

## **Second Report of the Secretariat to the Ministerial Council on the Progress in the Promotion of Renewable Energy in the Energy Community**

### **1. Introduction**

The Renewable Energy Directive 2009/28/EC on the promotion and the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC ("Renewable Energy Directive") was adopted and adapted by the Ministerial Council for the Energy Community five years ago<sup>1</sup>.

The Contracting Parties of the Energy Community committed to binding renewable energy targets to 2020 and to implement the Renewable Energy Directive by 1 January 2014, thus converging with the European climate and energy objectives.

The Renewable Energy Directive establishes a framework for the promotion of renewable energy, setting national renewable energy targets for achieving binding shares of renewable energy in the final energy consumption and a 10% share of energy from renewable sources in transport by 2020. The Contracting Parties have committed to individual national targets calculated based on the same methodology as for EU Member States, taking into account revised biomass data based on consumption surveys<sup>2</sup>. However, an overall renewable energy target by 2020 at the Energy Community level is not in place.

The Renewable Energy Directive requires the submission of National Renewable Action Plans ("NREAP") outlining the measures to achieve the binding 2020 renewable energy targets. It also calls for the simplification of the administrative regimes faced by renewable energy, together with improvements for the connections and access to the electricity grids. It introduces a comprehensive sustainability scheme for biofuels and bioliquids with compulsory monitoring and reporting requirements. All biofuels used for compliance with the 10% target that benefit from national support are required to comply with the scheme, otherwise they cannot be counted toward fulfilling the renewable energy targets.

The Contracting Parties have to submit Progress Reports to the Secretariat for the first time by 31 December 2014 and every two years afterwards. The Secretariat shall monitor and review the application of Renewable Energy Directive in the Contracting Parties and submit an overall progress report to the Ministerial Council on biennial basis.

In 2014, the European Commission issued the State Aid Guidelines for environmental protection and Energy 2014-2020<sup>3</sup> (EEAG) calling for the reform in the process of granting the support to the renewable energy producers to ensure cost-effectiveness of renewable energy up-take. Renewable energy has to become fit for the electricity market and the electricity market has to be fit to integrate renewables.

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<sup>1</sup> Consolidated renewable energy acquis, [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/ENERGY\\_COMMUNITY/Legal/EU\\_Legislation/Consolidated\\_acts#RES](https://www.energy-community.org/portal/page/portal/ENC_HOME/ENERGY_COMMUNITY/Legal/EU_Legislation/Consolidated_acts#RES)

<sup>2</sup> Study on the Biomass Consumption for energy purposes in the Energy Community and Study on the calculation of revised 2020 renewable energy targets for the Energy Community, [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/DOCUMENTS/Studies/Sustainable](https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCUMENTS/Studies/Sustainable)

<sup>3</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52014XC0628%2801%29>

Renewable energy integration into the market requires the support be granted on competitive process and paid on top of electricity price sold in the market, therefore ensuring translation to a feed-in premium support from feed-in tariff, a measure widely used in Europe to kick-start the renewable energy market. The renewable energy producers are required to bear standard balance responsibility and no support to be granted when electricity prices are negative.

Following the updated EEAG guidelines applicable to the Member States, the Secretariat endorsed the applicability of the EEAG in the Contracting Parties of the Energy Community<sup>4</sup> and issued the Policy Guidelines on Reform of the Support Schemes for Promotion of Energy from Renewable Sources at the end of 2015<sup>5</sup>.

Based on the conclusions of the first progress report endorsed by the Ministerial Council in 2015, the Secretariat established the Renewable Energy Coordination Group at the end of 2015 and starting addressing the delays in implementation as well as providing knowledge sharing on best practices at European level for the transition to the new market based support schemes for renewable energy. The Secretariat teamed up with AURES<sup>6</sup> project and IRENA to deliver the best and up-to-date practices in designing the framework on auctions for renewable energy<sup>7</sup>.

The commitments taken by the Energy Community Contracting Parties in the area of renewable energy require the implementation of sound, reliable, comparable and consistent energy statistics. This is a basic tool for monitoring the effectiveness of the energy policies and ensuring comparability of energy data among Contracting Parties and with the Member States. Therefore, with decision 2012/02/MC-EnC of the Ministerial Council, the Contracting Parties committed to the implementation of rules of energy statistics in the Energy Community<sup>8</sup> by 31 December 2013.

## 2. Purpose

The purpose of this Report is to comply with the reporting requirements of Decision 2012/04/MC-EnC of the Ministerial Council<sup>9</sup>. The Report assesses the Contracting Parties' progress in the promotion and use of renewable energy against the trajectory towards the 2020 targets set in the NREAPs and reports on the sustainability of biofuels and bioliquids consumed in the Energy Community and the impacts of their consumption.

This document is the second progress report to be submitted to the Ministerial Council monitoring the implementation during 2014-2015 following the first report submitted in 2015. The assessment is based on national developments, the NREAPs adopted and submitted to the Secretariat, the latest energy statistical data on renewable energy compiled in accordance with EUROSTAT methodology (for 2014 and 2015), Contracting Parties' renewable energy progress reports<sup>10</sup> submitted to the Secretariat in 2016 and 2017, the Secretariat's own research and research carried out by experts contracted by the Energy Community Secretariat. The revised projections to 2020 are based on Green-X modelling carried out for the Secretariat in 2017.

The most critical issue has been identified in relation to biomass (mainly firewood) used for heating. The statistical offices are required to conduct adequate energy consumption surveys and determine the real consumption of biomass used for heating which is key in ensuring the reliability of data on energy supply and heat consumption. Several Statistical Offices of Contracting Parties

<sup>4</sup> [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/DOCS/3892323/256E442005065CB8E053C92FA8C02D35.PDF](https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/3892323/256E442005065CB8E053C92FA8C02D35.PDF)

<sup>5</sup> [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/DOCS/4188394/34EDFA0DA700275FE053C92FA8C0834E.pdf](https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/4188394/34EDFA0DA700275FE053C92FA8C0834E.pdf)

<sup>6</sup> AURES project <http://www.auresproject.eu/>

<sup>7</sup> Workshop on Renewable Energy Auctions: [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/CALENDAR/Other\\_Meetings/2017/8\\_Mar](https://www.energy-community.org/portal/page/portal/ENC_HOME/CALENDAR/Other_Meetings/2017/8_Mar)

<sup>8</sup> [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/INST\\_AND\\_MEETINGS?event\\_req.category=E12820](https://www.energy-community.org/portal/page/portal/ENC_HOME/INST_AND_MEETINGS?event_req.category=E12820)

<sup>9</sup> Article 15, Decision 2012/04/MC-EnC of 18 October 2012, [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/INST\\_AND\\_MEETINGS?event\\_req.category=E12820](https://www.energy-community.org/portal/page/portal/ENC_HOME/INST_AND_MEETINGS?event_req.category=E12820)

<sup>10</sup> Contracting Parties biennial Progress Reports (2014): [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/AREAS\\_OF\\_WORK/Instruments/Renewable\\_Energy/Progress\\_Reports](https://www.energy-community.org/portal/page/portal/ENC_HOME/AREAS_OF_WORK/Instruments/Renewable_Energy/Progress_Reports)

(Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Moldova, Montenegro) have conducted biomass consumption surveys in the last years and, to a certain degree, the results are now incorporated in the national energy balances reported to EUROSTAT.

