

## Overcoming Barriers to Authorizing Renewable Power Plants and Infrastructure

### 1 Executive Summary

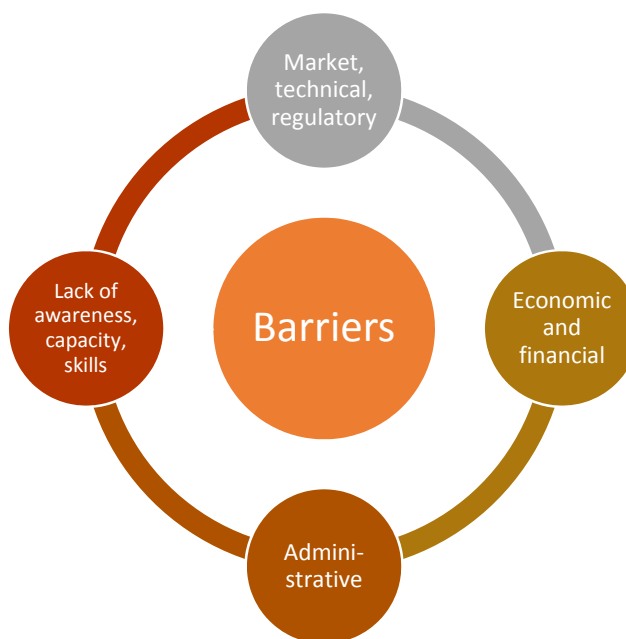
In South East Europe (SEE), the opening of electricity markets to competition is relatively slow. National markets are largely dominated by incumbent utilities, with regulated generation and supply segments. Aging infrastructure is posing a challenge to renewable energy integration, as massive investment is required to refurbish and enlarge the old and inefficient electricity transmission and distribution networks to be able to absorb variable energy from renewable power plants. Investors in renewable energy projects and associated transmission and distribution projects also face various administrative and institutional barriers and bottlenecks, extending the time and the costs of renewable projects. To successfully deal with all these challenges, the stakeholders need adequate human capacities, knowledge and awareness.

This paper attempts to identify the barriers to investment in renewable energy projects in South East Europe, including investment in renewable generation and transmission investments required to integrate renewables generation into the power system. Some of the barriers are common to most of the countries in the region, and they are summarized in the second section of the paper. In the third section, country-specific barriers to investment are discussed.

The identified barriers to renewable projects are classified in four groups:

- Market, technical and regulatory barriers;
- Economic and financial barriers;
- Administrative barriers;
- Lack of awareness, capacity and professional skills.

These barriers to investment in renewable energy projects are investigated to determine their salient features and thereby to help establish a comprehensive set of measures to overcome or mitigate them.



## **2 Overview of Common Barriers to Renewable Energy Investment in South East Europe**

### **2.1 Regulatory, Technical and Market Barriers to Investment**

#### **2.1.1 Introduction to the Market Setting**

The opening of power markets to competition in most of the countries of South East Europe that have not yet joined the European Union has been relatively slow. National markets are largely dominated by incumbent companies, with regulated generation and supply segments. Electricity trading in the region is confined to bilateral trade agreements of relatively low liquidity. Cross border trading is extremely limited due to insufficient transmission interconnection capacity, lack of transparency, and absence of a harmonised process for transmission capacity auction. The degree of market opening at national level mirrors the level of cross border trade at regional level (Energy Community, 2013).

In the absence of competitive market elements like power exchange, unbundled transmission and generation ownership, regulated third-party access, and entry of new supply and demand side players, the regulated price signals on the wholesale level are not reflecting the generation cost. Conventional energy sources, such as domestic coal, are often subsidized as part of a job creation strategy. At the same time, the retail electricity prices are regulated, with tariffs kept artificially low through mandatory subsidies by the incumbent state-owned utilities.

Prices are set by a public regulator and are not determined exclusively by supply and demand. Price regulation can take different forms, such as the setting or approval of prices, price caps or combinations of these. Even though price regulation is not prohibited per se by the *acquis*, it has distorting effects on the market and contradicts the key objectives of the Treaty, including the establishment of competitive markets, regional integration, the security of supply, attraction of investment and environmental sustainability (Energy Community, 2013). Revenues based on the regulated prices often cannot support the maintenance of existing generating plant, the financing of new generating plant, or upgrades to transmission network infrastructure needed to accommodate an increased share of variable renewable generation (UNECE, 2010).

