

Policy Recommendations



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The present document is elaborated by external experts to the project, the “Freiburg Working Group for RENREN” and puts forward policy recommendations.

While POLICY has a normative, content related dimension and is about programmes of action and approaches, setting goals, objectives and targets; we understand POLITICS as the processes around formulating and developing political will and interests as a basis for the policy to be agreed upon. POLICY RECOMMENDATIONS then are understood as proposals that can lead to target oriented policy and politics, and are as much about policy instruments as they are about procedures, processes, structures and prerequisites for effective target reaching.

Target group Regions. The main target group for the policy recommendations are regions and their administrations as well as the political decision makers on the regional level. Regions are understood as sub-national entities, one level below the national level. The present set of policy recommendations is presented both with a shorter paragraph (target group politics) and a more elaborated section (target group administration). The policy recommendations are not solely directed to the regions of the RENREN project. Rather, they are open for consideration by all regions wishing to reflect upon their potential and possibilities to foster the development and use of renewable energy sources.

Output based on experience. The recommendations build upon the experiences made by the regions participating in the RENREN project consortium and are based on the issues discussed therein. This is also reflected in best practice examples provided where feasible.

For both the less and the more experienced.

The recommendations are organised in two groups

a) policy recommendations relevant for all kind of regions, both with no and those with some experience in establishing and expanding the use of RES in their regions through regional action. (»learning«)

b) policy recommendations for regions with existing longer term experience and success in expanding the use of RES in their regions through regional action (»experienced«).

The text structure follows this distinction, but the present document does not, separate recommendations for group a) from group b).

Each policy recommendation has a note whether or not it is aimed at learning or experienced regions as well as a note regarding the renewable energy source to which a policy recommendation is applicable, whether it is cross cutting or technology specific.

Whether a region considers itself learning or experienced can certainly differ depending on the RES in question and will - in absence of widely agreed indicators - **also in the near future be based on a region's self-assessment.**

While the present policy recommendations are about changes and improvements targeted at the supply side, the generation and provision of energy, it is understood by the RENREN project partners that any policy supporting the EU goals of a decarbonised and sustainable society has to consider also the demand side. Both are needed to achieve cost - optimal results. Looking closer at Energy Efficiency and Energy Savings is, however, not within the scope of this paper.

I. INTRODUCTION

Modern society is energy dependent; surrounded by machines that simplify our lives and are fed by electricity or fuels. We prefer to take the elevator rather than using the stairs, or to have electric rather than mechanical blinds on our windows.

This dependence on energy can be satisfied by nuclear, fossil or renewable sources. As we are living in a competitive world, the satisfaction of this dependence must be cheap, manageable, a European jobs and technology provider, and as environmental friendly as possible.

In the last two decades, RES technologies have experienced a process in which these parameters hugely increased, and some technologies became a competitive resource ahead of conventional ones.

True, electric technologies achieved better results. However, the degree of development that we see now for thermal uses or RES for transport was largely unthinkable ten or even five years ago.

Now the challenge is boosting that process into a complex larger economic context in which short term concepts and goals are not yet aligned with long term ones, with an energy sector with less fossil fuels (or nuclear) and more RES benefits for

- National balance of payments
- Rural development
- Stability in prices and supply
- The European technology and industrial capacity

EUROPEAN FRAMEWORK

The EU as a group is committed to reducing greenhouse gas emissions to 80-95% below 1990 levels by 2050. The contribution of renewable energy sources (RES) became more explicit over time.

An increasingly comprehensive policy package, cumulated in Europe's 20-20-20 strategy and (regarding RES) lead to the 2009 adoption of the Directive on the Promotion and Use of Energy from renewable sources with indicative but legally binding targets. Overall, Member States are requested to increase RES in the gross energy consumption by 20 % and 10 % in transport.

Especially now during times of economic crisis, it becomes clear that what once started as sustainability policy is today at the core of economic policy.

In the more recent **Energy Roadmap 2050**, the Commission explores the challenges posed by delivering the EU's decarbonisation objective while at the same time ensuring **security of energy supply** and **competitiveness**. The Energy Roadmap 2050 is the basis for **developing a long-term European framework** together with all stakeholders. It builds on the single energy market, the implementation of the energy infrastructure and climate objectives as outlined in the 2050 low carbon economy roadmap.

The Commission Communication **An energy policy for Europe** was an important milestone and even point of departure for a European energy policy in this direction. It set the goal of »combating climate change, limiting the EU's external vulnerability to imported hydrocarbons, and promoting growth and jobs« as the approach down the road from the Lisbon treaty. Clearly, the role of energy from renewable sources is visible already in this statement.

The **Communication on Renewable Energy** from June 2012 looks at renewable energy and its integration into the single market. It gives some guidance on the current framework until 2020 and outlines possible **policy options for beyond 2020**.

When it comes to responsibilities and actions, the widely accepted cross-sectoral nature of sustainable development action and climate change response shows that climate change as such is mostly within the competencies of environment ministries. The measures, however, to reduce levels of emissions, are for the most part energy related: under the responsibilities of energy, or economy ministries and administrations.

