation capacity of the system. In that sense, when issuing the Preliminary electric energy approval (binding in the sense of allowed installed power size), the TSO/DSO is dealing with a limited resource. The TSO/DSO should not be in any way responsible for how will the RES investor in fact use the limited resource. But since the government has set up the goals in RES and since the resources are limited, it should be ensured that the limited resources are divided optimally, meaning that the power (MW) determined by the Preliminary electric energy approval will really be produced. One of the solutions is to filter (by a set of transparent criteria) the serious projects in the Ministry of Economy before they get the right to apply for Preliminary electric energy approval.
- New legal regulation is needed to stimulate the increase in system regulation capacity (regulation of auxiliary services). Also, the wind-power investors are not in any way obligated to contribute to more rational use of regulation capacity as the Croatian Energy Market Operator will pay for all the extra costs for balancing of power. More accurate production plans from wind farms would surely rationalize the use of regulation power reserves, so the wind power investors should be legally obligated to make their measurements and predictions of electricity production more accurately.
- Since the Preliminary electric energy approval is valid for two years and maximally extended to four years, it is obvious that some slower projects can block potentially better projects having “reserved” the limited regulation capacity by obtaining the Preliminary electric energy approval. In order to optimize the planning of the grid and the issuing of the Preliminary electric energy approvals, one idea is to periodically deal with a number of applications/projects, but according to transparent criteria and in coordination with other relevant government offices.
- After the deregulation of the energy sector (TSO/DSO and electricity generation no longer in the same company) the regulation regarding verification procedures (trial run) for power plants should be revised giving clearer guidelines on who is responsible for verification procedures, at what stage the trial runs have to take place etc.
- The final feed-in tariff is adjusted according to the “domestic component share” in the

project. However, there is still no legal act defining the “domestic component”. It is prevailing opinion that the “domestic component share” should not influence the feed-in tariff.

- All institutions should within 8 days (in most cases it is even stipulated so) from receiving an application issue of document declaring that the application is valid or what other documents should be included in the application. That would speed up the procedure significantly, as now there are cases that the investor gets notices of incomplete applications few months after applying.
- For PV systems there should be only one Electric energy approval, both Electric energy approval and Preliminary electric energy approval are not needed.
- Small PV systems (up to 30 kW) should not be obligated to deliver following documents in order to apply for the eligible producer status, as all of them have been required previously in the procedure: Grid use contract (from DSO), Elaboration on measurement equipment with a measurement scheme (measurement of electricity production), Monthly and yearly plans for energy production in average climate conditions including expected deviations from the plan. The procedures for small projects should be simplified.
- The limitation on maximum installed capacity of 1 MW for PV systems in existing feed-in support system should be removed.
- In case of wind farms the Approval from the Environmental commission and the Location permit should allow limited changes in the terms of size (MW), position and number of wind turbines and other facilitating objects (roads, cabling...).
- For larger power plants (over 5 MW), the regulation regarding the grid connection infrastructure should be revised in a sense that the power plant investor can be directly responsible for constructing the grid connection infrastructure (according to the TSO/DSO technical terms) and later being able to transfer the ownership rights to the TSO/DSO with tax exemption. Since the grid connection infrastructure value is in terms of depreciation sum usually much more significant to the power plant investor than to the TSO/DSO, a legal possibility of keeping that value in the power plant investor's depreciation sum should be considered.
- There are a lot of RES-E projects in different phases of preparation and some of them will be out of target for 2010 (5.8% of RES-E electricity in total electricity consumption). Consequently, there is a necessity for establishment of indicative targets of electricity production from RES for the period after 2010.
- There should be a support program for all electricity generation from RES, not only for electricity supplied to the grid.

Based on performed analysis, it was very easy to recognize significant improvements in support scheme for electricity generation from renewable energy sources in last few years. After adoptions of RES-E bylaws in 2007, feed-in tariffs were established and electricity generation from RES was regulated. However, there is a lot of space for improvements. The procedures should be simplified and harmonized. Complicated and long procedure for acquiring eligible producer status is a barrier especially in implementation of small-scale RES project. The abovementioned recommendations could be very useful in further improvements

of RES-E legislation.

Stable and well harmonized legislative framework, which follows the target based approach, is the guarantee of successful and efficient RES-E supporting scheme. The level of the set targets should be based on the realistic assessment of the national renewable potentials, both technical and economic, based on cost-benefit analysis. Additionally, feed-in tariffs for different RES technologies should be periodically recalculated, in order to be in line with new energy market conditions.

3.4.4 Estonia

List of interview partners
<p>In Estonia 11 interviews were carried out. The interview partners include:</p> <ul style="list-style-type: none"> • 3 representatives from National ministries (Agriculture, Environment and Economic Affairs & Communications) • 3 representatives from Industry associations (wind generated electricity, biomass & bio-fuels and district heating & power generation) • 5 persons representing Project Developers <p>In most cases the Project Developers had experience with RES 2-10 projects (total 230mil € and 171 MW). No failed projects occurred and number of planned projects was 2-10 per developer (total 1500 mil € and 780 MW).</p>
Experience in the RE Sector
Political framework
<p>All of interviewed persons identified EU level documents (as strongly or weakly supporting) Green Paper (A European Strategy for Sustainable, Competitive and Secure Energy) and in some cases EU Sustainable Development Strategy.</p> <p>From national level documents were pointed out mostly Long-term Public and Energy Sector Development Plan until 2015, Energy Sector Development Plan until 2020 (draft) and Development Plan 2007-2013 for Enhancing the use of Biomass and Bio-energy (strongly or</p>

weakly supporting).

