

Energy Community Regulatory Board
Electricity Working Group

Regulatory Perspectives on RES in Energy Community

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Joint TSO-Utility Regulator Workshop on Integration and Cross Border Trade of RES in Regional Transmission Networks

Istanbul - Turkey, 8 March 2011

Questions of interest

- Have the national/state regulations and approaches achieved their intended results?
- What role do regulators have in promoting, monitoring and approving renewable projects in each country?
- How can an approval process be developed so that it satisfies the need for expediency, regulatory transparency, economic feasibility, and rigorous system analysis?



Contents

- Framework for the Promotion of Renewable Energy Sources in the Contracting Parties of the Energy Community
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- Regulatory Framework on RES in Energy Community
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Energy Community

Energy Community Regulatory Board

ECRB and SEE Regulators' responsibilities on RES issues















Contracting Parties | Observers | Participants | 8th Region - MC Decision 27.6.2008 regional CAM/CMP Reg. (EC) 1228/2003

AREAS OF WORK

	Ministries/ECS	Regulators/ECRB
RES/EEF	■ Implementation plans ■ TF RES, TF EEF ■ Study 2009	Partly – as far as relevant for regulatory topics, e.g.: ▪ Priority access ▪ Biogas ▪ Balancing Markets (until now not discussed)

Energy Community Regulatory Board (ECRB)

- ✓ shall discharge the tasks entrusted to it by Article 58 of the Energy Community Treaty → 1st ECRB meeting held in December 2006
- ✓ at the request of the European Commission, or on its own initiative and in accordance with the objectives of the Energy Community Treaty, shall undertake the **function of advising on statutory, technical and regulatory rules** in the region to the Energy Community Treaty Institutions.
- ✓ shall provide **advice to the Ministerial Council and the PHLG** with regard to monitoring and assessing the operation of the energy networks and network energy market and **issue recommendations** to the Parties when so entrusted by the Treaty or the Ministerial Council.
- ✓ shall **facilitate consultation, co-operation and co-ordination amongst regulatory authorities** to a consistent application of the Acquis Communautaire. The ECRB **makes recommendations** and reports with respect to the functioning of the energy markets.
- ✓ may **determine the existence of a serious and persistent breach** and **bring it to the attention** of the Ministerial Council.

Main topics of the ECRB Work Program

- **Electricity:** Congestion Management and transmission capacity allocation, Regional Balancing Mechanisms, Compatible Market Rules, Wholesale Market Opening, mutual recognition of trading licenses, Cross Border cooperation, Coordinated Auction Office
- **Gas:** Cross border gas trade, interconnection and interoperability of transmission and transit pipelines, balancing and flexibility tools including storage and LNG facilities, cross border cooperation, transmission tariffs
- **Customers**: Protection of vulnerable household customers, quality of supply and commercial services, standards and incentives, tariff methodologies and transparency of prices
- **Coordinated Auction Office (CAO):** Implementation Group (IG) provides the platform for regulators, network operators and users to coordinate the establishment of a CAO

- The ECRB Work Program **does not include RES** and its impact on Transmission Network so far, but it will be included in EWG WP 2012



Energy Community

Regulatory Framework on RES

NEW EU RENEWABLE ENERGY DIRECTIVE 2009/28/EC

- Repealing both Directives 2001/77/EC and 2003/30/EC starting 1st January 2012
- The Energy Community - for the first time in an EU piece of legislation (Article 9, recital 37)
- … and the ENERGY COMMUNITY
  - Study on the implementation of the New EU Renewable Energy Directive
  - Renewable Energy Task Force
  - Activities in the 2009-2010-2011 Work Programs