A greater penetration of the environmental concepts and concerns in the energy policy seem advisable. The imperative to act, and steps necessary to act, the response to the threats have been discussed in depth on all levels, and are part of the reason for projects such as RENREN.

REGIONS AND RES

What then is the role of regions and generally the local levels to delivering the results, to contribute to the EU's success in beating the clock?

Results are essentially delivered on the local level, where people live. The governments tiers below national level need to be able to **translate policy into action**, to **communicate** with and **engage citizens** and companies in actions that together will result in progress; or not.

Around three quarters of the EU legislation is implemented at local or regional level.

It makes perfect sense for local and regional representatives to have a say in the development of new EU laws, one of the reasons why the Committee of the Regions was established in 1994.

The RENREN regions are a representative group of regions from across Europe, north, south, east, west, "old" and "new" Member States, regions with long experiences in working on RES issues and those with aspirations but less experiences to date as well as different levels of competencies.

While the majority of the RENREN regions are assigned NUTS 2 level, there are a few regions which are classified NUTS 1 level (Schleswig-Holstein and Wales) as well as NUTS 3 level (Jämtland, Timis, Usti). The most extremes are represented by Cyprus (NUTS 0) and The

Westfjords (LAU). Although the NUTS classification can only give a very general idea of the partners' characteristics as regions, the existence of five different NUTS levels is yet an indicator of the large variety and different levels of general, legal, fiscal and political competences.

RENREN regions may vary in terms of legal competencies, geography and climatic conditions, but each has a similar goal and different experiences that, when shared, can help accelerate results.

Regions can strengthen RES development no matter what the level of formal competencies is. They can directly or indirectly influence national level developments, but they can also strengthen their role by means of inter- and intra regional cooperation and exchange, RENREN being the obvious example.

Direct interaction with the national level ranges from general cooperation between regional and national level in federal systems to Regions responding with opinions on legislative drafts to thematic boards between national and regional level, or provide input for the focus themes of the Structural Funds' operational programmes.

More indirectly, regions can make the regional needs heard via regional stakeholders, liaising with national institutions, form Joint national/regional enterprises, and implement smart procurement processes.

Regions need to address local needs and respond and implement national and EU level legislation and targets. The challenge is to grow the regional capacities and know-how, to integrate ever more demands into regional processes and leverage synergies for effective action.

The following policy recommendations provide an idea of what it takes to accelerate RES.

II. POLICY RECOMMENDATIONS

1. INSTITUTIONALISE RENEWABLE ENERGY

The development of renewable energies (RES) in a region needs a framework within which it can grow. Without a vision and specific objectives, opportunities are lost. And RES need to be embedded in a region's overall policy and action, not being treated like a solitaire.

Institutionalising RES is therefore about a strategic, hence long term approach to achieving the desired results.

Institutionalisation of RES in a region is about leadership; knowing and managing resources and connecting it to economic development. It follows a continuous management cycle of action and reaction, of review and adjustment. First and foremost, however, it is about commitment. A policy statement and a clear target set are effective signals: both towards the electorate that there is a political will, and towards investors and others willing to engage, inviting them to take initiative.

1.1 COMMIT TO RES BY SETTING GOALS AND OBJECTIVES

Applicable to all renewable energy sources, relevant for all regions. Prerequisite for success.

Political commitment is the **decision of leaders to use their power** and influence to **ensure that RES receives visibility, leadership, resources, and ongoing political support** that is required to support effective action. It is the basis also to engage civil and community leaders at all levels of society to equally commit to realising the vision. Without political commitment, activities tend to be much more tentative and certainly less effective.

Administrations have, within their daily activities, room to drive the use of RES, but political commitment is a key driver for effective and well-coordinated regional activities in support of RES. In a constitutive process, the political agreement to adopt a vision and strategy for the use of RES in the region is the first step. Ideally this will result in the approval of a strategy with clear goals and objectives, based on a sound analysis of the current situation, and including a strategy for achievement.

A first step can, however, also be the commitment to utilise RES in a region and to commission the development of a sound regional strategy. In this manner, all relevant stakeholders (political and others) can be involved at an early stage, essential aspect to ensuring a long term sound basis for action and success.

Jämtland (SE) Climate & Energy strategy 2020
A Consultation-group with some thirty representatives from municipalities, counties, businesses, trade associations and interest groups were involved in the preparation of Jämtland's strategy development before in 2009 the Council of Regional Development adopted the plan and the County Administrative board approved it.

1.2 PROVIDE A GUIDING FRAMEWORK: DEVELOP A REGIONAL ENERGY OR CLIMATE STRATEGY

Applicable to all renewable energy sources, implementation can be technology specific as well as technology neutral. Relevant for all regions.