### **3. Implementation Status**

The overall deadline for the implementation of Renewable Energy Directive as adapted for the Contracting Parties expired on 1 January 2014.<sup>11</sup> The progress in the implementation of Renewable Energy Directive is uneven in the Energy Community.

The Contracting Parties acknowledged the benefits of renewable energy for environmental protection, reducing the energy dependencies and contributing to the security of energy supplies. However, the delays in closing the legal and regulatory gaps in transposition and implementation revealed renewable energy is not widely embraced as one of the solution to sustainable development, jobs growth and mitigating the climate change impact. This is mainly due to the paradigm (and mentality) shift required to address the changes in legislation and regulations, administrative procedures of the institutions in charge or to the market and system design and operation.

The cost of technologies have dropped significantly in the last years therefore, the concerns on impact in end-users energy consumers prices are not longer valid due to significant cost-effective potential mainly in wind and solar<sup>12</sup> in all the Contracting Parties of the Energy Community. Despite the important potential of hydropower and biomass, the current national hydro development plans and practices of biomass utilisation have to undergo major sustainability assessments at the Energy Community level.

Addressing the concerns with sustainability of hydro development and biomass utilisation, two major projects financed within the Western Balkans Investment Framework (WBIF) have been carried out.

*Regional Strategy for Sustainable Hydropower development*<sup>13</sup> has the overall objective to foster the development of environmentally and climate change sustainable hydropower generation in the WB6 region, in line with strategic objectives of the European Union and the Energy Community Treaty obligations of its Contracting Parties. The final report is expected to be available before 2017 Western Balkans Summit in Trieste.

*Biomass based heating study*<sup>14</sup> aims at identification of viable investment options and policy measures to increase the use of biomass for heating in the region in a sustainable manner. The study has been finalised and is currently in implementation phase.

Overall progress in the transposition and, to some extent, in the implementation of several articles of the Renewable Energy Directive through Energy Laws, Governmental Decisions, rules and regulations has been achieved in the Energy Community. However, a comprehensive approach to transpose the entire Renewable Energy Directive in national legislation is missing in all Contracting Parties. This becomes even more important due to the need to reform the support schemes and to introduce auctions to grant the support to renewable energy producers and to integrate renewable energy into the electricity market.

Article 4 of the Renewable Energy Directive, as adapted, requires the adoption of NREAPs by 30 June 2013 to ensure that the mandatory national targets are achieved. On the basis of the

<sup>11</sup> Article 3(1)(i) of Decision 2012/04/EnC of Ministerial Council of 18 October 2012.

<sup>12</sup> IRENA Cost-competitive renewable power generation: Potential across South East Europe  
<http://www.irena.org/menu/index.aspx?mnu=Subcat&PriMenuID=36&CatID=141&SubcatID=3801>

<sup>13</sup> <https://www.wbif.eu/wbif-projects/details?code=PRJ-MULTI-ENE-013&ogtitle=Regional Strategy for Sustainable Hydropower in the Western Balkans&ogdescription=PRJ-MULTI-ENE-013&ogimage=Sites/website/projects/PRJ-MULTI-ENE-013/The%20upper%20reservoir%20of%20hydroelectric%20power%20plant%20Capljina%20BiH.jpg>

<sup>14</sup> <https://www.wbif.eu/content/stream//Sites/website/library/WBIF-23rd-PFG-WBG-Biomass-Heating-Study.pdf>

NREAPs, the Contracting Parties are to work towards an indicative trajectory for the achievement of their final mandatory targets. The NREAP requires information on sectoral targets (electricity, heating and cooling and transport), measures to support their achievement and the overall implementation of the Renewable Energy Directive. The NREAP must be presented in the form of a template adopted by the European Commission<sup>15</sup> and submitted to the Secretariat. On this basis, the Secretariat evaluates the NREAPs and issues recommendations.

In comparison with the status described in the first progress report submitted to the Ministerial Council in 2015, by the date of submission of this report, all Contracting Parties have adopted and submitted the NREAP to the Secretariat.

Following the finalisation of the biomass consumption surveys and incorporation of data into the energy statistics, Former Yugoslav Republic of Macedonia submitted a revised NREAP. The plan however it is not designed to reach 28% share of renewable energy in gross final energy consumption in 2020 due to a lower baseline share in 2009 compared with the one used in target calculation.

Article 15 of the Decision 2012/04/MC-EnC requires the Contracting Parties to submit reports on the progress in the promotion and use of energy from renewable sources by 31 December 2014 and every two years thereafter. The second progress report of the Contracting Parties covers years 2014 and 2015. By the date of submission of this Report, Bosnia and Herzegovina has not provided any progress report to the Secretariat. Therefore the assessment provided for Bosnia and Herzegovina in this report is based only on energy balances and RES share calculation provided in EUROSTAT database.

	<b>NREAP adopted</b>	<b>First Progress Report 2012-2013</b>	<b>Second Progress Report 2014-2015</b>
<b>Albania</b>	✓	✓	✓
<b>Bosnia and Herzegovina</b>	✓	✗	✗
<b>Kosovo*<sup>16</sup></b>	✓	✓	✓
<b>Former Yugoslav Republic of Macedonia</b>	✓	✓	✓
<b>Moldova</b>	✓	✓	✓
<b>Montenegro</b>	✓	✓	✓
<b>Serbia</b>	✓	✓	✓
<b>Ukraine</b>	✓	✓	✓

Table 1: Status of the adoption of NREAPs and the submission of the Second Progress Reports

<sup>15</sup> OJ L 182, 15.7.2009, p. 33–62.

<sup>16</sup> 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.

#### **4. Progress in Renewable Energy Development**

The assessment of the progress in the promotion and uptake of energy from renewable sources in the Contracting Parties based on energy balances compiled in accordance with EUROSTAT methodology revealed several challenges with respect to the years 2014 and 2015, as the latest years with finalized energy balances:

- Inconsistencies of the data reported in the energy balances 2014 and 2015 provided to EUROSTAT with the data submitted in the Progress Reports persist. The Progress Report for Bosnia and Herzegovina is missing.
- Biomass consumption continues to distort the results registered by some Contracting Parties:
  - o Actual biomass consumption reflected in 2014 and 2015 energy balances of Montenegro and Bosnia and Herzegovina led to an overachieving the 2020 renewable energy targets without any additional capacities. In the current circumstances, the relevance of 40% renewable energy target of Bosnia and Herzegovina and 33% renewable energy target for Montenegro are questionable.
  - o Ministry of Economy of Montenegro submitted the progress report with diverging share of renewable energy in heating compared with data provided by the statistical office MONSTAT to EUROSTAT. The deviation comes from using different calorific values of biomass in dispute by the two institutions.
  - o Ukraine has not conducted yet comprehensive biomass consumption surveys therefore the results depicted reflect this shortcoming.
  - o Former Yugoslav Republic of Macedonia finalised the biomass consumption surveys and integrated the results in the energy balances from 2005 to 2015. This revealed the share of renewable energy in 2009 was only 17,2% compared with 21,9% which was used for target calculation. Former Yugoslav Republic of Macedonia submitted a revised NREAP which is not designed to reach the binding target of 28% in 2020 and might consider triggering the Article 16 of Decision 2012/04/MC-EnC of the Ministerial Council.