IMPLEMENTATION STATUS
Directive 2001/77/EC

Contracting Party	Indicative targets	Support schemes	Guarantee of origin	Administrative procedures	Grid system issues
Albania	2% total power production from RES (P>100MW) 18% RES_e of TPES by 2020 (new draft of RE Law)	Preferential tariffs for new SHPP (<15 MW) adopted; Feed-in tariffs to be developed for other types of RES; New RES equipment exempted from custom duties	Regulation on GO for power producers adopted in February 2007	Authorisation procedure for new capacities that are not subject to concession is in process of approval	Guaranteed grid access for all RES; TSO gives dispatching priority to privileged producers (RES<25MW, HPP<10MW, cogen<100); Grid costs covered by producers
Bosnia and Herzegovina	To be set	Support schemes partially developed at entities level, not at state level	Guarantee of origin issued by Regulator in RS, in FBiH not assigned yet	Administrative procedures, regulation and codes are not proportionate to the promotion of RES	Priority access to network and obligation of purchase in FBiH adopted in 2010
Croatia	Binding 20.02% RES in GFEC by 2020; 35% RES_e in power generation by 2020	Feed-in tariffs for various RES defined	Not yet adopted.	Administrative procedures, regulation and codes are not proportionate to the promotion of RES	Purchase obligation for Market Operator. Priority access for RES.Grid code limitations for wind generation due to stability requirements.
The Former Yugoslav Republic of Macedonia	>20% RES in GFEC by 2020	Feed-in tariffs are introduced for wind, biomass, small hydro and photovoltaic installations	Rulebook for issuing guarantees of origin adopted	Administrative procedures, regulation and codes are not proportional to the promotion of RES	Planned to be introduced in the amendments of the Energy Law

IMPLEMENTATION STATUS
Directive 2001/77/EC

Contracting Party	Indicative targets	Support schemes	Guarantee of origin	Administrative procedures	Grid system issues
Moldova	Ambitious target set at 20% RES in GFEC in 2020	Proper feed-in tariffs to be introduced	The Regulator is assigned to issue GoO	Administrative procedures, regulation and codes are partial proportional to the promotion of RES	Free, non-discriminatory access for RES, distribution tariffs not yet adopted
Montenegro	New Energy Law to set indicative targets for RES Planned >20% RES of GFEC by 2020	Feed-in tariff to be introduced	No guarantee of origin mechanism for RES energy	Authorisation procedures for RES to be simplified	RES <10 MW plants have guaranteed access to the transmission and distribution networks. Grid codes for T&D are temporary
Serbia	2,2% RES_e in GFEC up to 2012	Support mechanisms introduced for various RES but valid until 2012.	No guarantee of origin mechanisms for RES electricity	Guides for Investors in Renewable Energy - Administrative procedures, regulation and codes are not proportional to the promotion of RES	Priority access for RES only if offered under equal conditions. Purchase obligation for EPS. Limits for solar (5 MW) and wind (450MW) until 2012
UNMIK	7,8% RES_e and RES_{th} of TEP by 2016	Feed-in tariffs defined	The system for issuing guarantee of origin has been introduced	Administrative procedures, regulation and codes are partial proportional to the promotion of RES	Priority access for RESe and RESth (if covered by GoO). Purchase obligation for RES but priority access is not set out in the Grid Code

- **Renewable Energy Framework Analysis**
  - Assessment of Directive Requirements
  - Review of Existing Arrangements for Renewable Energy
  - Gap Analysis
- **Energy Market Modelling**
  - Forecasting the Energy Consumption in 2020
  - Calculation of Indicative RES targets
  - Regional economic model
- **2020 Target Implications**
  - Costs and opportunities

RESULTS OF THE RES STUDY

- **Partial results**
  - Methodology - the same level of ambition as EU-27
  - RE share in 2005 – almost double than in EU-27
  - 2020 RE share could exceed 20% at Energy Community level
- **RE Market Model**
  - Heat demand could be meet entirely from Biomass
  - Significant impact of Energy Efficiency measures
  - Increase Security of Supply, jobs creation, GHG reduction
- **Potential**
  - Significant Biomass (82 TWh/y), Hydro (19 GW), Wind (6 GW), Solar (200 MW)
- **Key issues**
  - 2005 energy statistics, Biomass consumption



Energy Community

Renewable Energy Sources

Regional Overview

RES in the Energy Community

- The availability of Renewable Energy Sources (RES) **varies** within the **SEE** region
- However **all** Contracting Parties (CPs) **started to develop** and implement a **Strategy on the promotion of RES**
- The development of these Strategies is under the **responsibility** of the relevant **Ministries** → and the **National Regulatory Authorities** (NRAs) are in most cases **responsible** to **set market based incentives**
- In this respect the **NRAs** are in most Contracting Parties **responsible** for **setting** the **Feed-in Tariffs** as well as for **defining** the **Tariff Methodology**

RES in the Energy Community

- **NRAs** are responsible for **issuing Secondary Legislation** related to RES and for **Licensing** RES generation units
- The **Definition** of Renewable Energy Sources is **not harmonized** within the Energy Community
- This could be illustrated by the example of the **threshold definitions** for Small- and Large-Hydro Power Plants
- Thus, it is very **difficult to compare** the various regimes for promoting RES within the Energy Community