*Developing a regional energy or climate **concept** is the **cornerstone of success**. While the overall commitment towards energy from renewable sources is a necessary step to legitimise action, an overall regional energy or climate strategy (rural, economic, and industrial aspects included) serves as an action plan for the attainment of the goals. Such a strategy is also the **basis for communication**. Where there is no vision developed, there is nothing to communicate. Last but not least a goal can be targeted and the target achievement can be measured, thus makes the decisions **accountable**.*

Regions have different climatic conditions as well as different economic, agricultural, or industrial settings. Therefore a concept needs to include a **baseline review**, a review of potentials and limitations, risks, challenges and opportunities. Based on this review the focus of actions can be identified. A baseline review will also look at the consumption as well as the generation side of energy and the contribution that RES can make.

Then **specific targets** can be developed, and the fundamental strategies for implementation, the **working principles**. The preparation of such strategy could include discussing questions on the extent to which urban and spatial planning can contribute to increasing the share of RES and to saving energy in the medium and long term. It should consider how a cost-optimal policy choice can be found, balancing between the support of better insulation of buildings to use less heating and cooling, and the systematic use of solar thermal energy as well as the waste heat

of electricity generation in combined heat and power (CHP) plants.

A sound, realistic, coherent and well-founded regional RES strategy has the potential to achieve more than just the steady increase in RES production. It is the contribution to enhance a region's resilience. RES is one element in the overall goal to achieve a society following the path of resource efficiency and sufficiency.

Regions should **consider different options** and be aware of consequences of decisions. technology oriented versus integrated approaches on RES:

With a view to generating synergies and effective use of public funding, regional administrations aiming at ambitious RES targets should consider to integrate or to clearly define the links between RES (energy) strategies and other regional (economic) development strategies and initiatives.

The longer regions have worked for the promotion of RES, the more likely it is that they have overcome a number of principle bottlenecks and are able to move towards a more integrated and admittedly more complex approach.

For regions which are starting their support of renewable energy it may be more successful to first focus on those initiatives that offer a sound solution between relevance to contribute to a region's goals and likelihood of success. It should be noticed that separate approaches to specific sources of RES may be easier to manage; however, they often are less effective in their results. Solar thermal installations, for example, are well combined with biomass or geothermal devices, and biomass could support solar thermoelectrical or wind power plants to get more electrical manageability.

Once organisational structures and communication channels are established, it may be natural steps towards other RES. Regions have to strike a balance between the

potential for the exploitation of RES and the energy needs.

Navarra and Andalucía (Spain) are working with General Energy Planning as the key instrument for a coherent and integrated approach and have achieved high levels of RES development.

1.3 ESTABLISH REGIONAL RES MANAGEMENT STRUCTURES

Applicable to all renewable energy sources, implementation cross cutting.

Management structures for RES should be incorporated, making use of the existing structures in regional administration, and not vice versa. It is essential to have responsibilities clearly assigned for effective implementation of goals and objectives. Coordination and allocated responsibilities are important within the administration, between different administrative units as well as for external partners, stakeholders and citizens.

Where to start: It is essential to clearly allocate responsibility. Coordinating efforts are needed both within an administration and as a point of contact to other actors, within different administrative units and external stakeholders. Establishing an effective coordination between the different actors involved does not automatically ask for separate or additional structures. Rather, an integrated management of RES should make use of existing structures and decision making processes.

Regional management structures for the implementation of plans and programmes should be identified and analysed, as well as monitoring and reporting structures within plans and programmes available. Possible gaps with regards to RES exploitation may then be identified and an appropriate organisational set up developed for those missing elements.

Regional **indicators to measure success** and data collection.

What you can measure, you can manage. To date information on quantitative figures for regional RES development are sometimes scarce and scattered. In countries that have investment subsidies, feed-in-tariff systems or quota, some data is available. Yet the data for heat generation, biofuel production or stand-alone devices as well as the data on reduced energy demand on a regional level is a difficult task. It is therefore important to move towards sound information gathering, preferably as part of an overall energy management system. Here the consenting process is one area to be looked at, as are other fields that can support to gathering information.

Continuous data collection, indicators, monitoring and evaluation are essential to keep RES development in line with regional needs, and the basis for a (regular) review of RES strategy. Effective monitoring and reporting includes

- Clear and specific targets for RES
- A set of relevant indicators to measure performance
- A schedule and set of guidelines to report
- Periodic reviews of the progress achieved
- A link between the evaluation and planning cycles

For “newcomer” regions in RES, monitoring the installed capacity and energy production can be a good starting point later to be expanded to a more complex analysis. For example, the quantification of regional resources in skilled workers or companies involved in RES energy generation, the investment costs, the accessibility to good finance conditions, the market share of fossil fuels providers in the region, etc. illustrates developments in the RES sector as much as the evolution of the yearly increase of wind energy capacity does.

Exchange with peers. Why reinvent the wheel again? The exchange of experience between peers can hardly be underestimated. Other regions with similar geographic or economic settings, with similar experiences are helpful allies in achieving own goals. The involvement in networks and international projects like RENREN provide an excellent platform for mutual learning, transfer of knowledge and good practice and potentially joint conception of projects. Common activities of exchange provide good revenue on the time and funding invested by the regional partners, as well as the supporting institutions on European Union and national level. Cooperation is also among the options for bordering regions to overcome capacity gaps, as staff could be shared to reach common goals.