A special situation is registered in Ukraine, where starting from 2014, the energy balance does not account for the energy consumption and production in the uncontrolled territories in the east side of the country. Therefore, compared with 2013, a significant reduction of gross final energy consumption of 11,6% and of 26,2% in 2014 and respectively in 2015 is recorded. Together with a regular increase of energy produced from renewable sources year by year, this was enabling Ukraine to registered a significant boost of the share of energy from renewable sources from 2,37% in 2013 to 3,29% in 2014 and 4,27% in 2015. However, Ukraine is falling short in making progress on the trajectory due to the delay in the organisation of the biomass consumption surveys and the revision of energy statistical data accordingly.

Accuracy and reliability of energy statistics reported to EUROSTAT significantly improved in the last reporting period, now all the Contracting Parties have submitted energy balances compiled in accordance with EUROSTAT methodology, following the implementation of *acquis* on energy statistics adopted in the Energy Community.

Chart 1 and Table 2 indicate the median renewable energy shares in gross final energy consumption of the years 2013/2014 and the deviations in percentage points from the indicative trajectory for all Contracting Parties. This is compared to the indicative trajectory set out in part B of Annex I of Renewable Energy Directive as adapted for the Contracting Parties. All interim targets of the NREAPs for 2014 show a lower percentage target than the indicative trajectory in the Renewable Energy Directive for 2013/2014.

Chart 1 shows that, except Montenegro, all other Contracting Parties fail to reach their indicative trajectory for 2013/2014. Montenegro actually already reached its 2020 RES target. For Bosnia and Herzegovina, due to the fact that revised biomass data has been incorporated only in 2014

and 2015 energy balances submitted to EUROSTAT, the median share of 2013/2014 is therefore impacted and the calculations in Chart 1 reflect a lower value than the renewable energy shares registered in 2014 and 2015 (Table 1). However, according to the statistical data 2014 and 2015, Bosnia and Herzegovina has already surpassed the 2020 renewable energy target (Table 3).

For other Contracting Parties, the deviations between the median shares of 2013/2014 and the indicative trajectory 2013/2014 range from -0.7 percentage points for Albania to -4.5 percentage points for Former Yugoslav Republic of Macedonia, as illustrated in Table 2.

The 2020 renewable energy target for each of the Contracting Party is around 5 percentage points over the indicative trajectory target for 2013/2014. The observed deviations indicate that significant efforts in the promotion of the use of RES remain to be done in the upcoming years in order to reach the binding 2020 targets.

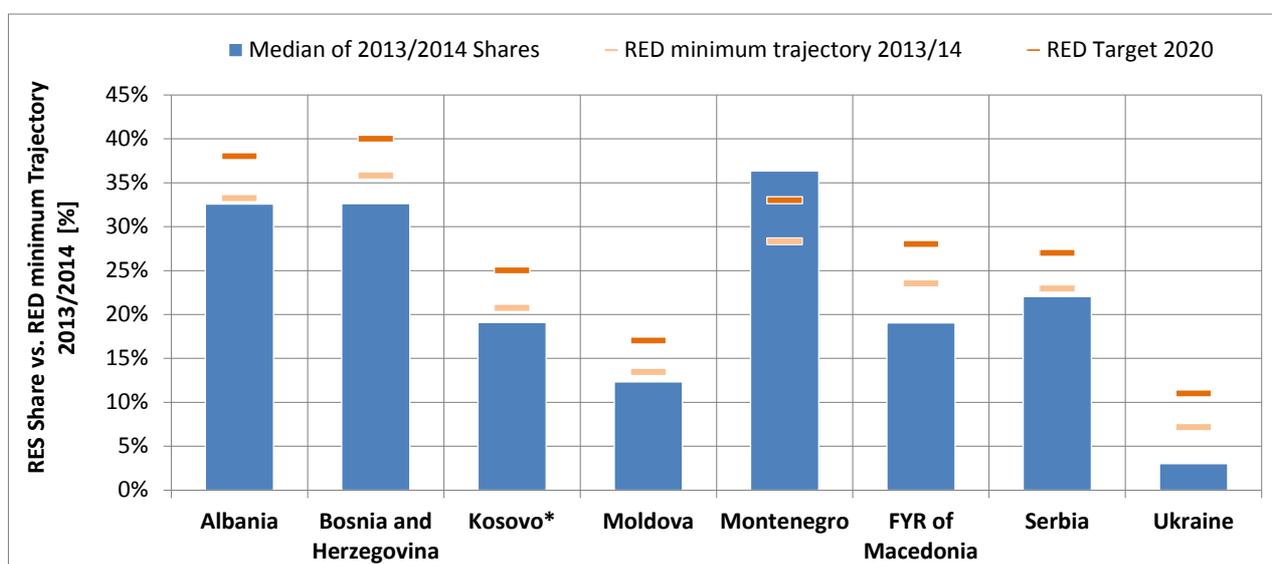


Chart1: The Median RES shares of in 2013/2014 of the gross final energy demand for all CPs compared to the 2013/2014 indicative trajectory in the Renewable Energy Directive (EUROSTAT, 2017, Renewable Energy Directive)

The median RES share in gross final energy demand by 2013/2014	RES share as of EUROSTAT data provided by the ECS	RED indicative trajectory (RED)		Percentage points deviation of indicative trajectory (RED)	
		Median 2013/2014	2020 Target	Median 2013/2014	2020 Target
Contracting Party	[%]	[%]	[%]	[pp]	[pp]
Albania	32.6%	33.2%	38%	-0.7%	-5.4%
Bosnia and Herzegovina	32.6%	35.8%	40%	-3.2%	-7.4%
Kosovo*	19.1%	20.7%	25%	-1.6%	-5.9%
Moldova	12.3%	13.4%	17%	-1.1%	-4.7%
Montenegro	36.3%	28.3%	33%	8.0%	3.3%
FYR of Macedonia	19.0%	23.5%	28%	-4.5%	-9.0%
Serbia	22.0%	22.9%	27%	-0.9%	-5.0%
Ukraine	3.0%	7.2%	11%	-4.1%	-8.0%