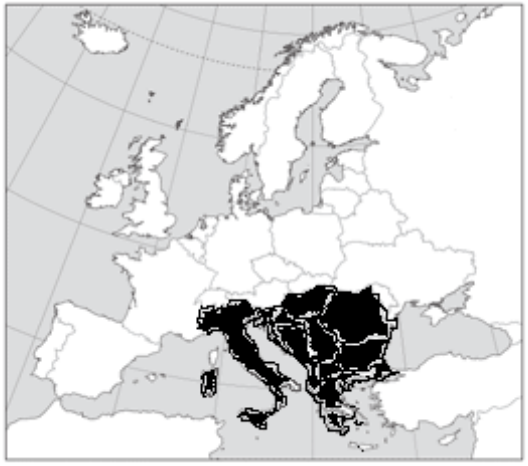


RES in the Contracting Parties of the Energy Community

SEE RES REVIEW

- **Items of interest:**
  - **Strategy on RES**
  - **Regulatory Role in Implementation of Strategy on RES**
  - **Strategic Outlook**

- **Review includes the following Contracting Parties:**
  - Bosnia and Herzegovina
  - Croatia
  - Former Yugoslav Republic of Macedonia
  - Moldova
  - Montenegro
  - Serbia
  - Ukraine
  - UNMIK



Bosnia and Herzegovina

- Compared to other Contracting Parties the share of RES in Bosnia and Herzegovina is relatively high
- In this respect the biggest part is related to LHPPs
- The installed capacity RES capacity in 2009 was:
  - Hydro > 5 MW: 2,027 MW
  - Hydro < 5 MW: 28,973 MW
- The amount of energy produced during 2009 from RES is:
  - Hydro > 5 MW: 6,219,246 kWh
  - Hydro < 5 MW: 102,600 kWh
- There are no final results for 2010, but it is expected that the RES generation was approximately 10% higher then in 2009

Bosnia and Herzegovina

- **Strategy on RES**

➢ Ministries at the entity level (two) are policy makers and responsible for promotion of RES

➢ By defining the energy strategy they are in charge to set the RES targets



Bosnia and Herzegovina

- **Regulatory Role in Implementation of Strategy on RES**

➢ Regulators at the entity level (two) are responsible for defining the Secondary Legislation dealing with the RES

➢ Regulators are responsible for:

- Setting the Rules on Authorization - Permitting process for construction of new generating capacity
- Setting the Rules on Support Mechanism for RES
- Setting the Rules on Certificate of Origin
- Setting the Feed-in Tariff for all type of technologies

Bosnia and Herzegovina

- **Strategic Outlook**

➢ The indicative plan for additional RES capacities by 2020:

- Hydro - 1,941.0 MW
- Wind - 3,015.5 MW
- Biomass - 10.0 MW



Croatia

- In 2008 the share of RES in total primary energy supply was around 15.6 % (according to the EIHP methodology), or around 8.7 % if the calculation is based on the EUROSTAT method
- Total electricity production in Croatia in 2008 was 12,325.6 GWh, out of which 43.7 % came from RES, including Large Hydro Power Plants, which accounted for 42.2 % in the RES share of total electricity production
- Other RES (small hydro, wind energy, landfill gas and bio gas) accounted for 1.3 % of electricity production
- In total consumption of electricity in Croatia in 2008 electricity generated from RES made about 28.5 %
- Electricity from LHPP accounted for 27.7 %, while electricity generated from other RES accounted for 0.8 % of total consumption

Croatia

The table below shows the total values of installed RES capacities as of 31 December 2010:

Type	Installed Capacity [MW]
Large Hydro and old Small Hydro	2,069
Wind	78.75
Biomass	2.74
Biogas	2.00
Solar	0.05286
New small hydro	0.03

Croatia

- **Strategy on RES**

➢ The Croatian Ministry of Economy, Labour and Entrepreneurship is responsible for defining the strategy on promoting Renewable Energy Sources

➢ This Ministry is also responsible for setting Feed-in Tariffs and criteria for eligible producers



Croatia

- **Regulatory Role in Implementation of Strategy on RES**

➢ As regards the implementation of the RES Strategy, the Croatian Regulatory Authority HERA performs the following tasks:

- Issuing licenses for all power plants over 1MW including Renewables and high-efficiency CHP
- Issuing rulings on eligibility status of power plants; Eligibility guarantees dispatch priority and allows participation in the Feed-in Scheme
- Supervising eligibility status
- Providing Methodologies (Tariff Systems) for defining connection costs (for all types of network users, including RES power plants)