Renewable Energy Regions Network (RENREN)

Fourteen partners from across Europe are collaborating to this end, working on their share to help achieve the EU 2020 targets, exchanging experiences, discussing and learning from and with one another.

1.4 ESTABLISH REGIONAL RES COMMUNICATION STRUCTURES

Applicable to all renewable energy sources. Implementation usually more technology specific.

Information & communication are essential elements in creating trust and support for RES in the region. Developing and commissioning new RES facilities despite public resistance can be an unwanted drain of resources. Regions therefore need to be accessible and pro-active with information at every step of the processes.

1.4.1 Central Platform of information

It is suggested to create a central point of reference channelling key information on RES. In addition to establishing clear responsibilities within the administration, it is

important to have an access point for external requests.

This can be for example a central website explaining about the region's goals and objectives, providing an overview on RES in the region, on technology, as well as processes and support for investments in RES. The key points are to inform, as well as to invite to exchange and engage. The platform should be home to guides and guidance on RES in the region. Guides on state-of-the art technology as well as guidance on the steps (and the responsible administrative units) for installation of a biogas plant, a small scale PV plant, a wind farm, or other.

1.4.2 RES Branding

"Bio Energy Region", "Fossil-Free Region", "100% RES Region" are only a few examples of what kind of branding regions are developing, depending on a region's vision. Often, these actions are incentivised by awards and respective competitions between regions.

1.4.3 Stakeholders are your potential allies or downfall

Stakeholder dialogue (with project developers, grid owners, etc.) helps RES developers to know early about possible arguments and to integrate this feedback into the planning process before applying for any permits. Initialising a mandatory stakeholder process for large projects such as wind, biogas plants, etc. could be one action in a region that helps speed the project implementation, since optimised planning can take place at an early stage.

Regional interest group: Even if a region decides to go with a separate RES strategy at the beginning, it should include milestones for **reflection and exchange** between different existing strategies within the region (climate, economy, education, etc.), for example via discussions in a regional interest group. Essentially, RES is about economic

development and needs to be cross-referenced with economic development (plans & activities).

Increasing Public support. **Engage citizens** in Regional citizen platforms. Public acceptance, or lack of it, is a recurring theme. Acceptance can grow with well informed citizens, companies as well as administrative staff. **Opportunities to** take part and **directly** participate in the **benefits** of renewable energies can bring will also contribute to increased acceptance. However, the process is demanding. It will require communication skills on side of the administration, and usually involve external support for moderation.

Increasing Passive Support with information campaigns, transparency; presentations of benefits – not only general but specifically what the region can expect to gain, and continuously what the benefits for the region have been thus far. Technology or renewable energy specific (biomass, grid) to increase acceptance and to build a positive image for RES usage in the region. Especially in regions which have identified a gap between existing and realised potential for a specific renewable source, a targeted, rather than general campaign can bring progress.

Further support is built via **engaging Stakeholders through participatory processes** in the planning process, in those priorities which are relevant for the region, but also via possibilities to reap benefits of renewable energy directly, as a shareholder, through a new job, or other.

All processes of public involvement need to be built on:

- **Persistent information**
- **Reliable information**
- **Target oriented information**

2. INCREASE THE SUCCESS RATE AT THE PROJECT DEVELOPMENT PHASE

Applicable to all renewable energy sources, implementation predominantly technology specific with some potential for cross-cutting improvements regarding the size of installations.

Efficient permitting procedures are crucial. They are in the end the turning point for changes in the supply system. Currently many of the energy technologies are disputed, their deployment delayed, posing problems and risks for investors. In general terms (perhaps more than in other aspects of the RES development), political commitment and will to shape may be the real driving factor for optimising administrative procedures.

A RES initiative can affect four levels (European, national, regional, and municipal) and depending on the project, involve some twenty kinds of authorities from Heritage conservation to traffic, Mining or Public Health. Obviously, having effective and efficient procedures is essential as is well informed staff, able to use available tools. Spatial planning offers itself to be used as a strategic tool to help structure and guide the process for RES development in a region.

2.1 USE SPATIAL PLANNING AS A STRATEGIC TOOL FOR RES DEVELOPMENT

Most relevant for wind, large scale solar green field developments, large scale biomass, transmission & distribution grid development (electricity, heat, (bio-) gas), network of fuel for transport.

The expansion of renewable energy sources is linked to demands for space, which poses new challenges. **Planning** at the regional level plays a key role. Practical approaches are needed to better integrate the expansion of renewable energy sources with spatial planning.

Spatial planning is about safeguarding a sustainable development of the spatial structures and their core elements

“**settlement**”, “**transport routes**”, and “**open space**”. Spatial planning is also about protecting natural resources and the **identification of preferred areas** for the use of these resources. Its role with view to RES cannot be to slow down or speed up political decisions for the expansion of RES. The **role of spatial planning** is much more a role of **balancing (competing) interests**, to visualize options and alternatives for expanding RES usage in a spatial context.