Although these points are valid for all energy markets in South East Europe, the Energy Community proposed to focus on electricity in a first phase (Energy Community, March 2012). Against a backdrop of regulated markets and insufficiently developed transmission and distribution infrastructure, renewable power projects are financed through state support schemes or else must compete in the marketplace with mature, often subsidized conventional generation technologies. While support for renewables is transparent through clearly defined feed-in tariffs or other support mechanisms, support for conventional energy generation is much less visible and remains largely unknown for the general public. As a result, the support for renewables tends to attract negative publicity and is often solely blamed for increased electricity prices. This paper investigates and classifies the barriers to investment in renewable energy projects as the first step towards their elimination, mitigation or bypass.

## 2.1.2 Assessment of Barriers

The countries of South East Europe are undertaking a strong effort to set up policies for the development of energy efficiency and renewable energy, to fully comply with EU regulation and renewable energy targets. Countries such as Macedonia and Moldova are aware of the need to reduce their high dependency on energy imports and improve their security of electricity supply. The interconnection within the whole region needs to be improved in order to increase the security of supply and operation of the systems, and to establish the fully operational electricity market. However, the regulatory framework for interconnection and trading is still under development.

A great number of borders in combination with conflicting transmission capacity auction mechanisms make trading in the region a difficult undertaking. Since most countries in the region are short of generating capacity and net importers of electricity, they rarely would have excess electricity generated for auction or trade (Energy Community 2013).

Due to various administration and policymaking levels involved, the regulatory and market barriers to investment in renewable power plants and associated transmission infrastructure at regional scale can be diverse and very difficult to address. The most frequently encountered barriers of this kind in South East Europe are:

- **Regulatory instability and discontinuity** caused by political instability, frequent and uncoordinated revisions to policy, and a complex regulatory framework which lacks transparency and leads to many pieces of legislation working at cross-purposes without clear division of responsibility or jurisdiction.
- **Lack of implementing legislation and operational instructions, tools, standards and procedures** to carry out strategic programmes, as well as accredited laboratories to provide required analyses, so that investors need to seek foreign assistance.
- **Lack of a competitive, integrated energy market** with regulated third-party access to the grid, and open, non-discriminatory competition based on transparent principles and conditions to attract independent investors. A common legal and regulatory framework for the energy markets in all countries of the region that would facilitate trading of renewable energy across their borders, has not yet been fully implemented. Such a framework is essential to the evolution of a competitive integrated energy market that would set a cost-reflective energy price signal. (Energy Community 2013).
- **Incomplete adaptation of regulatory framework for ancillary services, electricity balancing rules and balancing responsibilities.** Balancing rules are developed in the context of market rules and grid codes, but they have not always been adequately applied (Energy Community 2013). There is a need for non-discriminatory and cost-reflective methodologies to calculate prices not only for the short-term system imbalances that renewable generation may create but also for the ancillary services which renewable power plants can provide to help compensate for such imbalances.

- **Lack of transparency in cross border capacities and statistical information.** For creation of fair prices in the energy market, participants in the market should have as much information on the system as possible, especially on available production capacities, planned outages and available transmission capacities. A common transmission capacity allocation mechanism for coordinated auctions between countries would enable implementation of price based market coupling. The process of establishing a Coordinated Auction Office (CAO) began in June 2012, when the Transmission System Operators of Albania, Croatia, Bosnia and Herzegovina, Republic of Macedonia, Greece, Montenegro, Romania, Slovenia, Kosovo\* and Turkey agreed to establish a common auction office for South-East Europe (SEE) in Montenegro.
- **Lack of consistency in Value Added Tax (VAT) treatment for energy with that in EU member states.** Harmonization of tax treatment would enhance the procedure of establishing integrated energy market.

As variable renewable generation plays a growing role in electricity supply, it will replace the oldest and most expensive conventional synchronous generation that provides some ancillary services (such as frequency and voltage support) by design. The main barriers to renewable power investment in this regard are:

- **Technical barriers:** inability of the power system to integrate new variable RES generation plants due to insufficient reserve capability leading to operational problems.
- **Obsolete and insufficient infrastructure** for transmission and distribution of energy (grid losses, lack of adequate grid connection, and lack of real-time metering for renewable electricity generation), hinders the environmental and economic efficiency of renewable power projects even when the business case for them is attractive.