Table 2: The median RES share in gross final energy demand by 2013 and 2014 compared to the NREAP planned trajectory (EUROSTAT, 2017; CPs NREAPs, draft NREAPs and Progress Reports)

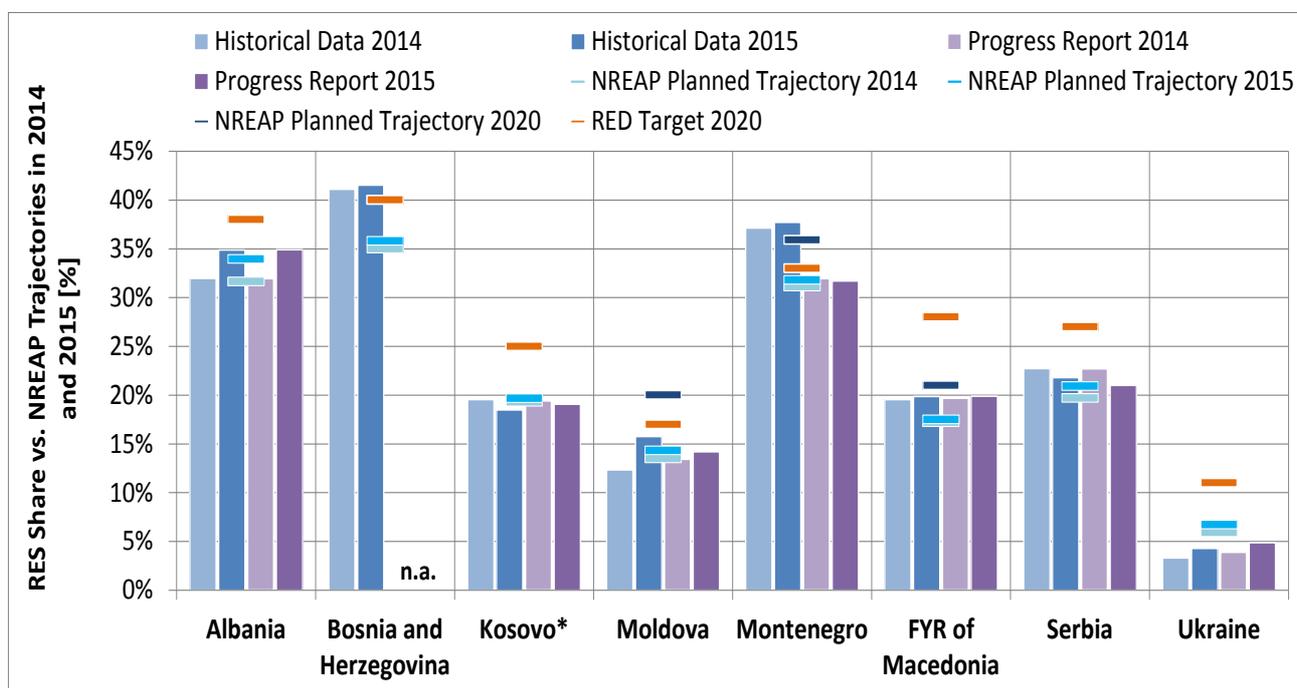


Chart 2 - The RES shares for 2014 and 2015 of the gross final energy consumption for all CPs compared to the reported shares of CP's Progress Reports and the indicative 2014 and 2015 shares of the CPs NREAP trajectories (EUROSTAT, 2017; CPs NREAPs and Progress Reports)

RES share in gross final energy demand by 2014 and 2015	RES share as of EUROSTAT data provided by the ECS		RES share as of Progress Report data		NREAP planned trajectory		Percentage points deviation from NREAP planned trajectory	
	2014	2015	2014	2015	2014	2015	2014	2015
<i>Contracting Party</i>	[%]	[%]	[%]	[%]	[%]	[%]	[pp]	[pp]
Albania	32,0%	34,9%	32,0%	34,9%	31,6%	34,0%	0,3%	0,9%
Bosnia and Herzegovina	41,1%	41,5%	n.a.	n.a.	35,0%	35,8%	6,1%	5,7%
Kosovo*	19,5%	18,5%	19,4%	19,1%	19,3%	19,7%	0,3%	-1,2%
Moldova	12,4%	15,8%	13,5%	14,2%	13,5%	14,3%	-1,1%	1,5%
Montenegro	37,2%	37,7%	32,0%	31,7%	31,1%	31,8%	6,1%	5,9%
FYR of Macedonia	19,6%	19,9%	19,7%	19,9%	17,2%	17,5%	2,4%	2,4%
Serbia	22,7%	21,8%	22,7%	21,0%	19,7%	20,9%	3,0%	0,9%
Ukraine	3,3%	4,3%	3,9%	4,9%	5,9%	6,7%	-2,6%	-2,4%

Table 3: The median RES share in gross final energy demand by 2013/2014 compared to the RED indicative trajectory (EUROSTAT, 2017; Renewable Energy Directive)

## 5. Electricity from renewable sources

With respect to the deployment of electricity from renewable sources and the share in gross final energy consumption, five out of eight Contracting Parties are not on track. Albania and Moldova are the only Contracting Parties which surpass their RES-E target shares with a surplus of 8.7 percentage points and 33.3 percentage points respectively in 2015. According to EUROSTAT data, Former Yugoslav Republic of Macedonia directly hits its target. It must be stated however that the high RES-E share for Moldova is mostly a result of the flaws related to the electricity demand in the EUROSTAT dataset.

Deficits for the other Contracting Parties range from 2.3 percentage points for Serbia to 11.9 percentage points for Kosovo in 2015. Contracting Parties which failed to meet their relative targets also missed their absolute deployment targets and vice-versa.

The absolute RES-E deployment as of energy statistics, Progress Reports and NREAP trajectories for 2014 and 2015 are shown in Chart 4. Contracting Parties which failed to meet their relative targets also missed their absolute deployment targets and vice-versa. The EUROSTAT data for Moldova is inconsistent with the data presented in the progress report. It can also be observed that in four of the Contracting Parties, the Progress Reports present a significantly better target alignment with the NREAPs than the data resulting from EUROSTAT.