As **regional** administrations are relatively small (their function is mainly supervision of municipalities in special planning and procurement) only few of them have elaborated some kind of development plans where RES-related topics have been covered.

Approximately half of **municipalities** have energy related development plans which mainly deal with district heating, some of them support RES activities as municipalities see in RES the potential of creating jobs.

Public awareness

The summarized public opinion expects from RES lower energy prices, less environmental impact and location "not in my back yard". There is no demand for green energy (economical considerations dominate).

Wind power: General opinion is positive, but local people (inhabiting the neighboring sites of wind generators) consider wind generators as waste to the landscape (the low frequency sound is also annoying).

- Concentrating of wind generation to off-shore could reduce the barrier.
- Compile a study of post-monitoring on sites of wind parks in order to disclaim the negative myths (dead birds, vibration, magnetic field etc). Afterwards publish the results and inform the publicity.

Biomass: No barriers identified. The municipalities see in RES activities the potential of creating jobs.

Bio-fuels for transport: General opinion is skeptic, as the quality of fuels is not satisfactory and does not combust properly in engines built according to latest technology (eg common rail diesel engines) and the manufacturers do not provide guaranty for engines utilizing bio-fuels (because of their low quality).

Biogas: General opinion is positive, but local people (inhabiting the neighboring sites of biogas plants) consider these as source of smell and it might drop the value of their property.

At moment neither the inhabitants nor the municipalities gain from green energy projects. Public awareness of local people could be influenced by involvement of municipalities and landowners economically (make them shareholders).

Legal background

Below listed documents are identified by interviewed partners as building barriers in the following way:

At **European level:** Laws and regulations of Environmental Impact Assessment - The procedures take too long time.

At ***national level***

A. Electricity Market Act: The feed-in tariffs are restricted only to 400GWh and low level of law enforcement – the market of Certificates of Origin does not function because the national registers are not linked to the EU registers (the system is actually introduced already, recently no demand on Certificates of Origin).

B. Excise duty Act on alcohol, tobacco, fuel and electricity: The exemption of liquid bio-fuels from excise duties is not sufficient to compensate higher production cost of liquid bio-fuels.

C. Environmental Fees Act: Depositing of ash from wood fuels has 10 times higher fee than depositing of ash from oil-shale (ash from fossil fuel).

D. National Grid Code requires compensating capacities that result in increase of investment cost (wind generators). The connection conditions for the new CHP plants include compulsory investments to the additional equipment that are needed only in the case of system failure. The TSO has no obligation to compensate these investments to the investor. The investment will increase the cost of the energy from the particular CHP plant and by that decrease its feasibility.

Administrative procedures – permits and institutions

The Ministries deal mostly with the administrative levels of European administration and National Government, less with regional or local authorities.

Developers mostly deal with local authorities, in some cases with national government.

The lead times for necessary permits are altogether up to 1 year. There are only few permits, but the developers have to conciliate the permits with 9-10 different authorities (Environmental, building, connection of electrical installations to the electrical network: the permits require also conciliation of permits with authorities responsible for aviation, defense, roads, protection of national heritage, technical surveillance, rescue and also owners of other communications).

At local level the municipalities should have unified rules and transparency in process of permit issuance.

There is no coordination between the authorities, the conciliation of permits with different authorities is left entirely to the developers.

It was noted that the responsibilities for implementing of RES are not clearly divided between the Ministries.

The procedures of National Regulation Authority have been found as a barrier by interviewed persons because it does not operate by guidelines that would be accepted by the developers.

The Consumer Protection Board does not appreciate the initiative of producers to increase the efficiency – the basis for approval of price of heat is guided merely by “reasonable profit” considerations. The Consumer Protection Board is guided from the average prices of primary energy and does not take into account local conditions. ROE (return on equity) should be increased for district heating producers (where competition is not possible). The relevant procedures should be complemented and the guidelines modernized according to best practices for price approval mechanism taking into consideration RES.

There were also expressed an idea that the arrangement of CO₂ trade should take into account the production of RES primary energy. It should be considered to concentrate and/or link the CO₂ and Certificate of Origin trade systems and to establish EU uniform trans-border trade for certificates of origin.

At EU level the rules of electricity market should be uniform in each country and European Commission should process the approval of National documents consuming less time.

Financial support schemes

The main financial support schemes identified at European level were LIFE, IEE, 7th Framework, INTERREG, NEFCO, and NIB.

At national level the main financial support schemes were feed-in tariffs for electricity, Structural Funds, Energy Conservation Fund, Environmental Investment Centre – National Program, Agricultural subsidies, Exemption of excise duty for liquid bio-fuels, Rural Development Fund (bio-energy investment support, support of growing energy crops, studies).

The interviewed persons proposed to improve the existing situation by increasing and/or fixing the feed-in tariffs for long-term period, setting higher pollution fees on production of energy based on fossil fuels, introducing more investment support and soft loans and introducing free market for more aggressively.

Conclusions and recommendations resulted from interviews

The interviewed persons recommended keeping a long-time stable national policy to create stable RES-related business environment and to open the energy market totally.

In order to improve the existing financial support schemes the interviewed persons recommended to increase or fix feed-in tariffs for longer period and increase the volumes of electricity purchased by feed-in tariffs. In order to promote different technologies there should be individual support-schemes for different technology. Technology-based investment support schemes should be elaborated (newer-better technology = higher support).