Croatia

- **Strategic Outlook**

➢ The Croatian Energy Strategy has been published in 2009 and it defines the following targets:

- By 2020 electricity production from RES and LHPPs will constitute 35% of the final electricity consumption (end-use of electricity)
- New capacity LHPPs by 2020: 300 MW
- New capacity SHPPs by 2020: 100 MW
- New capacity of Biomass Power Plants by 2020: 85 MW
- New capacity of wind power plants by 2020: 1,200 MW

Former Yugoslav Republic of Macedonia

- In **2005**, having a share of 13.8% for RES in the final energy consumption, the FYRoM has been listed among countries with relatively high use of RES:
- Use of RES in FYRoM accounted for 3,016 GWh, out of which Biomass was used as final energy in the amount of 1,767 GWh and participated with 59% in the total use of RES in country
- The contribution of Hydro energy accounted for 1,144 GWh, which represents a relative share of 38%
- Generation from LHPPs and SHPPs accounted for 94% and 6%, respectively
- Geothermal energy accounted for 105 GWh or 3%
- Modest use of Solar Energy was noted (around 0.2% in the total use of RES), but the same was not registered in statistical terms

Former Yugoslav Republic of Macedonia

- **Strategy on RES**
- The Government of the FYRoM creates the policy for improvement of energy efficiency and for the exploitation of RES
- The policy for RES exploitation is established within the Strategy for RES exploitation
- FYRoM accepted the system on stimulating electricity generation from RES by means of Feed-in Tariffs and issuance of guarantees of origin for the electricity generated
- In addition, on two occasions in the last several years, the Government of FYRoM provided direct budget subsidies aimed to stimulate installation of solar collectors for hot water. Guarantees of origin for electricity generated from RES and high efficient cogeneration plants are issued by the Energy Agency of FYRoM, while the generators can use them when trading the electricity they generated

Former Yugoslav Republic of Macedonia

- The Ministry of economy issued the following bylaws regarding RES:
  - Rulebook on RES for electricity generation in 2008
  - Rulebook on issuing guarantees of origin for electricity generated from RES in 2008
  - Rulebook on obtaining the status of preferential electricity producer from RES in 2009
- Taking into consideration the analysis in the Strategy for utilization of RES until 2020, Government of FYRoM in October 2010 adopted Decision for the target share of energy produced from RES in the total energy consumption, as well as the manner and dynamic for reaching the target share, until 2010
- The decision sets the target share of RES in 2020 in FYRoM at 21%
- According to the Decision, the target share will be reached with construction of new energy utilities that use RES, as well with stronger energy efficiency measures in accordance with the Strategy for utilization of RES until 2020 and Strategy for energy efficiency until 2020
- In September 2010 Government of FYRoM adopted Strategy for utilization of RES until 2020, as one of the most important strategic document

Former Yugoslav Republic of Macedonia

- **Regulatory Role in Implementation of Strategy on RES**
- According to Article 141 of the **previous** Energy Law, Energy Regulatory Commission of FYRoM (ERC):
  - Sets the Feed-in Tariffs for electricity sold by the preferential producers of electricity and producers of electricity from high-efficiency cogeneration facilities
  - Issues Licenses for performing the energy activity producing of electricity from RES
- In the period of 2007-2010, ERC brought many bylaws and decisions regarding RES
- According to the new Energy Law, ERC will not be in charge for setting the Feed-in Tariffs for electricity produced from RES, but the Government

Former Yugoslav Republic of Macedonia

- By means of an Act on Electricity Feed-In Tariffs, the Government of FYRoM shall stipulate, for each type of preferential generator separately, the following:
  - specific terms and conditions to be met by the power plant in order to obtain the status of preferential generator
  - upper threshold for the power plant installed capacity required for obtaining the status of preferential generator
  - electricity Feed-in Tariffs and period for their application
- Government of FYRoM, by means of a decision, shall stipulate the total installed capacity of preferential generators for each RES separately, and the total installed capacity of high-efficiency cogeneration plants in the Republic of Macedonia, depending on the attainment of goals and implementation dynamics from the Strategy on RES, the RES Action Plan, the Energy Efficiency Strategy and the Action Plan on Energy Efficiency