Zoning: the growth of space-intensive renewable energies, such as wind energy, as well as the cultivation of plants for energy, such as rape, both require the allocation of space at the regional level. The identification of potential and specifically suitable areas, e.g. for wind development, therefore represents a core field of action for spatial planning.

The relevance of zoning can also be visualized with the following examples, when looking at creating the base for spatial and technological “cooperation”: Biogas production sites and the (natural) gas network, where biogas can be fed into the gas network, thus increasing the efficient use of the technology. It is also supporting security of supply, because in this case biogas is used as a buffer for energy, since it is available for use in CHP plants connected to the gas network in question. Or the connection between transport routes and biofuel production sites and their supply stations where proximity and accessibility needs are important.

For the integration of RES into spatial planning, the regional energy & climate concepts should be considered key tool, the evaluation of potentials, locations, needs and the development of the focus field of action being core content, that is relevant for spatial planning especially where space consuming RES are concerned. Energy infrastructure in general and electric grid development specifically is an important issue to consider:

how to upgrade existing grids towards higher levels of decentralized energy generation; be it biomass generated heating energy in a District Heating network, or fluctuations in electricity generation by wind or photovoltaic.

In this context, the need for improved data basis becomes again evident as a supporting tool for appropriate planning, and monitoring.

Based on its usually mandatory public participation procedures, spatial planning is also a tool a tool to inform, and engage civil society, thus a tool for increasing acceptance for RES development.

Wales (UK), and Schleswig-Holstein (DE) aid developers' planning by identifying strategic areas for development of on-shore wind, documented in the regions' spatial (land use) plans.

2.2 PROVIDE INFORMATION & GUIDANCE FOR DEVELOPERS

Applicable to all renewable energy sources, relevant for all regions, (Reference also to RES management structures, communication, and incentives)

Provide guidelines and tools to enhance the quality and know-how for business and RES developers to how to best apply RES in their environment.

RES resources guides such as like solar maps (or solar atlas), biomass potentials, geothermal options etc., which are produced by several organisations also for regional levels can help investors with information on whether or not their property is suitable or within a preferential planning zone for RES developments. Further, legal documents or templates for the permitting process will spur both the application process for applicant as well as administration unit.

Principle **participation guidelines** for large scale installations - how to involve the public (and permitting authorities) at an early stage in the planning process to increase success.

Public resistance and mistrust in the potential of RES can arise from a lack of knowledge about the prerequisites and necessary conditions for such installations; hence such a tool also supports the acceptance by increasing awareness and information.

Wales (UK). The Welsh Assembly Government has published a Technical Advice Note (TAN 8) supporting local governments in how to organise or what to consider when involving stakeholders.

2.3 REDUCE COMPLEXITY OF THE PERMIT PROCESS

Applicable to all renewable energy sources, relevant for all regions

The procedures for gaining permits for renewable energy generation plants are in most cases complex and lengthy. An essential element to make this process easier to handle, is the coordination of responsibilities, and process simplification where possible.

Key findings about elements that together cause the permitting process to be complex, are unclear timelines and rules, a high number of contact points for the applicant, as well as - foremost in the case of wind energy - a lengthy EIA process.

In response to creating a process that on the one hand does the technology and its impact justice and hand fulfils its role of providing a clear guidance and support system for guided development, it is necessary to provide clear procedural steps (example: biomass in S-H) and to reduce complexity in the permitting process

Simplification options will vary with the size and type of installation. Small scale installations can easier be integrated into building regulations, resulting in a one-stop-shop via the usually locally issued authority building permit. An example might be to introduce a simple registration process for building integrated PV instead of the need for a building permit. Here the regions can provide guidelines and information on standards to be realised.

For larger impact RES such as wind parks, but also larger scale biogas plants, a different approach may be needed. Reducing contact points for investors (One stop shop) for larger installations should be discussed. Such initiatives can e.g. involve the decision to provide access to land together with the building permit. Permits hence can be executed faster.

Capacity building on the side of administrative staff is yet another issue to be tackled. Here the networking with peers as well as specific training (peer-to-peer) can be envisaged.

Cyprus simplified its procedure for small - scale Photovoltaic installations. Systems up to 100 kW do not need specific permits if the instructions and certain that the Town & Housing department issued, are followed.

2.4 INCREASE TRANSPARENCY OF THE PERMIT PROCESS

Applicable to all renewable energy sources, relevant for all regions

Clarity of procedures not only reduces complexity. It does also contribute to an increased transparency, because every step of the process is defined and can be followed. This in turn increases accountability on side of the administration.

For a process to be defined and transparent, it needs to have

Clear deadlines. The response time, deadlines for both applicant and the evaluating administration need to be set, and communicated.

Clear communication. If the status of the evaluation and permitting process is being published, it will further increase the transparency.

Data tracking. The permitting process is a valuable and key source of data. Without much additional work, the data on RES type, plant size (installed capacity), location can be fed into a central register and thus constitute the basis for evaluation of RES deployment.