3.4.5 Germany

List of interview partners
<p>In Germany interviews were carried out and recently received statements/presentations evaluated from:</p> <ul style="list-style-type: none"> • German Wind Energy Association (BWE) • German Association for the Solar Economy (BSW) • Developers of wind power projects (3 companies) • State Environment Agency Brandenburg, Potsdam • Federal Network Agency, Bonn • Region Hannover, Hannover • Producer and operator of Biogas plants (1 company) • German Aerospace Centre (research group on renewable energies)
Experience in the RE Sector
Political framework
<p>The political framework in Germany is at the national level seen as to be really supportive to the realisation of RES-E and RES-H projects. The Renewable Energies Law (EEG) is providing important economic incentives in terms of guaranteed revenues per kWh of electricity fed into the grid from renewable energy sources. The Renewable Energies Heat Law (EEWG) is providing financial subsidies for the investment in RES-H in buildings, supporting it by minimum standards for the installation of technologies for RES-H in newly built as well as in rehabilitated buildings in the future.</p> <p>Preferences for specific sources of RES-E and RES-H are sometimes occurring at the level of regional politics (e.g. priority for solar PV, solar thermal and biomass in the South of Germany; restrictive determination of priority areas for wind power in some specific areas),</p> <p>Political barriers for individual projects may occur at the local level, particularly if renewable energy projects are seen as to be in competition to or even in conflict with other concepts of land use which are already in place. Local politics, which are often highly influenced by public opinion, may sometimes tend to build additional barriers for individual projects.</p> <p>Typical political mechanisms which may result in additional local barriers for renewable energy projects are, for example:</p> <ul style="list-style-type: none"> - Biogas plants: A common public fear of odour emissions may, even if it is technically not reasonable, raise strong public opposition to large-scale biogas projects or of projects which are not integrated into existing agricultural premises. Farmers' expectations of growing prices for food crops which they need to buy in order to feed their livestock may raise farmers' protests against new large-scale biogas projects in a region. - Wind power plants: Avoidance of visual impact of wind power plants on the landscape is an issue of even

growing importance for local governments in many regions in Germany.

The obligation to put beacons (=visual impact during nights) on top of wind masts above 100m height is raising objections against bigger wind turbines which would need higher masts.

Neighbours' expectations of noise from wind turbines may cause local governments to deny permits or to ask for an extension of the distance from housings.

- Solar PV or solar thermal collectors:

Monument protection authorities are often objecting against solar PV or solar thermal panels in the neighbourhood of protected buildings or within protect areas of towns.

Large solar PV installations in the open field are still subject to public objections in some cases, because of visual impact on the landscape.

In general, however, renewable energies of all kind are well accepted in the public and among local politicians. Still it is often helpful if the local community can see a local benefit or if individual stakeholders can see even a personal benefit in supporting renewable energies. Such kind of local benefits could be created in terms of, for example.

- Favourable heat supply from a biomass-incinerating heating central (customers);
- Financial return on investments (local shareholders);
- A discount on electricity prices for direct neighbours of wind farms, if the are e.g. accepting the construction of wind power plants in less than 1.000 m distance from their homes;
- Additional income from the delivery of biomass to a new bio gas plant (farmers);
- Lease fees for the ground on which wind turbines are placed (land owners).

In daily business, project developers do intensively investigate the local political situation at a very early stage of project planning. If they would be confronted with strong objections from the local public or from local politicians against a specific project, most of them would skip such a project and spend their time and efforts on other projects which they can realize more easily. There are still enough opportunities available, if not in Germany then abroad.

Regarding the political and legal framework, **European politics and directives** are not seen as playing the most important role with regard to the renewable energies in Germany, at least not as a barrier. Nevertheless, most of the players are very well aware of them, normally because of their international businesses.

The low importance of European politics and directives in the daily renewable energy business may be understood in a context, in which German politics for the promotion of renewable energies are always seen as being in the lead of the rest of Europe. Indeed, the targets and commitments of German government with regard to renewable energies are exceeding the common European targets and commitments by far.

The **national political and legal framework** is well appreciated. Feed-in tariffs allow for the economic use of RES-E. Only for biogas plants, which are regularly subject to changes in the prices for their input resource, the long-term fixing of feed-in tariffs (20 years) is seen as a

potential barrier. Wind power developers are appreciating the the fact that the gradual decrease of feed-in tariffs for newly-built wind power plants was interrupted in the latest revision of the Renewable Energies Law (EEG). This was seen by industry as necessary in order being able to balance the increasing world market prices for wind turbines.

On the **regional level** the delay for receiving the required permits for large-scale facilities (wind, solar PV, biogas, biomass) is not seen as a major barrier today. Major public objections, which could cause longer delays, would have been investigated in advance and would have been taken as a reason not to apply for any permit, in most cases.

In those cases, where project developers find a positive public opinion towards their project, the administrative procedures are found to take at least not more time than the detailed planning and the financial setting up of a project.

On the **local level**, the political support of medium- to large-scale renewable energy projects is depending on public awareness and public opinion.

Small- or micro-scale installations e.g. of solar PV or solar thermal plants on the roofs of family homes or farm buildings are normally well accepted. Biomass heating in buildings is not subject to any kind of permitting procedure. Mandatory emission control is efficiently handled by the chimney sweeps within their own districts.

Facilities of larger scale and facilities in the open landscape, however, are often subject to public disputes. Even though the legal situation is awarding some privileges to facilities for renewable energies (particularly wind and solar PV) with regard to construction permits in the open landscape, public perception of such a project may become a major problem at the level of local politics.