Former Yugoslav Republic of Macedonia

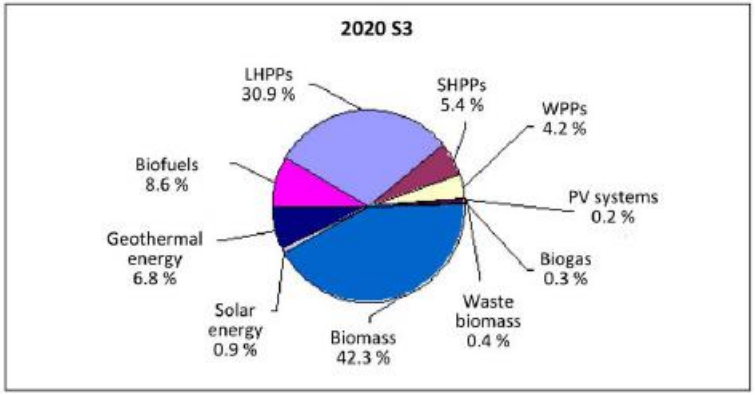
- According to the new Energy Law, ERC shall issue the decision on awarding the status of preferential generator and shall keep the Registry of Preferential Generators
- ERC shall adopt the Rulebook on Preferential Generators, by means of which it shall stipulate the manner and procedure on obtaining the status of preferential generator, the manner and procedure on adopting the decision for the application of Feed-in Tariffs, as well as template, contents and manner of keeping the Registry of Preferential Generators
- Registry of Preferential Generators shall be published on the website of ERC
- ERC shall initiate the procedures on issuing electricity generation License and awarding the status of preferential generator when the applicant has submitted the documents required for license issuance and obtaining the status of preferential generator
- In the procedure on issuing the decision on obtaining the status of preferential generator, ERC shall ask the Energy Agency to confirm that the plant in question has been constructed and fulfills the specific requirements and installed capacity set forth in the relevant acts
- When the confirmation issued by the Energy Agency is positive, ERC shall issue a decision on awarding the status of preferential generator and the decision on the application of Feed-in Tariffs in effect from the day the decision was issued, by means of which the preferential generator acquires all rights stemming from the Energy Law

Former Yugoslav Republic of Macedonia

- The Electricity Market Operator (MO) is obliged to purchase the electricity generated by preferential electricity generators
- On the request from the preferential generator, MO is obliged to sign the electricity purchase contract
- The contract should be in compliance with the Energy Law, the decision on the application of Feed-in Tariff issued by ERC and the Market Code
- Energy Law defines that the electricity Transmission or Distribution System Operators, within the operational possibilities in the relevant system, shall provide priority access to electricity systems for the electricity generated from RES

Former Yugoslav Republic of Macedonia

- **Strategic Outlook**
- As RES targets for EU Member States are calculated based on the 2005 RES share for the country in question plus 5.5% for each Member State and plus a particular percentage calculated in proportion to the country's GDP per capita, the target for Macedonia is set at 21% for 2020



- The figure shows the shares of individual RES types in the total amount of RES for the year 2020
- Biomass for Combustion has the highest contribution with a share of 42.3%, as well as the Hydro energy with a share of 36.3% (30.9+5.4)
- Following are Biofuels (8.6%), Geothermal Energy (6.8%), WPPs (4.2%) and Solar Energy as heating energy (0.9%)
- Electricity from Biogas, Waste Biomass for TPP-HP and electricity from Photovoltaic systems contribute with a total of 0.9%

Former Yugoslav Republic of Macedonia

- New Energy Law entered into force by end of February 2011
- In accordance with new Energy Law and taking in consideration Directive 2009/28/EC of the European Parliament, for the purpose of implementing the Strategy on RES, the Government of FYRoM, on the proposal from the Ministry, shall adopt **Action Plan for RES** covering a period of ten years
- **Action Plan** for RES shall **define measures aimed to promote use of RES**, and shall contain in particular: expected gross final consumption of electricity, fuels for transport, heating and cooling energy, targets set and annual dynamics for the increased share of energy generated from RES in the energy consumption; measures aimed at achieving the targets; the overview of relevant policies and measures on the promotion of the use of RES; specific measures aimed at addressing administrative barriers, information and training measures and appropriate transmission and distribution systems development and upgrade; incentives related to electricity generation, heating and cooling energy, biomass transport and use; possible joint projects with other countries, in the light of attaining the targets set in the Strategy on RES; funding sources; holders of activities and deadlines for the implementation of anticipated activities
- Action plan is prepared with technical support, provided by USAID, and it is planed to be adopted by the end of 2011