In order to enable the operation of the power system under the new conditions, the renewable generators will need to participate in the provision of ancillary services. With the provision of these services beyond compliance with the grid codes, renewable electricity generators could provide new ancillary service products and thus derive additional revenue. Such is the case of Ireland, which has the highest potential of wind generation resource in Europe. Its transmission system operators are conducting the DS3 program that is investigating the possibilities for wind generation to provide ancillary services, (Eirgrid 2012).

## 2.2 Economic and Financial Barriers to Investment

Following several decades of lacking investment, in the countries of South East Europe the aging generation and network infrastructure is posing a challenge to renewable energy integration. A massive investment is required to refurbish the old and inefficient power grid

infrastructure and enlarge the electricity transmission and distribution networks to be able to absorb variable energy from renewable power plants. Without this investment, a lot of renewable power goals and projects are very unlikely to be realized.

In most countries of South East Europe, renewable power plants can obtain permits to connect to the grid, but only if they meet technical requirements for grid connection and their integration does not adversely affect the reliability of the system. To meet these criteria, an upgrade of the network is often needed, raising the question of how to finance the connection costs. In the so-called “shallow connection charges” approach, the generator pays only for the connection to the nearest point of the network. But a “deep connection charges” approach also requires the generator to finance any necessary grid reinforcements, significantly influencing the profitability and financial viability of a renewable energy project. Most of the countries have no specifically dedicated funds to finance network upgrades for renewable power projects, so the deep connection charges approach is the only possibility for them. National energy strategies also do not fully reflect the medium- and long-term prospects for RES installation.

Common economic and financial barriers to renewable power projects in South East Europe include the following:

- **State-regulated electricity tariffs** generally fail to cover the real costs of electricity supply because it is politically popular to keep them low. Regulated tariffs are often too low for even the most cost-effective new investments in renewable power to be financially justifiable with an appropriate rate of return.
- **Banks’ lack of experience with renewable power projects, as well as lack of transparency and predictability of RES support schemes** makes them reluctant to finance such projects on the same terms as other investments with comparable risk. High interest rates are thus applied by local banks to medium- and long-term loans that renewable power projects require, along with restrictive requirements for collateral.
- **The small size of many renewable energy projects** results in relatively high evaluation and transaction costs per project.
- **Insufficient public funds** are available for financing of initiatives and programmes:
  - Feed-in tariffs for renewable energy sources are developed but often not operational and are frequently of limited extent; for example, they may apply only to certain technologies or may have strongly restricted budgets).
  - State owned funding agencies for renewable energy (such as Eko sklad in Slovenia), if they are operational, have limited resources.
  - Funds are sometimes awarded on a political basis, and the rules for their use are frequently changing and lacking in transparency.

- Alternative incentive measures such as dedicated credit lines providing soft loans, tax exemptions or support schemes for third-party financing are often not in place.

To enhance the development of renewable power projects, EU countries have designed various forms of support such as grants, subsidies, feed-in tariffs (FIT) and tax incentives. Following their example, every considered South East European country has adopted or is in the process of adopting some form of FIT or other subsidies for renewable energy projects. The EU countries in the region have applied such schemes successfully, though in some cases this has led to excessive profits which adversely affect public perceptions of renewable energy options. There are still some inconsistencies with the implementation from country to country, and the following issues still need to be dealt with:

- **Limited and uncertain FIT funding.** Limits on funding for FIT support may prevent projects that qualify from being admitted to the support scheme. In a few countries, there is no explicit indication that the FIT will be maintained at a consistent level over time. Such uncertainty in FIT support brings risk to financial profitability of renewable power plants for local and foreign investors.
- **Discrepancy between the duration of FIT support and project financing.** One example is in Kosovo\*, where the FIT scheme is provided for a 10 year term while projects are typically financed over a minimum of 12 years.
- **Lack of fiscal and tax incentives, as well as lack of innovative financial instruments, other than grants.** In some countries there is a lack of tax incentives for RES projects. Such incentives would ease the financing of projects, for example incentive that would reduce upfront capital costs. Innovative financial instruments would include dedicated credit lines providing soft loans, tax exemptions or support schemes for third-party financing.
- **Retroactive application of fees.** This has led to legal cases, confrontation between industry and government, and reduced investor confidence.