Public awareness

Public awareness of climate change issues, of increasing prices for petrol and natural gas as well as the newly arising public perception of the political risks of inter-continental gas trade are supporting the growing public awareness of the need of a more intensive use of renewable energy sources (RES-E and RES-H). The German policy of abandoning nuclear power in the near future is also pushing public awareness of the needs of a growing share of renewable energies in total energy supply.

Public priorities, however, are changing quite fast: The two winters of 2006/07 and 2007/08, when Germany experienced almost now snow, pushed the climate change issue on top of the public agenda. As a consequence, the climate initiatives of the German government, e.g. at the G8 Summit in Heiligendamm 2008, were well supported by public opinion. The dramatic increase of the oil and gas price in the beginning of 2008 was creating a high interest in biomass for the heating of private houses and public buildings. Since the global financial crisis is more and more affecting the daily life in Germany and the oil price is decreasing, economic and employment issues took over and set climate change and other sustainability issues back in

public awareness.

Nevertheless, renewable energies, as such, have a very positive image in the German public and the financial incentives provided on the basis of the Renewable Energies Law (EEG) and the Renewable Energies Heat Law (EEWG) are initiating new investments.

Local problems with public opinion are often related to the so-called NIMBY phenomenon (**Not In My BackYard**). For example: Whereas many people think positively about wind power, they do not want wind parks next to their houses and villages. Whereas they think positively about the utilization of biogas, they do not want to have a large-scale biogas plant next to their houses and villages.

Professional project developers, therefore, are undertaking to create a positive local awareness of their projects from the very beginning of project planning. If the NIMBY-fraction on site turns out to be too strong and too much resistant to any kind of argumentation, this would normally be a “no-go” for most of the projects.

Those project developers who are spending a lot of time and effort to overcome the local NIMBY-barrier are often restricted to specific sites, e.g. because they want to establish a larger biogas plant or a wind turbine on their own farm ground.

In fact, it seems that in Germany the local public opinion barriers, if there are any, are the barriers which are the most difficult to overcome and which are the most likely to prevent projects from being realised. Additional awareness building efforts are therefore required at all levels.

Legal background

Administrative procedures – permits and institutions

- Wind power:

The permitting procedure was standardised in 2005 at the national level in Germany. Since then, wind turbines with a total height of more than 50 m are subject to an examination (environmental impact analysis IEA) according to emission control laws. The specific procedure is depending on the number of plants to be built:

- up to 2 plants: no IEA required
- 3-5 plants: an IEA is only required, if a site specific pre-examination shows some good reasons to ask for it.
- 6-19 plants: an IEA is only required, if a general pre-examination shows good reasons to ask for it.
- 20 or more plants: an IEA is always required

The procedure is built upon for major steps:

- Scoping (the authority is informing the applicant on the required

documents).

- Environmental impact study (the applicant is providing the required documents concerning environmental impacts of the plant).
- Public consultation (documents are open for public review).
- Assessment and decision making (basis for the the construction permit).

The procedure is coordinated by the State Agencies for the Environment in the 16 Federal States.

Duration of this procedure depends to a certain extent on how fast the applicant can provide all the required documents. As a whole, this procedure may normally take from a few weeks up to several months. As the preparation and planning of wind park projects, including the financing, is taking at least 1-2 years, the permitting procedure can be an integral part of such a project. Strict “no-go” criteria (e.g. housing areas or cultural heritage sites close by a site or sites which are located in nature reserves) have normally been excluded during the first steps of project identification.

Cost of the required studies may be high, but compared to the investment in wind park projects and the other cost of project development (wind measurements, grid access, heavy load access to the construction site ...) they are often negligible and they do normally not create a major project barrier.

- **Solar installations**

Solar installations on private family homes, which are normally roof-mounted, are free of any permitting obligations in most of the federal states. The details are stipulated in the construction laws at federal states level.

Limitations for solar installations which are free of permitting obligations are often related to the size of the installations as well as to the type of building on which they are roof-mounted.

Most of the solar plants which are mounted on building fronts or in the open field are subject to permitting.

Providers and installers of solar installations for family homes know the rules and can inform their customers. Most of them are offering the management of the application procedure, if there is any, as part of their services.

Developers of large PV projects on the open field are employing specialists for the management of the permitting procedure. Normally, the permitting procedure does not take longer than the detailed planning and the financing of a plant. Insofar, the permitting procedures in Germany are not regarded as to create a major barrier or substantial delays for large-scale solar PV projects.

- Biogas

With regard to the permitting procedure for biogas plants, national and federal states laws apply in different ways for different types of biogas plants, mainly depending on size. Only those biogas plants, which are built at a minor scale in the close context of an agricultural farm, are privileged like farm buildings in the sense that it is allowed to build them outside of towns on the basis of a regular construction permit. Bigger biogas plants or plants which are planned to be built outside of farms and outside of towns are not privileged which means that it is quite difficult to get a permit.

Therefore, project developers normally try to plan their large-scale biogas plants within commercial areas. But even there they are sometimes facing strong objections of commercial neighbours who fear that odour emissions could harm their own business.

This is one of the reasons why it is recommended that biogas plants which are planned to be built as an independent unit should be privileged similar to farming or forestry facilities.

A relatively new issue for large-scale biogas plants is the feed-in of the produced gas into the gas grid. For plants from 5 MW to 25 MW of gas product, this is found to be the most efficient way of using the gas product, avoiding inefficiencies of small-scale electricity generation and making plant operation independent from heat demand on site.

Since 2005 there is an ordinance regulating access to the gas grid in place in Germany (Gasnetzzugangsverordnung GasNZV). From the biogas producers point of view, this ordinance is too complicated and gives them not enough rights in front of the grid operator.