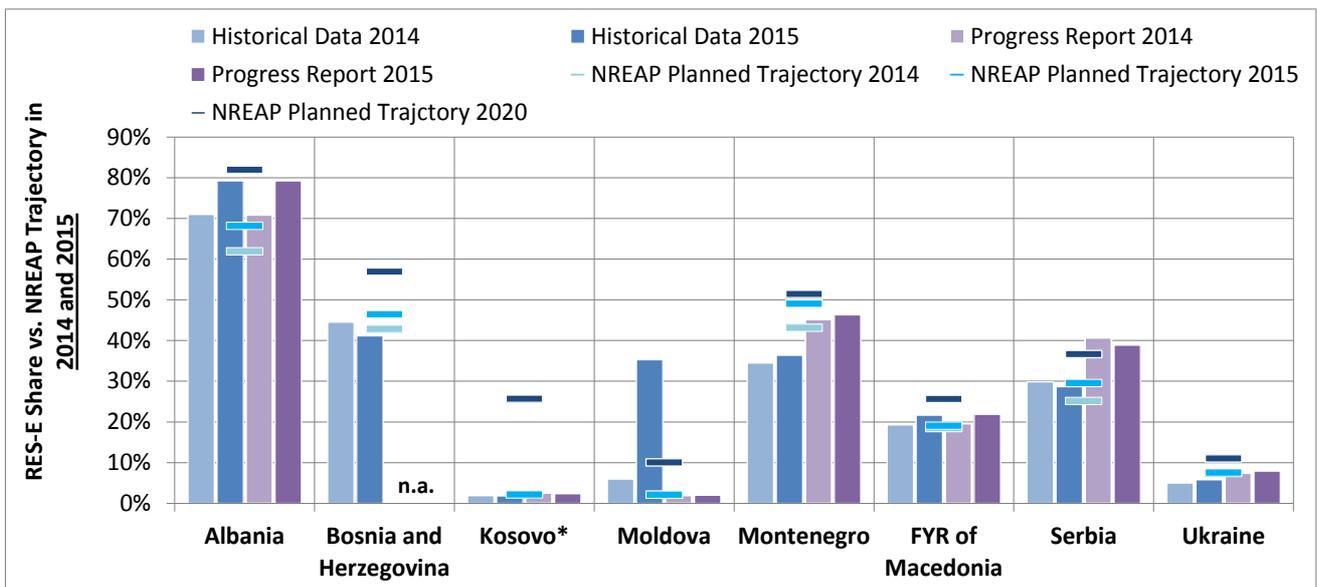


Chart 3: RES-E share in 2014 and 2015 of the gross electricity demand for all Contracting Parties compared to the non binding NREAP targets. (EUROSTAT, 2017; CPs NREAPs and Progress Reports)

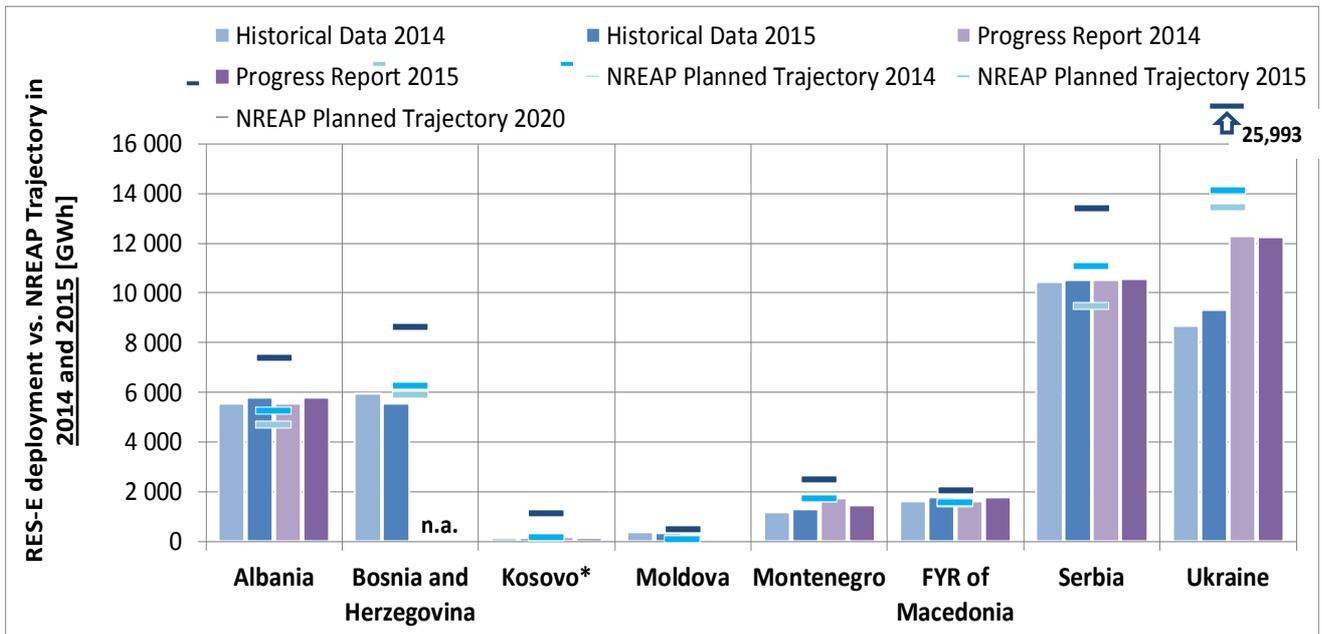


Chart 4: Absolute RES-E deployment in 2014 and 2015 for all CPs compared to the indicative NREAP targets. (EUROSTAT, 2017; CPs NREAPs and Progress Reports)

## 6. Energy from renewable sources in heating and cooling

The actual and planned development of the Contracting Parties renewable energy shares in the heating and cooling sector (RES-H) is depicted in Chart 5. Five of the Contracting Parties managed to meet their RES-H target shares in both 2014 and 2015. Albania and Moldova missed their target in 2014 and overachieved it in 2015. Ukraine presents deficits of about 2 percentage points in both years. For Montenegro, the significant differences between the statistical data and the data from the progress report is due to different calorific values used in calculation by two state institutions.