Moldova

- At the moment Moldova has only 2 HPP-s with an overall capacity of 64 MW (HPP Costesti - 16 MW and HPP Dubasari - 48 MW) as well as one small scale Biogas Power Plant (about 85 kW)
- **Strategy on RES**
- The Energy Strategy of Moldova which has been approved in 2007 sets the targets and defines the activities related to energy until 2020
- In this respect a key target is besides assuring the energy security also an increase of the utilization of RES
- In order to implement the Energy Strategy it is foreseen to set up an Agency for Energy Efficiency which will have the following duties:
  - Implement state policy in the field of EE and RES
  - Participate in drafting legislative acts, programs and national action plans
  - Develop pilot projects;
  - Consult central and local public authorities

Moldova

- **Regulatory Role in Implementation of Strategy on RES**
- As regards RES the National Agency for Energy Regulation (ANRE) has the following duties:
  - Regulate the renewable energy market
  - Approve Tariffs for Renewable energy and Biofuels
  - Develop draft contracts for RE and Biofuel trade
  - Issue Licenses for the production of electricity and Biofuels from RES
- **Strategic Outlook**
- Plans for additional RES capacities: the construction of a Biogas Plant with a production capacity of 16 mio m3 per year was approved by the Government last year (within the industrial park "Bioenergagro") → Construction works will start this year
- ANRE received other requests from potential investors in Wind Energy (capacities ranging from 40 to 90 MW) that expressed interest in constructing Wind Farms in Moldova but till now, they submitted only Feasibility Studies and there are no project proposals

Montenegro

- The percentage of RES in the total energy generation is 76,67% (LHPP-649MW + SHPP-8MW)
- In addition to these resources, there is Thermal Power Plant with installed capacity of 200 MW

- **Strategy on RES**

- According to the Energy Law (May 2010), development and use of RES is set in the Program for Development and use of RES that is adopted by the Government for a period of 10 years in accordance with the Energy Development Strategy, and that contains specifically the national indicative target with regard to use of RES and time schedule i.e. timing for its implementation, together with support schemes

- The national indicative target for RES means the contribution of energy produced from RES to the gross final energy consumption, which is expressed as a percentage and shall be calculated based on a Methodology set by the Ministry

Montenegro

- **Regulatory Role in Implementation of Strategy on RES**
- Agency issues guarantees of origin for electricity generated from RES or from High-Efficiency Cogeneration and maintains a register of issued guarantees
- Agency carries out the following activities in the sector of RES and Cogeneration:
  - Annual analysis of contribution of RES and Cogeneration to the gross generation and consumption of electricity
  - Publication of results of the analysis of contribution of RES and Cogeneration to the gross generation and consumption of electricity
  - Issuing of guarantees of origin to generators of electricity
  - Maintaining of a register of issued guarantees of origin
  - Approval of a status of privileged producer
  - Maintaining of register of privileged producers
  - Reporting to responsible Ministry, Market Operator, Distribution System Operator and Transmission System Operator about issued decisions on obtaining a status of privileged producers
- The Ministry of Economy (Department for Energy) is responsible for setting of methodology for feed-in-tariffs in Montenegro, and that methodology is given to the Agency on its opinion

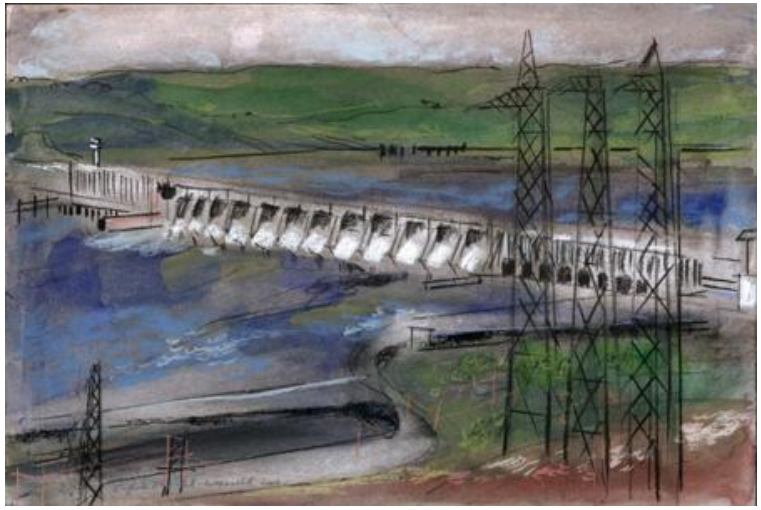
Montenegro

- **Strategic Outlook**
- Overview of the RES targets of Montenegro by 2020:
  - Hydro: 1,221 MW
  - Wind: 96 MW
  - Biomass: 3 MW
  - Waste: 10 MW
  - ➢ Sum: 1,330 MW