Transparency for support. RES are space consuming technologies, some more, others less. However, all of them are visible and have an impact on the perception of people in the vicinity. If a RES technology is considered to be intrusive, it will trigger protest and may delay or even prevent its installation. Therefore mandatory stakeholder participation for larger project developments such as wind, biomass, green-field solar, and concentrated solar thermal electrical plants may be advisable.

Wales (UK) has an online database for the permitting process for large scale RES developments showing at which stage of the process a specific development is, including the date when e.g. a wind farm is grid connected and operating.

3. RENEWABLE ENERGIES: A MOTOR FOR JOBS, DRIVING INNOVATION

The use of RES is not only about a different way of supplying electricity, heat, or fuel. Besides supplying energy to run an existing (regional) economy, RES itself is at the centre of business developments and innovation, providing jobs in many fields. RES has therefore a potential to advance a region's economy, to increase regional added value.

The possible value added covers all parts of the life cycle of and the value chain for renewable energies. This means that the more successful a region is, the more elements of that value chain and therefore value added created remains within the region's boundaries.

The value chain covers all phases from

- Production
- Planning & planning related services
- Installation
- Technical operation & maintenance
- To commercial operation including running costs: electricity, land use charges, insurance
- Research & development

The production of RES technology may shift from one region to another – as could be observed in the PV panel production capacity where European producers were leading the market until recently. Now Asian producers dominate.

Services in operation and maintenance, however, are very much bound to local providers, and thus a source for local jobs. Research & Development (R&D) continues to be a crucial element in overall RES policy. It not only provides a perspectives for long term jobs, given that a number of technological challenges have to be overcome, technologies still need to be brought to maturity (e.g. ocean energy). R&D contributes to a region's overall

competitiveness, because know-how and innovation developed in the region reach to markets beyond.

3.1 QUALIFICATION - KEY TO KEEPING AND ATTRACTING JOBS IN A REGION

Applicable to all renewable energy sources, implementation technology specific.

Raising the professional standards of those who are engaged in renewable energy is creating and extending the regional knowledge base. It is one step towards creating jobs and added value from renewable and keeping it in the region.

3.1.1 Integrate renewable energies in educational curricula

Renewable energy can and should be part of the educational curricula, in primary as well as secondary education. Elementary schools and high schools, technical schools and secondary qualification centres to vocational training to universities, all of the curricula should integrate some aspects of RES. Such a process could be launched under the auspices of a regional cooperation platform, where actors from various fields are connected, and can provide a link from theory to practice in the form of internships or training. Essentially these kinds of cooperation are a key recruiting source of companies.

3.1.2 Quality & Certification Schemes for installers

While a technology is new, a lack of trained staff for actual on the ground implementation is a common situation. Until RES becomes an integrated part of apprenticeship, the level of expertise of those who install, and maintain any RES plant, needs extra support and training to be provided, for example via special training courses at the Chamber of Commerce or the like.

The level of quality of services can greatly positively or negatively influence the image of a technology, so the quality of work that installers are delivering is important to build trust in the technology.

3.1.3 Qualification of planners.

Planning new buildings, new facilities or planning the refurbishment of buildings and processes needs to reach a stage where RES is considered a principle option of energy generation and use to be checked. Only when planners have an appropriate level of know-how on issues to be considered, can projects move from a level of “yet another pilot project” to mainstreaming the application of RES. This applies to architects as well as engineers.

Timis county (RO) has developed a set of trainings/ seminars on low energy buildings and the use of RES for engineers, architects, also students, in order to increase the professional competencies available in the region.

3.2 CREATE AND USE COOPERATION OPPORTUNITIES WITHIN AND BEYOND YOUR REGION

Applicable to all renewable energy sources, implementation usually technology specific.

Cooperation has a high potential in bringing synergies and aligning RES and other regional activities. Through the coordination of technology transfer, initiating and / or implementing joint research projects, providing educational and information activities, elaborating guidelines, promoting the use of renewable energy and energy efficiency etc. is a means of triggering innovation and regional economic development.

The location of such cooperation platforms is recommendable in particular for regions where a number of stakeholders are already

active in renewable energies, but not very well connected.

Cross-border cooperation is another approach to increasing the learning speed of a region. This can be the engagement in international projects (RENREN being an excellent example in itself), membership in thematic international networks (e.g. Energy Cities, EcoProcura) but also inter and intra regional cooperation is possible and potentially feasible. Sometimes a region across the national border, but adjacent, shares similar challenges and similar settings, enables the neighbours to join forces while looking for solutions.

The **Centre of excellence** for biomass in Schleswig-Holstein (Germany) is the centre of transfer of expertise, coordinating the scientific aspects of biomass exploitation and the technology transfer within this field in Schleswig-Holstein. It established a sustainable structure for collaboration, a strong network of companies, farmers, agricultural enterprises, higher education, and institutions of Land Schleswig-Holstein. The created know-how enables companies in Schleswig-Holstein to increase the use and exploitation of biomass.