A special problem from the biogas producers' points of view is that there are competing competences (agriculture and energy) involved in the biogas business at various government levels. Sometimes, this may lead to confusion and to additional barriers for new biogas projects.

- Biomass for heating

Biomass has a long history as a heating source in most parts of Germany. Biomass installations for the heating of family houses are free of any permitting requirements. They are only subject to emission control which is to be performed by the chimney sweep in a similar way as for fuel- or gas- fired heating systems. Providers and installers of the required equipment are normally offering the service of managing the application for financial subsidies, which are available from the state if somebody is e.g. changing from fuel- to wood-fired heating. Therefore, the private customer does not encounter any kind of administrative barriers neither regarding the installation of a

biomass-fired heating system for his own premises nor regarding the application for available financial incentives from the state.

Large-scale biomass-fired heating centrals, which are e.g. serving as heat providers for district heating systems are subject to permission, normally according to national emission control laws.

Finally, it seems as if administrative barriers, which might have prevented renewable energies from gaining more importance in the 80-ies or in the 90-ies of the last century, have to a large extent been overcome in Germany, during the past decade.

Financial support schemes

Conclusions and recommendations resulted from interviews

3.4.6 Romania

List of interview partners

In Romania 10 interviews were carried out. The interview partners include:

- A representative from the Romanian Agency for Energy Conservation (ARCE)
- A representative from the Ministry of Economy – SOP Competitiveness
- A representative from the Ministry of Economy – Energy Division
- A representative from the Ministry of Environment – MA SOP Environment
- A representative from the National Authority for Energy Regulation (ANRE)
- A representative from the Environmental Fund Agency
- Two representatives of utility companies
- A representative of a research institute in the field of RES
- A representative of a project developer

Experience in the RE Sector

Political framework

The interviewed persons consider that in Romania the political framework is in line with EU policy related to promotion of RES using in covering the energy demand.

The promotion of energy (electricity and heat) produced from renewable energy sources is a high priority for reasons of environmental protection, increase the energy independence from imported electricity by getting a wider range of energy sources as well as for other reasons of economic and social cohesion.

The Directive 2001/77/EC of the European Parliament and of the Council on the promotion of electricity produced from renewable energy sources in the internal electricity market represents the first step of European Union in complying with the Kyoto targets of reducing the greenhouse gases.

Romania was one of the first EU candidate countries transposing the Directive 2001/77/EC provisions into its own legislation (see GD no.443/2003 with modification of GD no.958 / 2005). Its indicative target for 2010 was fixed at 33%, representing the share of E-RES in the gross national electricity consumption. After that, through GD no.1069/2007 regarding the approval of the National Energy Strategy for 2007-2020, there were established the indicative target of 35% for 2015, respectively of 38% for 2020 representing the share of E-RES in the gross national electricity consumption.

Public awareness

The interviewed persons consider that in terms of public awareness this is rather poor, even at the academic level and at the specialists level there are a lot of conferences and seminars promoting and explaining the importance of using RES for covering the energy demand. The mass media role was pointed by all the interviewed persons and they believe that in order to promote RES using mass media role has to be increased. Also, in order to increase public awareness, it is very important to involve in the process the local authorities from rural area, where the most projects in RES field could be implemented.

Public awareness is quite good in the region with high wind potential, but most of the people in rural area are worried about the agriculture potential decreasing due to the wind farms.

In terms of biomass using for heat in rural area, there is a general opinion of the interviewed persons that the level of using it is high (in fact the biomass is the main fuel for houses heating in rural area), but the efficiency of use is very low.

Legal background

The legal framework for RES development in Romania is given by the Energy Law. In art 4 of the law it is stated that the development of RES using represents a priority for energy sector in Romania. Chapter 5 of the law defines RES and mentions the promotions criteria and support schemes for RES.

Based on the Energy Law provisions a series of Government Decisions and Romanian Energy Regulatory Authority establish the main regulations in RES field, related to:

- guarantee of origin for electricity produced from RES,
- promoting system for energy production from RES
- monitoring the issuance of the guaranties of origin,
- organizing and functioning of the green certificates market,
- monitoring the green certificates market,
- qualification of the electricity priority production from RES.

Generally speaking, the interviewed persons agreed that there are some legal provisions which

really support RES using for final energy production. In the same time, they are conscious that supporting system adopted by Romania could be improved based on the experience of other EU countries.

Administrative procedures – permits and institutions

In terms of administrative procedure, the interviewed persons agreed that for RES projects there are no simplified procedure in force. In order to implement a RES project, the same administrative procedure has to be followed as for any other energy project.

More over, for RES project, new steps, like obtaining the qualification certificate for the electricity priority production, registration at TSO for obtaining the green certificates (GC), registration at the Green Certificates Market Operator for participating on the centralized green certificates market, have to be followed.

The main permits and approvals are setting up by the following authorities:

- local administration authorities – city planning certificate, construction authorization
- network operator – location approval, grid connection approval
- Romanian energy regulatory authority – setting-up authorization, generation license, qualification certificate for electricity priority production,
- other authorities responsible for: aviation, defense, roads, communications, public health, environment protection, etc.

A complete list account more than 20 permits, approval and certificates needed to implement a RES project. The developers need between 12 to 15 months to obtain all of them. The interviewed persons consider that the main barriers in order to implement a RES project, from administrative point of view, are the following:

- the big number of involved authorities,
- there is no coordination between different authorities; as consequence the developers have to deal themselves with all the involved authorities.