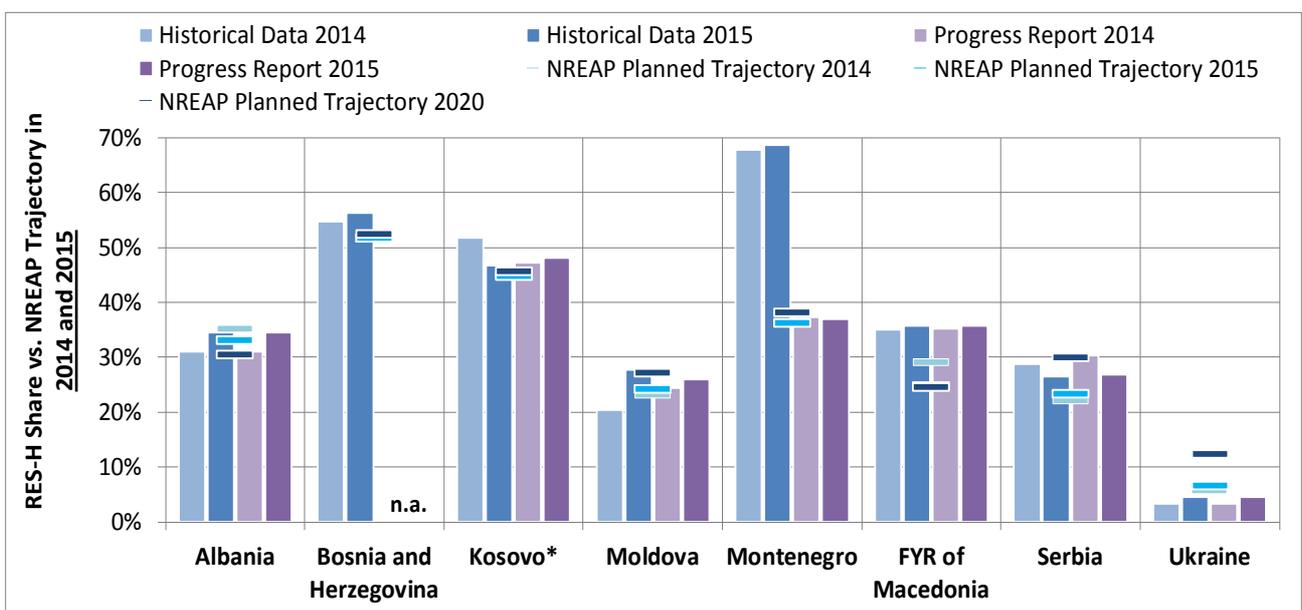


Chart 5: RES-H share in 2014 and 2015 of the gross heating and cooling demand for all Contracting Parties compared to the indicative NREAP targets. (EUROSTAT, 2017; CPs NREAPs and Progress Reports)

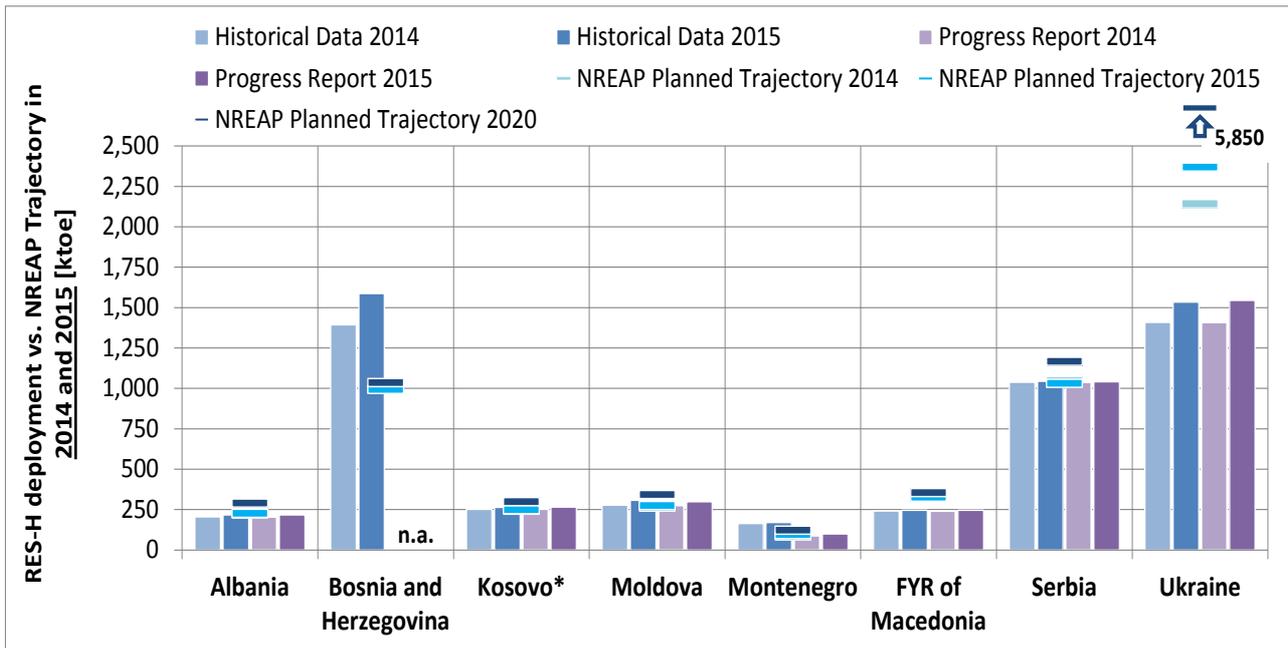


Chart 6: The absolute RES-H deployment in 2014 and 2015 of the gross heating and cooling consumption for all Contracting Parties compared to the indicative NREAP targets. (EUROSTAT, 2017; CPs NREAPs and Progress Reports)

### 7. Energy from renewable sources in transport

Increasing the share of energy from renewable energy sources in transport made no progress in the past two years. Without adoption and implementation of sustainability criteria and appointment of a certification body, the biofuels produced in the Contracting Parties cannot count towards the targets. Therefore, it is not envisaged that biofuels would have a significant contribution towards the 2020 renewable energy targets, let alone to reach the binding 10% energy from renewable sources in transport.

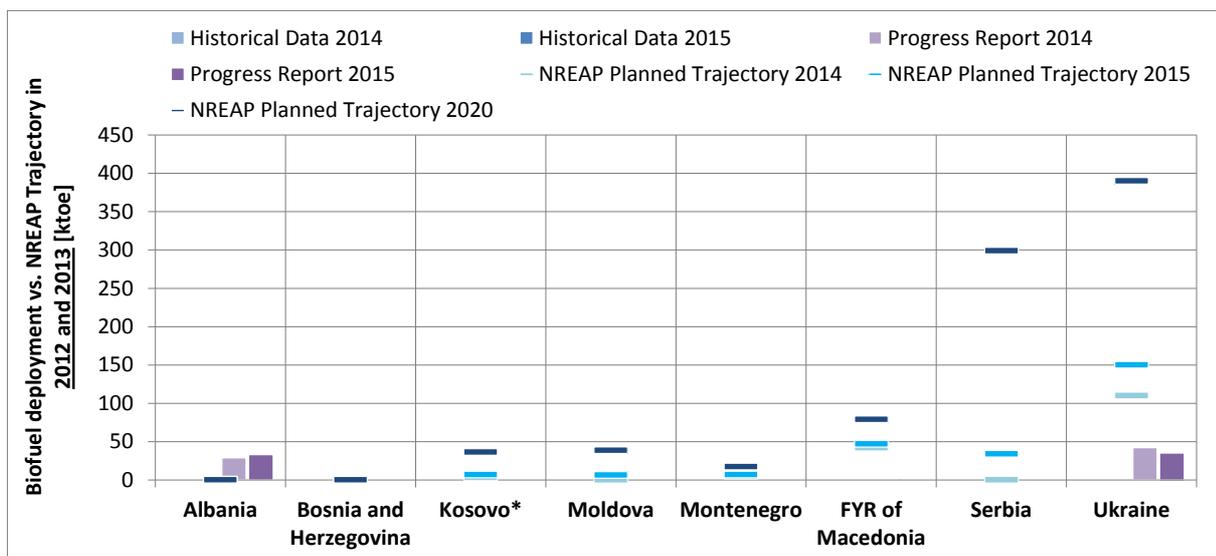


Chart 7: The absolute deployment of biofuels in 2014 and 2015 for all Contracting Parties compared to the NREAP targets. (EUROSTAT, 2017; NREAPs and Progress Reports)

## **8. Policy Measures**

Legal, regulatory, administrative and financial measures are needed to support the uptake of energy from renewable sources in all Contracting Parties to ensure that the 2020 renewable energy targets are met. This is due to the fact that almost no renewable electricity technology is currently competitive in a market mostly dominated by fossil fuel power plants and large hydro. Moreover, the environmental costs are not appropriately reflected in the electricity price and are not envisaged to be internalised before 2020<sup>17</sup> in order to become a key driver for investments in renewable energy.