Cluster 'Bioenergy for the Region' in Lodz (Poland) is a co-operation platform of companies, research institutions, local administration and business support institutions (including local authorities) aiming at a sustainable energy development in Central Poland. One core focus of the cluster's activities is education and information, promoting the use of renewable energy and energy efficiency, promoting innovative solutions in renewable power engineering in local and regional dimensions.

Timis County Council (Romania) took initiative to develop necessary structures for RES in their region by establishing a **Technology Park**. Core aims is to set up a business support

structure for companies specialized in producing specific equipments for alternative energies (photovoltaic, wind, geothermal, biogas, etc), located on 15 ha of dedicated land, and securing co-funding from EU Funds. The project supports the region's goal to reduce the CO₂ emissions by promoting technologies for alternative energies; the establishment is accompanied by a marketing program to ensure that after 5 years the project can run independently of the county.

4. INCENTIVISE THE USE OF RENEWABLE ENERGY IN YOUR REGION

Applicable for all RES, at various levels of experience in the regions.

*An incentive is to **put the right information** or action choices **near key decision points**. The aim is to make a desired choice, such as using RES technologies, more attractive than the alternative of using conventional technologies. Incentives can, and often are, but need not be monetary.*

Regions have a number of opportunities to incentivise the use of RES, the main ones are connected to showcasing the direct as well as indirect benefits Renewables provide.

*There are regions where it is possible to have a very **direct impact** on whether and how renewable energy is being used, for example though including RES in the technical requirements for new or renovated buildings. In other regions, more **indirect impact** has to be leveraged, for example by adopting management structures or the promotion of technology standards to be used in RES applications installed in a region.*

4.1 APPLY & DEMAND STANDARDS FOR THE USE OF RES

Standards:

- Technology Quality Standards for RES
- Minimum Standards for the use of RES

An example is the mandatory inclusion of RES in refurbishment or new buildings. Possibilities are to define a minimum solar contribution to preparation of hot water (all building types with a demand for domestic hot water and/or air conditioning; swimming pool); as well as a minimum photovoltaic contribution to electric power.

Standards can also be applied to industrial processes, for example to optimise efficient use of resources by generating on-site energy

with a highly efficient co- or tri - generation unit fuelled either by natural or bio-gas. Here regions can define a guide for assessing RES options for refurbishment in industrial processes.

Adopting standards for administrative processes:

Introduction to EMAS, ISO 14001, ISO 50001 standards or similar in regional administration in order to lead by example as well as showcasing an efficient structural approach to integrating RES into the overall resource management processes.

4.2 PROVIDE INCENTIVES TO USE RES BY DEMONSTRATING ITS BENEFIT AND ADDED VALUES

Sometimes, only seeing will result in believing. Demonstrating the application possibilities for application and the benefits is key. There are a number of ways, ranging from pilot installations and targeted information campaigns accompanying the development to preferential treatment of RES, e.g. preferential parking for RES fuelled cars. Other examples available and ready to be showcased include

- Energetic self sufficiency of agro-industries using bio fuels, CHP, solar , using production residues for energy production, for example olive pumice and pits
- Geothermal energy for buildings
- Biomass in District Heating & Cooling
- Public roofs for RES available for community owned PV, Solar thermal plants, e.g. on schools
- Administration has shares in RES plants (wind, biomass District heating)

- Regional administrations offer marginal land such as landfill sites for the installation of RES

A more complex example is the development of model RES districts. The planning and the realization of such districts e.g. by setting specific high building standards can represent a strong example for entire regions, by an environmental, social and economic point of view. In order to make this valuable and relevant for the local and the regional community – rather than just a stand-alone non-replicable best case – some pre-conditions should be fulfilled.

First of all the process should bear both on public decisions and regulations and on private enterprise and initiative. Should the local - or regional - government decide to subsidize the buildings, this must be accompanied by a strict and transparent documentation (quantitative as well as qualitative) which guarantees the scientific and politic value of the operation. A long-term communication campaign needs to accompany this kind of initiatives.

Schleswig-Holstein (DE), »Zukünftig Bioenergie« is the title of a targeted campaign to inform about bio energy and specifically promote the use of biomass (wood-pellets) for heating in households in the region. Two ministries (economy, agriculture) cooperated on implementing this action.

4.3 AWARD FORERUNNERS

Easily implemented for all RES and in all regions.

Recognize the contributions of individuals or groups. This not only motivates those who are being honoured. It is a simple communication tool that can trigger interest in a topic, and replication. Awards can be the result of a competition. Awards can also be recognizing individual or group success, without the imitators knowing about it. In both cases, however, the results are based on an evaluation of a set of agreed and monitored criteria.

Competitions can be created between companies, local authorities, schools, or citizens & households. They can cover an array of topics related to renewable, from drawing /photo competitions to competitions on the percentage of energy demand covered by RES in companies.

Competitions have also been used to promote subsidies, e.g. to replace old boilers or heating units with modern ones or to decide design questions, such as the design of biogas/biofuel or electricity stations to fuels / charge vehicles, for bus stops using solar energy to power displays, among others.

It is important to **document success and failures!!**

Competitions and awards engage, inform and build a local base of good practice and lessons learned.