Financial support schemes

The main financial support scheme for RES project in Romania is given by the Law 220/2008. According to this law the mandatory quota system combined with the trade system with minimum and maximum price limits legally set up for the green certificates, is adopted as financial support schemes for E-RES project.

The H-RES projects are supported only in the implementation phase (investment incentives) through incentives granted through the programs managed by the Environment Fund Agency and Romanian Agency for Energy Conservation.

Other financial support scheme is given by the state add scheme for RES project developed under SOP “Increasing the economic competitiveness”.

Conclusions and recommendations resulted from interviews

The main conclusions of the interviews are:

- Romania is focused on implementing the EU policy in the field of RES
- There are institution in charge with policy implementation
- Some financial support schemes are active especially focused on RES – E
- RES – H is supported under implementation phase (investment incentives)
- Public awareness is poor, need to be improved by disseminating implemented project results
- Long administrative procedure needed for a project implementation
- Grid connection: the main challenge for any project
- Investors are wary by the legal framework fluctuation
- National Plan for RES (E and H) need to be clear and focused on giving development direction in connection with European/national targets.

3.4.8 Slovakia

List of interview partners

In Slovak Republic 10 interviews were carried out. The interview partners include:

- a representative of the Ministry of Economy of the SR,
- a representative of Industry association (air-conditioning, heat pumps),
- an institution with Large-scale pilot project (biogas station),
- seven representatives of Project developers with:
European range of activities (solar heating systems and solar photovoltaic systems),
national range of activities (biomass),
national and regional range of activities (renewable energy sources utilization, especially wind energy) and
four companies of European, national and regional range of activities (heat, RES in general, solar energy, heat pumps).

Experience in the RE Sector

In most cases the experiences with RES include mainly:

- electricity generation and heat and/or cold supply,
- more than 10 successful projects,
- no failed project and
- 2-10 planned projects per developer.

Total of **performed investments** (depending on type of the projects of interviewees):

From 100 000 €/company to 34 mil. €/company, total 50,3 mil. €, average 7,2 mil. €/company

From 0,2 MW/company to 35 MW/company, total 45,9 MW, average 9,2 MW/company

Total of **planned investments** (depending on type of the projects of interviewees):

From 1,5 mil.€/company to 50 mil. €/company, totally up to 111,5 mil. €, average 15,9 mil. €/company

From 1 MW/company to 50 MW/company (in next 5 years – this depends on the appropriate conditions; in the long term planned installed capacity could be up to 200 MW), total 134 ÷ 284 MW, average 22,3 MW/company

Political framework

European politics

The aim of the European politics is to raise the RES share on the final energy consumption. On the other hand, definition of eligible recipients and the conditions for financial support is not in line with the real relation between the producer and consumer of the electricity. European policy is therefore wrong interpreted on the national level and it is difficult to distinguish who made the mistake.

Most of interviewed persons identified EU level documents as weakly supporting RES with high barriers.

National politics

Passive take-over of the EU commitments without specifications of national conditions. RES support programs and the national legislation do not create one coherent system. E.g. the policy of agriculture development is in contrast with the biomass cultivation policy, the small heating units support policy is in contrast with the energy efficiency policy. Price regulation in the energy sector does not support the investments and that implies that the RES sources are not supported as well. National politics of the SR was also identified as weakly supporting RES with high barriers.

Every of interviewees identified Regional and Local policies as neutral.

Public awareness

In the public, the biofuels are perceived as a route back to the fossil fuels with all the particular negatives. Public opinion is against the building of the fuel storages, the transport of the fuel with the regular traffic and is alarmed by the possible pollution from the biomass co-firing.

Some of the interviewees think that existing barriers could be overcome by focusing on the promotion of successful projects, mapping of existing RES potential, identifying the corresponding potential projects and helping with managing of the project chain – from the intention, through the feasibility study, financing and realization. Next possibility is to provide independent and true information.

Legal background

Most of the interviewees identified internet, collection of laws and newsletters as their sources of information for RE activities.

If people are interested they can find any kind of information. Complex information is missing – for one project we need to gather the information from several sources and the problem is that in such cases one document is interpreted differently. Example – fast growing crops (short rotation crops) are defined as agriculture crops at the Ministry of Environment, but at the Ministry of Agriculture they are treated as a wood with no connection to the agriculture utilization of soil.

Some of the interviewees think that there are no law barriers at all; on the other hand some of them identified following laws/regulations which are building a barrier for their RE activities: energy price regulation, nonexistence of the RES Act, Public Notice of the Regulatory Office for Network Industries (Nr. 2/2008) – feed-in tariffs indication, Energy Act Nr. 656/2004 Coll, Regulation in Network Industries Act, etc.

As a building barriers in the following way interviewees identified: uncertainty about the feed-in tariffs duration and therefore unstable investment environment, investments restrictions, technical restrictions, the pressure to decline the regulated heat prices causes that there is only limited space for realization of large and challenging investments.

Administrative procedures – permits and institutions

The Ministries deal mostly with the administrative levels of European administration and National Government, less with regional or local authorities.

Developers mostly deal with local authorities, in some cases with national government.