## 2.3 Administrative Barriers to Investment

### 2.3.1 Barriers and Bottlenecks

Investors in renewable energy projects and the associated transmission and distribution projects in the countries of South East Europe also face various administrative and institutional barriers and bottlenecks. Administrative burdens can significantly increase the costs of renewable energy supply. Among the most important barriers are:

- **Excessive bureaucratic obstacles,** non-transparent administrative procedures, with lengthy, complex and cumbersome authorization procedures for new RES projects.

Acquiring all the necessary documents can take an exceptionally long time, and responsible authorities are not usually required to respond to applications promptly.

- **Complexity of legislation on permitting procedures** with many permits required, many institutions involved, and lack of coordination among those institutions. Sometimes the relevant by-laws referred to by the Energy Law are missing.
- **Inefficient or limited use of public tendering processes** so that the best sites for renewable power projects may be auctioned off without being built upon, yet also not released to other potential power projects for many years.
- **Lack of cooperation** among different ministries and agencies involved in energy policy as well as between authorities at national and local levels. Differing terminology between various pieces of legislation causes confusion, additional costs and delays. This is often true for legislation in the fields of energy and environmental protection.
- **High transaction costs:** Acquiring all required permits for renewable energy projects is expensive, increasing the already high expenses for putting these projects in place.
- **Unnecessarily stringent technical requirements** for RES power projects to fulfil the environmental national and regional policy goals. Such technical requirements are often based on risk-averse principles and not on what is needed to fulfil the policy goals. (In Slovenia, for example, the biological minimum flow for small hydro is set by default at a very high level. An investor can only obtain a reduction in this threshold by investing in a costly project-specific study that proves a lower minimum flow is sufficient.)
- **Zoning of RES projects:** RES generation and transmission infrastructure projects need to comply with various national and local laws. National, district and local zoning plans developed at different levels of decentralized local government are often insufficiently coordinated. Detailed zoning plans do not exist in many municipalities, considerably prolonging the process of obtaining permits and approvals.
- **Siting of RES generation:** Administrative procedures and requirements to prepare the necessary documentation are not transparent and are too complex. Often, local communities require investments in roads, bridges or other infrastructure not directly associated with the RES project in order to support the project.
- **Very long and expensive procedures to obtain rights-of-way:** Transmission and distribution projects are rarely declared as infrastructure of national importance, so the land for needed transmission and distribution corridors cannot be expropriated if the owners do not agree to sell the land to the investor.
- **Restrictive quotas for particular RES technologies:** The use of some technologies may be limited because RES laws are not harmonized with the National Energy Strategy or with regulations for construction, mining, or river management.

- **Administrative problems of securing fuel for biomass RES projects:** Sufficient and reliable quantities of available biomass are needed on the market to enable stable long-term operation of biomass plants. In absence of transparent and liquid biomass markets, administrative solutions are often complex and inefficient.
- **Unresolved property issues:** Obtaining land for renewable power projects may be complicated by fragmented land ownership, obsolete information in the land registry, and ambiguous property rights. Many properties in remote areas are not registered in the land registry, so the owners lack formal deeds. In such cases, investors must explore and verify the status of land ownership on their own.

### 2.3.2 Duration of Application Process

Among the countries of South East Europe, the time required to obtain all necessary permits and licences for a RES project generally varies with the size of the project and also with the effort the government has invested in streamlining the administrative procedures. Among the common metrics to measure and reduce the length of the procedures are:

- **The total duration of the review process** (in months or years) by the competent authority. For example, in Albania, larger projects need to be approved within three months and smaller projects within two months.
- **A detailed description of the procedures and duration** (time limits) for the implementation of the procedure, including the maximum number of days each approval step can take, and the maximum period for the investor to file a complaint. Determination of the responsibilities of institutions and the investor.
- **Maximum and average number of steps** the RES project approval procedure can take. For example, in Croatia, the most complex processes can take 30 steps, while less complex process can be done in 20 and energy permits can be issued in 9 steps.
- **A-priori publication of the exact chain of typical procedural steps** for each type of the project, including the number of authorities and the number of permits and documents that need to be obtained (for example in FYR Macedonia).
- **Introduction of a quick process** for smaller, simpler projects (such as small integrated solar PV plants in Croatia).