In the last two to three years, the main progress made by the Contracting Parties in adopting legislative measures in compliance with the Renewable Energy Directive has been made in the electricity sector. Albania has adopted a new Law on promotion of renewable energy sources transposing the requirements of the State Aid Guidelines for the introduction of competitive process to grant the aid and to integrate the renewable energy into the market. The Law provides for the aid in the form of contract for differences paid on top of electricity price sold in the market. The new framework however, will be implemented after 2020. Montenegro and Moldova are the other two Contracting Parties that have transposed competitive based process in granting the support to renewable energy producers in the Energy Law and the Law for the promotion of energy from renewable sources, respectively. Montenegro has to adopt implementing legislation to enforce the respective chapter of the Energy Law. In 2017 Moldovan Parliament decided the postponement of entering into force of the Law on promotion of energy from renewable sources until March 2018 to allow the finalisation of the implementing legislation. The other Contracting Parties have to start amending their legislation and regulations to comply with the State aid guidelines and therefore to ensure a cost-effective renewable energy development.

Electricity market liberalisation is instrumental in the integration of electricity from renewable energy sources and the progress is severely delayed in the Contracting Parties with the exception of Serbia. Despite commitments taken by the Contracting Parties to open their energy markets by 1 January 2015, the energy markets are currently neither fully open nor competitive. Until now, only Serbia has established a power exchange and setting the day-ahead trading platform however the liquidity remains low and prices not always accurately reflecting market conditions. Other Contracting Parties intend to open their own power exchanges rather than joining already established platform despite higher administrative costs and even more acute lack of liquidity envisaged.

The wholesale electricity market price is not entirely transferred to all end-users requiring significant cross-subsidies between non-household and household customers. Therefore, to compensate for market failures, renewable energy needs a set of support measures and regulatory and administrative rules to ensure their proper development in order to reach the 2020 policy objectives. Limited efforts to improve the legislative framework for renewable energy deployment have been made in the heating and cooling sector, while the transport sector seems to have been forgotten in all Contracting Parties.

## **9. Cooperation mechanisms**

Renewable Energy Directive introduces the possibility for optional use of cooperation mechanisms between Contracting Parties to facilitate cross-border support for renewable energy and to reach their 2020 renewable energy targets in the most cost-effective way. The creation of the regional

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<sup>17</sup> Environmental acquis of the Energy Community:  
[https://www.energy-community.org/portal/page/portal/ENC\\_HOME/AREAS\\_OF\\_WORK/Obligations/Environment](https://www.energy-community.org/portal/page/portal/ENC_HOME/AREAS_OF_WORK/Obligations/Environment)

electricity market with the implementation of the Third Energy Package generates opportunities for developing and supplying energy, including renewable energy, more efficiently and cheaply.

The Contracting Parties may enter into cooperation mechanisms between themselves to lower the cost of meeting the targets using only domestic renewable energy resources. As long as the cheaper form of renewable energy are exploited, it becomes necessary to turn to more expensive sources, therefore the annual cost of meeting the 2020 target will rise. The possibility to enter into cooperation mechanisms it is therefore very important since the 2020 renewable energy targets were set on the basis of ability to pay rather than domestic resource potential<sup>18</sup>.

Moreover, the adaptation of the Renewable Energy Directive by the Ministerial Council introduced possibilities to establish cooperation mechanisms with EU Member States under certain conditions. Besides the benefits of further income from selling the renewable energy, cooperation with EU Member States could be beneficial in terms of know-how transfer, jobs creation, increased security of supply and technological innovation.

Making use of cooperation mechanisms by the Contracting Parties which might be above 2020 renewable energy targets only due to revision of biomass statistical data (Bosnia and Herzegovina, Montenegro) poses questions related to the to the fairness to the other Contracting Parties or EU Member States.

### **10. Administrative procedures**

The administrative procedures remain the greatest barriers in development of renewable energy in the Energy Community. In the last years, some Contracting Parties have taken steps to improve the administrative procedures in the Contracting Parties. However, for most of them the measures taken have yet to be translated in a significant increase in installed generation capacities, which so far remain minimal. Lengthy and not clearly defined or coordinated procedures remain a key barrier for renewable energy development in all three sectors. A lack of coordination between different administrative levels, agencies and institutions is a major problem in most Contracting Parties. Often numerous State and local level authorities are involved in the licensing and administrative procedures for renewable energy projects.

The provision of information is not coordinated and in some cases it is neither transparent nor comprehensive. In Former Yugoslav Republic of Macedonia and Kosovo\* measures to simplify and streamline the procedures taken in the last years are expected to continue to yield good results. In the rest of the Contracting Parties, at least some attempts to simplify administrative procedures can be observed. Nevertheless additional simplification of administrative measures for smaller, distributed generation, allowing self-consumption of electricity or for decentralised projects is required.

Very little progress can be seen in the Contracting Parties on the establishment of a one-stop shop. A one-stop shop only for construction licenses was implemented in Serbia and for the majority of licenses and permits in Albania.

For the renewables in transport sector, there is little to report as nearly no efforts have been made to improve the licensing or authorisation procedures. This is largely linked to the fact that there is almost no biofuels production or consumption in most Contracting Parties.

### **11. Information on renewable energy support measures, benefits and use**

Information on support schemes, benefits, cost of renewable energy or optimal use of renewable energy technologies has been improved in the last years however is not always adequately made available by the institutions in charge in most of the Contracting Parties. In general, dissemination of information to applicants is not clearly regulated in the legislation as a legal obligation of a

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<sup>18</sup> A factor based on GDP per capita was used to determine the 2020 renewable energy targets.

certain body. Relevant institutions involved in renewable energy have published information on their websites but this information is mostly in local language and an English translation is not always available. Awareness raising campaigns and trainings for various stakeholders are usually not organised. In most Contracting Parties, the local and regional administrative bodies involved in authorisation or permitting procedures lack official guidance or training from national authorities.

## ***12. Electricity grid – connection, access to and operation of the systems with renewable energy***

Along with the administrative procedures for permitting, authorisation and licensing, the procedures related to connection to the grids are the greatest barriers for a higher up-take of renewable energy. Overall, slow progress has been made by the Contracting Parties in facilitating and improving the integration of electricity from renewable sources into the grids. While the NREAPs provide a fairly positive picture of measures that will be undertaken, in many cases the implementation of these measures is still pending. The adopted or drafted primary legislation of the Contracting Parties requires the transmission and distribution system operators to prepare development plans that include renewable energy integration. Ten-year network development plans of the transmission networks are required to take into account the uptake of renewable energy.