Permits

Three last successful projects mentioned by interviewees:

Please specify	Project 1	Project 2	Project 3
Short description of the project	Reconstruction of the heating unit based on the biomass chips (Malacky)	Installation of the solar collectors for the pool water heating (ZS Lehota pod Vtacnikom)	Utilization of the landfill gas for heat and electricity production (Povazsky Chlmec)
Number of months/ years from project idea until start of operation	12	6	24
Lead times for necessary permits	3	1	12
Number of different permits required	4	3	4

Types of permits required	Building permit; permit for test operation; permit for permanent operation	Building permit; permit for operation; statement from the NATURA 2000 organisation	Building permit; permit for the operation; approval from the transmission system operator for grid connection
Number of involved administrative authorities	Offices concerning the building permits, building inspections	Offices concerning the building permits, building inspections	Offices concerning the building permits, building inspections; transmission system operator
Levels and identities of involved authorities	Local administration	Local administration	Local administration; regional electricity distributor;
Coordination between involved authorities	No coordination	No coordination	No coordination
Transparency of administrative procedures	Administrative procedures are set by the law	Administrative procedures are set by the law	Administrative procedures are set by the law
Further Comments:	In some cases the regional authorities and administrations interpret the same law and regulation differently (e.g. the amount of necessary permits and statements, competences)		

Institutions

The interviewees are usually dealing with ministries (Ministry of Economy of the SR, Ministry of Environment of the SR, Ministry of Agriculture of the SR).

They think, these units are:

- aware of the benefits of RES only partially,
- not supporting RES activities,
- informed about the laws supporting RES projects only partially,
- not using their potentials to facilitate RES projects,
- not accelerating RES projects,
- blocking/delaying RES projects.

Generally the local administration is not interested if it is a RES project or not – they act independently on this matter.

Financial support schemes

Available financial support schemes:

European: EU Structural Funds
National: Environmental Fund, Ekofond, feed-in tariffs
Regional: no
Local: no

Currently Environmental Fund is open only for villages with less than 2000 inhabitants (in such small villages there is no potential for large projects – no central district heating)

Proposal improvement of existing situation:

When creating the programme conditions the cooperation with the people from praxis is necessary,
 RES Act adoption,
 Higher level of transparency,
 National Support Programme for RES utilization.

Financing of three last successful projects:

Please specify	Project 1	Project 2	Project 3
Support schemes used	Single Programming Document NUTS II - Bratislava Objective 2 EU Structural Funds (2004-2006)	Operational Programme Basic Infrastructure EU Structural Funds (2004-2006)	No financial support (from investor own financial sources)
Lead times of applications for funding	6 months	6 months	-
Administrative requirements and cost of applications	Cost of application was high – 50 000 SKK (1800 EUR)	Cost of application was high – 30 000 SKK (1000 EUR)	-
Types of application documents required	Statements, abstracts, approvals	Statements, abstracts, approvals	-
Number of involved institutions/authorities	15	14	-
Levels and identities of involved institutions/authorities	Statements – local; approvals – regional; abstracts - national	Statements – local; approvals – regional; abstracts - national	-
Coordination between involved institutions/authorities	No coordination	No coordination	-
Transparency of administrative procedures	Good	Good	-
Further comments	In case of support schemes when submitting the project proposal, we would prefer to replace the statements with the declaration on word of honor. The statement will be necessary after the project proposal is approved. This will lead to lower administration both for the applicant and for the administration.		-

Conclusions and recommendations resulted from interviews

Proposed recommendations to reduce administrative barriers for RES-H:

Some of the interviewees think that administrative barriers are not an obstacle in the development of this area. On the other hand, there are also missing significant supporting incentives therefore there is need to adopt an Act on support renewable energy sources in the SR.

Proposed recommendations to improve the existing financial support schemes:

In case of support schemes when submitting the project proposal, interviewees would prefer to replace the statements with the declaration on word of honor. The statement will be necessary after the project proposal is approved. This will lead to lower administration burden both for the applicant and for the administration.

Financial support schemes partially deform the energy market. The call conditions for new projects partly discriminate some of the market players and some of them are preferred.

3.4.8 Spain

List of interview partners

Ten interviews were carried out to representatives of:

- The Institute for Energy Saving and Diversification, Ministry of industry Tourism and Trade (IDAE).
- Ente Vasco de la Energía (EVE), Regional Energy Agency from the Basque Country.
- Agencia de la Energía de Ávila, Local Energy Agency from the city of Ávila.
- Association of the Solar Thermal Industry (ASIT).
- Spanish Association for the Dissemination of the Biomass Valorisation (ADABE).
- Iberdrola the main Spanish renewable energy promoter.
- GAMESA wind farm developer.
- Prosolia solar project promoter.
- Hidráulica Molino de Suso, minihydro promoter.
- Biodiesel Alcalá, biodiesel producer.

Experience in the RE Sector

Political framework

EU level:

There is an agreement that the directive 2001/77 on the promotion of electricity from renewable

energy sources has been very useful for the development of wind and solar PV.

The Directive 2003/30 was also very important for the introduction in the use (but not really production) of biofuels in transport.

Is missing a Directive on RES-H.

There are great expectations on the future RES-Directive.

Related with biomass the European Common Agriculture Policy is not satisfying for the development of the energy crops sector.

The Central Administrations pointed out that the Directive 2001/42 Assessment of the Effects of Certain Plans and Programmes on the Environment will seriously hinder the development of renewable since is going to be an important barrier for the approval of the Renewable Energy action Plans 2011-2020.

National level:

A part from the biomass technologies, all the interviewed agrees that the feed-in tariff have developed very successfully the renewable energy technologies for electricity.

For heating and cooling the Policy is more criticized, mandatory solar thermal in the Building Code is a very important measure but must be monitored, improved and updated. The subsidies to RES-H investment have very heterogeneous results since the money is coming from the National government but is allocated to regional governments that can use or refuse to expend the money.