Serbia

- **Strategy on RES**
- The currently installed RES generation capacity is 2,872 MW including both Large- and Small-Hydro Power Plants



- **Regulatory Role in Implementation of Strategy on RES**
- Aside from the role of Licensing electricity generation with an installed capacity over 1MW (RES or not), there is no role of the NRA
- **Strategic Outlook**
- By 2015 about 20% increase of electricity production from RES s envisaged

Ukraine

- Installed electricity generation capacity of RES in Ukraine is 156.1 MW
- Installed RES generation capacity is concentrated in Wind Power Plants (51% of installed RES capacity) and Small Hydro Power Plants (44,9% of installed RES capacity)
- It has to be noticed that according to legislation HPPs below the threshold of 10 MW are considered as Small Hydro Power Plants
- Installed capacity of Large HPPs – 5354,6 MW
- There also exists a small number of Solar and Biomass Power Generation Units → Compared to the total installed capacity the share of these alternative generation units is neglectable
- Most of RES generators sell their electricity to the Wholesale Market (Single Buyer) at Feed-in Tariffs

Ukraine

- **Strategy on RES**
- The “Energy Strategy of Ukraine for the period till 2030” which has been adopted in March 2006 foresees also an increase of the installed RES capacity
- The main focus is however on the development of nuclear energy
- Strategy estimates the economic potential of Renewable and Alternative Energy Sources at about 58 tce (Tons of Coal Equivalent), including RES – 35,5 tce (19% of total primary energy consumption in 2030)

Ukraine

- **Regulatory Role in Implementation of Strategy on RES**
- According to the legislation the National Electricity Regulatory Commission of Ukraine has the following responsibilities in the area of RES:
  - Licensing of electricity producers (including RES's)
  - Keeping register of RESs
  - Setting of Feed-in Tariffs for electricity produced from different types of RES
- Acording to the Law of Ukraine "On Electricity" the wholesale electricity market of Ukraine (Single Buyer) has to purchase electricity generated from RES at Feed-in Tariffs → These Feed-in Tariffs are available till 2030
- **Strategic Outlook**
- According to the envisaged targets in the "Energy Strategy of Ukraine", the planned RES electricity generation capacities are 800 MW till 2015 and 1,600 MW till 2020

UNMIK

- The amount of energy produced during 2010 from RES is currently around 3% of total used energy during 2010 (approximately 3,2 TWh)
- **Strategy on RES**
- Government /Parliament is defining the overall Strategy for the Promotion of RES
- In this respect, Government is acting as Policy Maker and sets the target of RES
- **Regulatory Role in Implementation of Strategy on RES**
- Regulatory authority (ERO) plays an important role as regards the implementation of RES targets set by Government
- In this respect legislation foresees that ERO issues:
  - Rules on Authorization
  - Rules on Support Mechanism for RES
  - Rules on Certificate of Origin
  - Feed-in Tariff for all type of technologies
- Furthermore ERO has to approve: Market rules, Connection charging methodology for transmission and Distribution, Grid codes for Transmission and Distribution System; Grid codes for Wind Generation, etc**.**

UNMIK

- **Strategic Outlook**
- The figures below describe the Indicative targets for the consumption of electricity and heat from RES and Co-generation for the period till 2016:
- Indicative targets for electricity consumption produced from:

• **Renewables:**	**Electricity**		**Thermal Energy**	
	(ktoe)	**(% of TEForecastC)**	**(ktoe)**	**(% of TTE RES)**
➢ Hydropower:	19.81	3.15		
➢ Wind:	26.65	4.24		
➢ Solar:	0	0	0.28	0.07
➢ Biomass:	2.50	0.40	411.63	99.74
➢ Cogeneration:			0.79	0.19



RES in the Member States of the Energy Community

Slovenia

- Slovenia has (if 50% of the capacity of the NPP Krško is deducted) a relatively high share of RES generation
- The table below contains data on RES-E installed capacities in 2010