## 2.4 Lack of Awareness, Human Capacities and Professional Skills

Stakeholders involved in identifying, developing, financing, approving, regulating and implementing renewable energy projects must have well-developed capacities and awareness



to achieve tangible results (Energy Community 2012). Several factors can impede the renewable energy project development:

- **Skepticism among senior policy makers** who may lack knowledge of the comparative costs of different energy sources and may therefore have an outdated view that renewables are expensive and unreliable compared with alternatives.
- **Lack of commercial bank experience** in financing energy efficiency and renewable energy projects, with lack of awareness of their possible economic benefits, resulting in limited or absent demand for energy efficiency and renewable energy audits by Energy Service Companies (ESCOs).
- **Lack of professional training and education** for conducting energy audits, identifying attractive project opportunities, and preparing bankable project proposals.
- **Insufficient professional expertise among local authorities** for implementation of identified renewable energy projects.
- **Lack of knowledge among investors** in renewable projects, who may evaluate locations for projects only from a local energy perspective and not according to zoning laws environmental regulations, or potential for power flows on the grid.
- **Lack of awareness by consumers**, who regard energy as a public service rather than a valuable good and are very reluctant to change their consumption behavior unless this will tangibly improve their standard of living.

### **3 Particular Barriers to Renewable Energy Investment in Countries of South East Europe**

In this section, some country-specific aspects of the barriers are gathered that further explain the above findings and highlight the differences among the countries. The section focuses primarily on administrative barriers.

#### **3.1 Albania**

Albania has undertaken several policy reforms, mainly in compliance with its status of a candidate country to the European Union. In Albania, the virtually complete reliance on hydro-power, and the low financial liquidity of the electricity sector are obstacles for the sustainable development of the electricity market and security of supply. Albania has a “single buyer” market structure, i.e. a legal monopoly for purchase of domestic electricity. Prices are regulated both in the wholesale and retail segment (UNECE 2010, Energy Community 2013).

According to the power sector law, the government is responsible for the authorisation and tendering of new electric generating capacity. The law sets the main authorisation criteria in an adequate manner but does not enforce transparency requirements. Tendering is not stipulated in the power sector law, but some relevant provisions are to be found in the law on concessions and the law on licenses, authorizations and permits. The national licensing centre provides practical conditions for shorter authorisation procedures, in particular when concession certificates or other administrative prerequisites are required.

A national licensing centre was designated by the power sector law to act as a one-stop-shop for all investors who won a tender for a concession or obtained an authorisation for construction pursuant to the existing laws. The Albanian Energy Regulatory Entity (ERE) is empowered to adopt simplified procedures for licensing producers with capacities below 15 megawatts.

The main problems the transmission and distribution companies face for construction of a line are related to the ownership of land. These difficulties are not due mainly to the cost of compensating landowners for property that is expropriated, but rather to the fact that many landowners lack a deed of ownership since a lands in remote areas are typically not registered in the Real Estate Registration Office.

### **3.2 Bosnia and Herzegovina**

Bosnia and Herzegovina faces several institutional and administrative barriers which are related to the specific administrative structure of the country that consists of two separate administrative entities and one district: the Federation of Bosnia and Herzegovina, the Republic of Srpska and the District of Brčko each with its own entity level government.

- In the Electricity law of the Republika Srpska, there are no provisions for tendering for new generation capacity. The Regulator, ERS, is issuing authorisations for the construction of new generating capacity instead.
- In the Federation of Bosnia and Herzegovina, the new Electricity Law of 2013 improves the process of authorising new generating capacity. In most cases, projects are tendered and permits issued by the Federal Ministry. Upon proposal by the Federal Ministry, the Federal Government is expected to adopt a regulation on the process. At the moment, there is no single independent authority for tendering for new capacity and issuing permits that would speed up the process. In practice, the procedures applied by the regulators at both levels are perceived by the industry as lengthy, requiring various certificates, hearings and consultations, and thus introducing significant delays.
- In the Brčko District, there are no procedures in place for authorising new generating capacity; hence the process of installing new power plants is even more complicated. (Energy Community, 2013).

### **3.3 Croatia**

The administrative barriers for renewable energy projects in Croatia mainly include complex authorization procedures for even small renewable energy projects as well as insufficient coordination between different governmental agencies involved in renewable energy policies. For example, the administrative procedure for obtaining the status of eligible electricity producer can require around 30 steps for a large RES generator and 20 for a smaller one. The majority of the procedures require about 20 steps and take between 10 and 30 months. In 2010, a regulatory streamlining project identified about 80 legal and administrative barriers and inefficiencies and proposed measures for their removal. Each of these barriers is classified by type and labelled according to priority.