5. FINANCING IS AVAILABLE - CREATE ACCESS

Growth of RES today is strongest when the policy-makers in charge have established favourable conditions. Favourable conditions include a long term framework of stable conditions. In order to be able to compete with established technologies, a financial framework is important to help bring new technologies to the market.

Financing is available, but may not be easily accessible. Regions can spend their budget on new technologies, help create demand, for example by purchasing RES-E and or RES-H for their buildings. Furthermore, however, it is important to create access to further funding support available, and from a regional perspective, the EU Funds are a relevant source to co-finance actions.

The European 2020 strategy for a »smart, sustainable, and inclusive growth«, as well as the Energy Roadmap 2050, key documents, place high emphasis on rational use of energy as well as RES, and the priorities are reflected in the current and draft budgets for all funds.

5.1 MOBILIZE EU FUNDS FOR REGIONAL RENEWABLE ENERGY PROJECTS

Applicable to all renewable energy sources, relevant for all regions. Needs internal capacity building.

Long term availability of financing for RES is a driver for innovation. It also reduces risk for investors. Hence it is important to make use of existing funding opportunities in an efficient manner. Not only those program lines which specifically mention RES are relevant, but also those that have a more indirect connection. Increased RES implementation covers many aspects in different fields, and key words to look for in funding lines include innovation,

competitiveness, rural development, education or infrastructure.

The so called Structural Funds include The European Regional Development Fund and the Cohesion Fund, The European Agricultural Fund for Rural Development, and the European Social Fund, all of which are relevant for RES Development on a regional level. Also the Competitiveness and Innovation Programme (CIP), specifically its funding line Intelligent - Energy - Europe (IEE), is relevant, albeit more for information and awareness. EU funding can directly support RES Technology pilot project implementation, to create a Research arena or to co-finance vocational training of planners or installers. It can also be the basis for exchange between regions, and support the development of a communication plan.

Regional Administration can both be implementing projects directly, but it is crucial to build know-how and capacity on how to attain funding from EU sources and how to run EU projects. It is further important to create access for it to multipliers in the region, i.e. to support (especially smaller) companies in getting access to such funding.

For the new funding period from 2014 onwards, the operational programmes (OP) are currently under discussion. Regions need to **voice their needs** and **proactively contribute to the programme development** under the OP of Europe's cohesion policy in order to be able to use funds more effectively to the benefit of goals such as the increased use of RES.

Regions can also already start to develop ideas for project proposals, for example, under the programme called "COSME", Competitiveness for SME, which will support national, regional and local authorities, supporting "tools for effectively reforming policy: reliable, EU wide

data and statistics, best practice and financial support to test and scale up sustainable solutions for improving global competitiveness”.

Usti (CZ), In a coordinated effort, supported the city of Litomerice in the development of a large pilot project on geothermal energy replacing fossil fuel as main heating source in local homes. The €60m project found co-funding through the structural funds.

5.2 CREATE DEMAND - USE PUBLIC PROCUREMENT A (STRATEGIC) TOOL

Applicable to all renewable energy sources, implementation technology specific. Relevant for all regions.

Currently, around 18% of European Gross Domestic Product is spent by the Public Sector, on all levels. Public procurement can be instrumental to address also the goals of increasing the use of RES.

Extending the use of RES by setting an example is a signal to and motivation for stakeholders. Integrating RES into procurement decisions, in order to effectively support a regional vision is an effective way to create demand. Examples are the purchasing of electricity or heat fully or largely based on RES generation, or the procurement of vehicles that run on biogas.

Help on greening public procurement is available for example via the European Commission's DG Environment.

5.3 LEVERAGE PRIVATE MONEY

Applicable to all renewable energy sources, implementation technology specific

5.3.1 Public-Private-Partnerships

The growth of RES will depend to a substantial extent on the success of using public money as a leverage to trigger private investment. Options to trigger investments are to engage in Public-private partnerships, for example to initiate demonstration projects.

A good example for involving private investors is combined energy efficiency and renewable energy projects. These kinds of projects have multiple benefits, reducing energy demand as well as demonstrating the use of RES. Renovation of public buildings is a good leverage point for such projects, also because of a usually stable and long term usage.

5.3.2 Private investments & participatory models

Leverage for investment can also come from local residents and companies. Participation is a powerful tool to engage, and if people can directly benefit, the acceptance has shown to be larger; as well as benefits for added value on a regional level, keeping the money as well as its return on investment within the regional economy. Possibilities for such participatory projects have been successfully implemented for example with solar PV and wind energy. It is a model of Active Support through opportunities to buy-in. The role of the public body can be for example to rent out the land for the development or to provide roof-space in case of PV/Solar thermal installations.

In **Castilla y Leon (ES)**, the ESCO concept finds application for biomass projects. The region supports projects that comply with their criteria ensuring quality of projects.

In **Schleswig - Holstein (DE)**, community owned wind-parks were fostered, where citizens, local businesses either initiate, plan and own a wind farm, or »only« provide funds investing in a development.