Tax exemption and mandatory consumption has been very successfully for the consumption of liquid biofuels in transport but not for the production due to dumping practices from third countries.

Regional:

Regional Governments are generally very supportive of renewable energy projects, since they entail important benefits for their territories in terms of income, jobs created, etc.

The main barriers here are the heterogeneity of legislation/rules applicable (they change in every region, so in practice there are 17 different rules), the often too long decision periods for the concession of permits.

Public awareness

In general we can summaries that there is a problem in Spain in the lack of awareness on the benefices of renewable energy.

People associated renewable energy with expensive energy, energy saving with scarcity and they don't have knowledge on the origin and impact of energy products they use.

In particular recently biofuels suffered and image campaign against the social and

environmental sustainability of the biofuels and people were very sensitive to it. There is a perception that hydro causes very much environmental impact that the real one. The use of biomass even if it is in modern equipment is perceived as a step back in economical development and modernity since it is associated with the traditional uses of biomass. There is not an agreement on the public perception on the landscape impact of renewable. There is an agreement that massive awareness campaigns are needed to inform on the benefits of renewable energy. But most important is the education, introduce renewables in the schools.

Legal background

At the different administration levels there are sufficient source of the needed information.

Administrative procedures – permits and institutions

There is a general agreement that the procedure is transparent, but very lengthy. For instance: Hydro not less than 5 years, wind and biomass 3-5 years, solar thermoelectric 2-3 years, PV farm 2 years, PV in houses from six to twelve months.

The number of administrative procedures is very high 37 for a bio-diesel plant and not less than five for the rest of the renewable technologies.

Administrative procedures must be done with the local, regional, national authority and the distribution company. Sometimes it is necessary to visit several departments of the same authority.

The authorities affected most of the time help project developers with information on the procedures but there is not a deadline for receiving response from the Administration or this is not are not kept and this implies problems for the promoter, with no compensation in exchange.

There is not any coordination between the different authorities affected even if the represent the same level of administration.

The main problem identified is the lack of homogeneous administrative procedures in the different regions.

There are not specific administrative procedures for renewable heating in buildings and the actual ones is designed for the conventional fossil technologies.

Main suggestions for improvement are:

- To establish the same procedures in the 17 regions.
- To establish a single stop office with the possibility to do the applications on line.
- To establish concrete response period and to considered a positive response in case of not having any communication in the established period.

Financial support schemes

For electricity:

The support scheme is the feed in tariff.

It is considered sufficient. Biomass is the exemption, the interviewers stressed out the complexity of biomass projects and the lack of a common policy to develop biomass which means coordination of the agriculture, and energy policy.

The procedure to ask for the FIT is clear, the lead time for the process is around one year, there is not a relevant cost for the procedure but there is a need to present a bank guarantee to assure that the promoter will develop the project.

There are three administrations involved and there is enough coordination between them.

For heating:

Besides the mandatory solar thermal for hot sanitary after in new buildings there are subsidies for the investment.

The money for the subsidies comes from the electricity tariff and is allocated to the regional governments. There is a general agreement that the procedures to apply for this financial support depends a lot in the region.

The interviewers demand for:

- Higher subsidies for the investment;
- A feed in tariff for heat;
- Support for the development of ESCOs specialised in renewable energy projects;
- Coordination between different policies as agriculture, building and planning and energy.

Conclusions and recommendations resulted from interviews

4. GENERAL CONCLUSIONS AND RECOMMENDATIONS

The assessment of administrative structures and procedures had as main target to offer an overview of existing information and data related to the administrative barriers for renewable energy sources projects.

The assessment was focused on:

- Studies on administrative barriers for different renewable energy sources in more than one EU country
- Studies focusing on administrative barriers for a specific renewable energy source or technology
- Studies on administrative barriers for renewable energy sources on country and regional level
- Gap analysis for data on administrative barriers for renewable energy sources
- Institutions in charge of RES programs implementation in partner countries
- Interviews on administrative barriers.

Based on existing information and data related to administrative barriers for RES, the following conclusions could be emphasized:

- At the EU level, a couple of studies were conducted in the last years. These studies found that administrative and regulatory barriers are the main barriers for the

development of renewable energy projects. As administrative barriers were identified the following:

- High number of authorities involved
 - Lack of coordination between different authorities
 - Long lead-time to obtain necessary permits
 - Low awareness of benefits of RES of local and regional authorities.
- At the EU level a couple of studies on specific RES or technology were identified. The generally findings of these studies (not depending of the addressed type of RES) show that a project developer has to face the following barriers:
- A complex administrative procedures – high number of permits, high number of involved authorities, different rules in different regions for decentralization, lack of transparency;
 - Insufficient grid access
 - Missing or restrictive building sector regulations.
- At the country and regional level, only in a few of partners countries in the project were identified studies on administrative barriers. The identified studies emphasize the same administrative barriers as the studies at the EU level.

Based on interviews results, the following conclusions could be draw up:

- Even the experience in RES promotions is higher in some countries, interviews results show that there is still potential for optimizing the support scheme;
- Different support schemes are applied in different country and the obtained results are direct influenced by the applied support scheme;

In order to reduce the administrative barriers for RES projects implementation, the following recommendation can be draw up:

- Increase or fix the existing financial support schemes for a longer period of time;
- Establish individual support-schemes for different technology;
- Establish a special authority for RES projects, where all relevant people from institutions involved in permitting process would meet at regular occasions (i.e. once a week) to resolve potential issues among themselves and investors;
- A better coordination between the involved authorities is recommended.