The main legislative framework for Croatia's electricity sector was significantly altered during 2013. There was a fine tuning of the legislation to meet the requirements of the EU *acquis* ahead of the country's accession to the EU on 1 July. With the new legislation in place and a deadline provided for its implementation, Croatia's energy market has been in transition. (Energy Community, 2013).

### **3.4 Kosovo\***

Kosovo\* has made good progress with undertaking several policies and legal amendments to enhance integration of RES. Authorisation and tendering procedures are defined by the law on the Energy Regulator Office (ERo) according to which ERo is responsible for conducting authorisation procedure for the construction of new electric generating capacity and direct electricity lines, as well as for initiating and conducting tendering procedures for the construction of new generating capacity. In 2011, ERo published a rule on authorisation procedures for construction of new generating capacity, direct lines and interconnectors. (Energy Community 2013). Despite all the progress, legislation still needs to be streamlined and harmonized to enable the full utilization of RES generation.

Kosovo\*'s transmission system operator and distribution system operator also made progress in helping integration of RES by establishing standard rules for sharing the costs of grid connection and reinforcement that are associated with RES systems among all electricity producers benefiting from them. The control center of the electricity transmission and distribution system is old and inadequate. To mitigate this, the implementation of SCADA/EMS is planned by the Kosovo\* transmission system operator (KPRES 2009, RKES 2011).

Due to lack of expertise in implementation of RES, the Ministry of Economic Development has published a leaflet on licensing and permitting requirements for renewable energy. However, specific training and activities that would enhance the process of capacity building among the investors and the industry are not yet available (KPRES 2009). In addition, it would be useful

to undertake further research on renewable supply potential, example by developing a map of wind resources and performing an updated assessment of hydro and biomass potential.

### **3.5 Former Yugoslav Republic (FYR) of Macedonia**

As in the most of other countries of South East Europe, the key unnecessary obstacle in FYR Macedonia is the large number of institutions involved in the procedures and licensing and lack of coordination among the bodies involved. At the moment there is no one-stop shop for coordinating all steps, but significant improvements have been made in recent years to streamline the process. The timetable for processing applications is defined by legislation and mostly communicated in advance. The average time for getting decision on the application is between one and two months. Recent legislation offer a more detailed description of the procedures and duration (time limits) for the implementation of the procedure by determining the responsibilities of institutions and interested party (the applicant).

### **3.6 Montenegro**

The Government of Montenegro has drafted a new Energy Development Strategy in which it defines objectives of energy development through 2030 (MEDS 2013). The strategy sets objectives for development and authorization of energy infrastructure. An action plan for implementing the strategy identifies the applicable terms and conditions for construction and rehabilitation of the power infrastructure. Construction or refurbishment of energy facilities requires an energy permit or a concession by the ministry (Energy Community, 2013).

The following barriers to efficient RES project integration have been identified (MEMN 2013):

- Insufficient capacity, with overloading of transformers and power lines, is causing high transmission and distribution losses.
- Electricity generation facilities are old and in urgent need of rehabilitation; the last one was built in 1982.
- The public is concerned about hydropower investments, based on earlier experience.
- Implementation of energy development action plans is lagging.
- Incentives in the renewable and energy efficiency sectors are lacking or insufficient.
- Energy management in the public sector, which could lead to savings through RES projects in rehabilitation of public buildings, is largely absent.
- Local electricity markets are underdeveloped.
- Land ownership issues impede projects to expand the transmission network.

The Energy Policy also emphasises the need for improving the system of financing, planning, monitoring and controlling the implementation of energy policy and strategy, which are prerequisites for sustainable development of the energy sector (MEMN 2013).

### **3.7 Republic of Moldova**

One of the main barriers for investment in renewable energy projects in Moldova is capital constraints. The Moldovan Sustainable Energy Financing Facility was recently established to provide more financing opportunities (Moldovan SEFF 2012). Other barriers include the absence of a feed-in tariff support scheme for RES generation, lack of a public tendering process, and limited access to the power market. All RES projects have been developed and implemented by state institutions, as private investors cannot readily compete.

For new power plants with a capacity greater than 20 MW, authorisations are issued by the government, but detailed procedures for the authorisation which would facilitate the process are yet to be adopted. Authorisations for power plants with a capacity below 20 MW are granted by local authorities on the basis of connection notices issued by the local distribution company. Tendering procedures for new generation capacities to ensure security of energy supply are organised and based on a regulation adopted by the government (Energy Community, 2013).