Technology	Installed capacity (MW)
Hydro	**1.071**
small (<1 MW)	118
medium (1 MW-10 MW)	37
Large (>10 MW)	916
Solar (Photovoltaic)	**12**
Onshore Wind	**2**
Biomass	**51**
solid	22
biogas	30
TOTAL	**1.136**

Slovenia

- **Strategy on RES**
- Ministry of Economy defined a National Action Plan for RES until the year 2020 as well as tools for promoting RES
- Ministry of Economy is responsible for setting Feed-in Tariffs in Slovenia
- **Regulatory Role in Implementation of Strategy on RES**
- Slovenian Energy Agency as the National Regulatory Authority of Slovenia is responsible for the following tasks in the field of RES-E:
- Issuing of production declaration for all production devices (RES-E and CHP) that want to enter the national Guarantees of Origin (GO) system (Agency checks whether the production unit really uses renewable sources or it is really a CHP plant)
- Issuing of GO (for all supported electricity in the national Feed-in system GOs have to be issued, which means that all production units benefiting from Feed-in Tariffs must enter the national GO system)
- Deciding on eligibility of each production unit to enter the National Feed-in System (Agency checks whether the production unit is eligible to receive support due to its age – less than 10 years for CHP and less than 15 years for RES-E – or whether support per kWh should be reduced due to previously obtained investment)
- Elaboration of reports on achieving national RES-E targets (every 2 years)

Slovenia

- **Strategic Outlook**
- The table below contains data from the National Action Plan for RES for the period 2010 – 2020:

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hydro	**1.071**	**1.071**	**1.136**	**1.140**	**1.193**	**1.227**	**1.232**	**1.318**	**1.318**	**1.354**
small (<1 MW)	118	118	120	120	120	120	120	120	120	120
medium (1 MW-10 MW)	37	37	37	41	52	52	57	57	57	57
Large (>10 MW)	916	916	979	979	1.021	1.055	1.055	1.141	1.141	1.176
Solar	**17**	**22**	**27**	**32**	**37**	**49**	**63**	**82**	**107**	**139**
Onshore wind	**2**	**2**	**8**	**8**	**60**	**60**	**60**	**60**	**106**	**106**
Biomass	**59**	**67**	**74**	**78**	**83**	**85**	**93**	**94**	**95**	**95**
solid	22	23	24	24	24	26	33	34	34	34
biogas	36	44	50	54	58	59	60	60	61	61
TOTAL	**1.149**	**1.162**	**1.245**	**1.258**	**1.373**	**1.420**	**1.448**	**1.555**	**1.626**	**1.693**



Regulatory activities on RES

Next Steps and way forward

Regionally Coordinated Mechanism: SEE CAO



- Legal requirement of regionally coordinated CAM & CMP
- Discuss transmission capacity auctions for production from RES

Contracting Parties | Observers | Participants | 8th Region - MC Decision 27.6.2008 regional CAM/CMP Reg. (EC) 1228/2003

Issues to be discussed related to RES

- Impact of RES production to Transmission (and Distribution) Network
- Establish close cooperation between Regulators and TSOs regarding RES
- Discuss RES impact on Transmission Network on regional level → Through close cooperation between ENTSO-E RG SEE and ECRB EWG envisaged
- To take measures in order to ensure safe and secure system operation
- To discuss Transmission (and Distribution) Network enhancement in line with RES construction forecasts on regional level → linkage with TYNDP and inclusion of SEE TSOs in this plan

Issues to be discussed related to RES

- Discuss Balancing issues related to production from RES
- Balancing responsibility for all RES
- Construction of Pump Storage Power Plants in SEE Region in order to evacuate energy surpluses during night hours (projects already exists, e.g. Serbia and Romania on Danube River – regional projects)
- Monitoring RES: Make proper definition (monitoring on individual country level; and monitoring on regional level)
- Legal issues regarding RES
- Harmonize Regulators' role regarding RES in SEE Region: ECRB EWG Review on actual status is in preparation



Conclusions

Conclusions

- Various legal approaches towards RES in SEE Region
- Different role of Regulators regarding RES in SEE Region
- Energy Community Contracting Parties compliance with Directives 2001/77/EC and 2003/30/EC → via Energy Community
- RES items inclusion in ECRB EWG Working Program 2012: RES impact on system stability, balancing, monitoring, etc.
- SEE Regulators‘ close cooperation with SEE TSOs regarding RES issues, especially on technical issues
- Include SEE Region in ENTSO-E TYNDP, putting accent on RES projects in SEE and its impact on regional transmission network

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