### **3.8 Slovenia**

The administrative barriers for renewable energy projects in Slovenia are mainly embodied in the complex and lengthy authorization procedures for small hydropower projects, especially with respect to spatial planning. A high feed-in tariff for photovoltaic plants led to a boom in installed capacity. New PV capacity amounted to 122 MW in 2012 alone and 221 MW by late 2013, far exceeding the projection the NREAP projection of 139 MW for 2020. This deviation from plan brought difficulties in financing the FIT; to obtain sufficient funds to support the FIT, the regulator had to increase the “green tax” levied on electricity consumers (SI NREAP 2010).

### **3.9 Serbia**

The main barriers to development of RES in Serbia's, as identified in the country's NREAP, are complex procedures for building power plants on state-owned land, lengthy and complex procedures, and a lengthy process for obtaining a great number of approvals and permits.

The authorisation and tendering procedures are de-fined in the Energy Law in line with the *acquis*. A public tender for new capacity is envisaged in cases where the energy permits issued and measures for energy efficiency are not sufficient to ensure security of supply. Upon proposal by the Ministry, the Government decides on initiating a tender procedure for which the Ministry is responsible. According to the Law, the Ministry sets rules defining in detail

conditions and a procedure for the application and issuing of energy permits, as well as conditions for approval of energy facilities that do not require energy permits. Obtaining licenses, permits and approvals requires familiarization with a great number of laws and by-laws defining procedures, required documentation and deadlines. Required licenses, permits and approvals are issued by various institutions which are not always government authorities.

Lack of qualified human resources appears to be a major barrier throughout the entire public administration. In the private sector, technical skills are available, but there is lack of experience in the preparation of bankable projects to be submitted to funding institutions (UNECE 2009).

### **3.10 Ukraine**

Ukraine's regulatory framework for energy in general, and renewable energy in particular, is fragmented and complex. Authorisation and tendering procedures are defined in the Energy Law. A public tender for new capacity is envisaged in cases where the energy permits issued and measures for energy efficiency are not sufficient to ensure security of supply. Upon proposal by the Ministry, the Government decides on initiating a tender procedure for which the ministry is responsible.

Economic and financial barriers that were identified are lack of transparency in distribution of state funds for energy conservation and energy saving measures, difficulties with access to credit resources since banks are reluctant to provide loans for investments with a payback period of over one year, and the current difficult economic situation in the country. The heat tariffs applied by the municipalities do not fully cover the costs, thus hindering highly necessary investments to renovate and upgrade the infrastructure (UNECE 2009).

## **4 Conclusions**

There are numerous barriers to investment in renewable energy projects and associated transmission and distribution networks in the countries of South East Europe. The countries are at various stages of the process of integrating with the European Union, for which they have many challenging tasks at hand. They need to open their electricity markets to competition, stimulate energy efficiency measures, reach renewable energy supply targets, enhance environmental protection, overhaul their standards, and harmonise their legislation to enable all these goals. But in view of the employment provided in traditional sectors of the energy business like coal mining, they are trying not to dismantle the current system of support measures too quickly; economic development efforts in mining regions could help.

Introduction of new renewable power technology is posing new challenges. In the past, the state-owned utilities have used conventional technology for electricity generation with well-known procedures, regulation and streamlined processes for investment in new power plants. But with the advent of renewable power projects, new independent investors are seeking to challenge the incumbents and take advantage of the mandated opening of power markets. While the old regulated market favours the incumbent utilities, the new market structures and the associated opportunities for international trade offer new avenues for development.

To achieve all this change is a complex undertaking. There are many new actors, often with unclear or insufficiently coordinated responsibilities and conflicting goals, facing a system that has a high inertia and is slow to adapt. Quick-fix solutions by authorities that often lack competences and coordination add to regulatory and legal uncertainty for investors. Existing legal frameworks and administrative practices still fall short of compliance with EU directives. Although implementation frequently falls short of ensuring the efficiency and transparency needed by investors in renewable energy projects, there are positive examples among the countries of South East Europe in addressing all types of barriers to investment.

Foreign investments will be of great importance for the deployment of renewable energy in South East Europe. But the region's energy market is far from attractive to foreign investors for several reasons:

- **Market, technical and regulatory barriers** mean an insufficiently competitive regulatory environment for private companies. Monopolists and de facto monopolists dominate the regulated energy markets. Lack of market access to new entrants is accompanied by burdensome administrative and institutional complexities in some of the countries. Poorly developed frameworks for trading on regional markets influence the security of energy supply while some countries are short of generating capacity. . The regional market is highly fragmented, which reduces the attractiveness of investment in cost-effective large-scale projects by which the region as a whole could be served. Introduction of retroactive rules for renewable energy supply in some countries has also repelled investors. Creation of a competitive integrated energy market between the countries South East Europe and their neighbors in the European Union, ultimately involving the integration of South East Europe into the unified EU energy market, would help set cost-reflective energy price signals which are needed to attract new renewable power investments.
- **Economic barriers:** To enhance the development of renewable power projects, the countries of South East Europe follow the EU lead to design various forms of financial support such as grants, subsidies, feed-in tariffs and tax incentives. While state-regulated electricity tariffs do not cover the real cost of electricity supply, the incumbent utilities can access various forms of state aid to cover the revenue shortfall, while new independent investors cannot. Banks often lack experience with renewable power projects, and public funds are often insufficient to stimulate such projects at scale.

- **Administrative and legal barriers** mostly include excessive bureaucratic obstacles, unnecessary complexity concerning permitting procedures, legal uncertainty due to changing legislation, lack of cooperation and lack of clear delineation of responsibility among various authorities, long and complex procedures to obtain zoning and siting permits as well as unresolved property issues and other administrative problems.
- **Lack of awareness, capacity and professional skills** poses the most immediate challenge as any change needs to be initiated by the competent and well-organised staff. This goes for the authorities, investors in RES projects, technology and engineering providers, and consumers.

The example of Croatia as a new entrant to the EU shows a path to reforming the energy market to comply with the EU legislation. Another helpful approach, pioneered in Albania, is to designate a licensing centre as one-stop-shop for all investors. The countries of South East Europe, most of which are EU accession candidates, should follow such examples to benefit from competitive energy supply and to enable early integration with the EU energy market. They should also cooperate closely in sharing knowledge and experience and in creating a regionally synchronized and transparent market space.

## 5 Literature

- Albania Government, 2012: *Draft National Renewable Energy Action Plan*.
- Croatia Government, 2013: *Croatian National Renewable Energy Action Plan*.
- EirGrid, SONI, "DS3: System Services Consultation - New Products and Contractual Arrangements", Ireland, 8. June 2012.
- Energy Community Secretariat: *Annual Implementation Report*, September 2013
- Energy Community Secretariat: *Energy Strategy of the Energy Community*, 10. MC/18/10/2012 - Annex 19/27.07.2012, July 2012
- Energy Community Secretariat: "*Regulated Energy Prices in the Energy Community – State of Play and Recommendations for Reform*", March 2012.
- Macedonia Government, 2012: *Draft National Renewable Energy Action Plan*.
- Ministry of Economic Development, Republic of Kosovo\*, *Kosovo Plan on Renewable Energy Sources (KPRES) – Draft*, December 2011.
- Ministry of Economic Development, Republic of Kosovo\*, *Energy Strategy of the Republic of Kosovo, 2009-2018 (RKES)*, 2009.
- Ministry of Economy of Croatia, *National Renewable Energy Action Plan until 2020*, October 2013.
- Ministry of Economy of Montenegro, *Strategic Environmental Assessment for the Draft Energy Development Strategy by 2030*, Draft SEA Report, April 2013.



- Ministry of Economy of Slovenia, *National Renewable Energy Action Plan 2010-2020 (NREAP 2010)*, Slovenia, Ljubljana, July 2010.
  - Moldovan Sustainable Energy Financing Facility, *MoSEFF website*, set up in 2012, <http://www.moseff.org/index.php?id=88&L=1>
  - Serbia Government, 2013: *Serbian National Renewable Energy Action Plan*.
  - UN Economic Commission for Europe: *Policy Reforms to Promote Energy Efficiency and Renewable Energy Investments in Bosnia and Herzegovina*, Seminar on Policy Reforms to Promote Energy Efficiency and Renewable Energy Investments, Geneva, October 7-8, 2009.
  - UN Economic Commission for Europe: *Regional Analysis of Policy Reforms for Energy Efficiency Investments*, June 2010.
- \* *This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.*