Priority or guaranteed access to the grid for renewable energy is included in the adopted or draft primary legislation of all Contracting Parties with the exception of Bosnia and Herzegovina in the case of access to the transmission network. Priority dispatch of renewable energy is implemented in all Contracting Parties. However, requirements for minimizing curtailment of energy from renewable sources are not properly addressed in most Contracting Parties.

In relation to connection to the grids, the picture is quite mixed among the Contracting Parties. There are good examples where connection of renewable energy producers to the transmission and distribution grids has been facilitated in the last years. In former Yugoslav Republic of Macedonia, the connection rules have been simplified through amendments to both network codes resulting in several renewable energy projects to be connected to the grids in the last years. In Bosnia and Herzegovina and Serbia, transmission and distribution system operators have published rules and methodologies for calculation of the cost for connection to the networks. The rules also include costs estimates and the timetable for processing the applications after the preliminary approval from the system operator. In Kosovo\*, at the proposal of the transmission system operator, procedures for connection to the transmission network have been adopted by the regulator at the end of 2014.

In Albania, the Law on Renewable Energy lays down extensive obligations on grid operators. The law requires a specific regulation regarding connection of renewable energy producers, which is currently not in place. Currently, the connection procedures are stipulated in the network codes. In Moldova, the Electricity Law assigns the regulator the task to set up conditions for grid connection in an objective and transparent way. The technical conditions for connection to the grids have been issued only by the transmission system operator. In Montenegro, calculation of costs of connection to the distribution grids for small renewable energy installations of up to 10 MW are provided in the Distribution Grid Code, while for the power plants exceeding this capacity the conditions are determined based on project specific analyses and calculations. In Ukraine, connection to the grids is decided on a case-by-case basis using methodology approved by the regulator. The technical specifications for grid connections are expected to be clarified with the adoption of the grid codes.

In general, connection costs are paid by the renewable energy producers. Only in Bosnia and Herzegovina, Kosovo\* and former Yugoslav Republic of Macedonia (only for connection to the distribution grid), there are rules for bearing and sharing the connection costs between initially and subsequently connected renewable energy producers.

With few exceptions, renewable energy producers are not paying balancing costs. In former Yugoslav Republic of Macedonia, large renewable energy producers (capacities above 10 MW) with preferential status are required to take balance responsibility since beginning of 2015. In Bosnia and Herzegovina (Republika Srpska), renewable energy producers supported through feed-in tariffs are required to pay 25% of the balancing costs while the ones supported through feed-in premiums pay 100% of the balancing costs.

### **13. Guarantees of origin**

The implementation of a system to issue, transfer and cancel guarantees of origin for energy produced from renewable sources is in a very early stage of development in most of the Contracting Parties.

Only in Montenegro the first guarantees of origin have been issued and the legislative and regulatory framework has been completed. In Bosnia and Herzegovina, Kosovo\*, former Yugoslav Republic of Macedonia and Serbia there is yet no practical implementation despite the transposed requirements in laws and regulations. In Albania and Moldova, the adoption of an adequate legislative framework is still pending.

The appointed body for issue, transfer and cancellation of guarantees of origin varies among the Contracting Parties and the schemes in place are not always regulated. In Albania and Kosovo\*, the energy regulator is the authority responsible for issuing and supervising the guarantees of origin. In Bosnia and Herzegovina, in Republika Srpska the energy regulator is the issuing body while in Federation of Bosnia and Herzegovina the renewable energy operator issues guarantees of origin. The supervision is not assigned to either entity of Bosnia and Herzegovina. In former Yugoslav Republic of Macedonia, the Energy Agency is the issuing body, while the supervision is not regulated. In Montenegro, guarantees of origin are issued by the energy regulator and the supervision is entrusted to the market operator. In Moldova, according to the draft Renewable Energy Law, the network operators shall issue guarantees of origin, while the supervision is not assigned. In Serbia, the guarantees of origin are issued by the transmission system operator and supervised by the Ministry of Energy. In Ukraine, the issuing body is not clearly appointed yet.

In relation to recognition of guarantees of origin issued by other Contracting Parties of the Energy Community and by EU Member States, the approach is very different. Albania and Moldova recognise guarantees of origin issued by other Contracting Parties and EU Member States without the condition of reciprocity. Bosnia and Herzegovina, Montenegro and Serbia recognise guarantees of origin issued by other Contracting Parties only under the condition of reciprocity. In addition, Serbia will recognise the guarantees of origin issued by other members of the European Association of the Issuing Bodies for issuing of guarantees of origin only once it becomes a member. In Ukraine, the recognition of guarantees of origin is not regulated.

### **14. Sustainability of Biofuels**

The deadline for implementation of sustainability criteria and establishment of the relevant verification systems expired on 1 January 2014. However, none of the Contracting Parties made any progress in the reporting period related to the transposition of Articles 17 to 21 of Renewable Energy Directive into their national legislation. This is in spite of extensive preparatory activities including technical support in legislative drafting to some Contracting Parties. Most of the Contracting Parties started to develop necessary legislative framework some years ago, but none of them bring even primary law to the adoption phase. Besides this, drafted solutions are mainly partial, not targeting complete set of measures – from proper development strategy, promotion, incentives for sustainability – and not involving in the discussions at State level all relevant sectors, such as agriculture, transport, rural development, financial.

The Contracting Parties are thus lagging behind in achieving their indicative targets, despite having defined them in their respective NREAPs. Few Contracting Parties (such as Albania, Ukraine and Moldova to the limited extent) registered some small biofuels consumption that anyhow cannot contribute to the mandatory targets achievements due to the lack of transposition of sustainability criteria and the lack of an adequate certification system.

### **15. Assessment of future progress towards 2020**

The assessment of the future progress towards the 2020 was based on a model-based quantitative assessment of future renewable energy deployment in absolute (i.e. GWh produced) and relative terms (i.e. renewable energy shares on gross demands), reflecting assumptions also on future energy demand, comprising trend expectations for 2020. The scenario calculation is performed by applying the Green-X model, a well-established simulation tool for policy instruments in the European renewable energy market indicating consequences of policy choices on deployment and cost of renewable energy technologies in a comprehensive manner. Although Green-X is capable of providing details for a broad set of renewable energy technologies used for power generation or in heating and cooling, for the transport sector Green-X is only capable to model biofuel deployment but not electro-mobility. For the assessment of overall renewable energy target achievement at Contracting Party level this does not represent any constraint since renewable energy target achievement is measured by summing up renewable energy use in the electricity sector, in heating and cooling and biofuels in transport, and the sum is subsequently divided by gross final energy demand. For the transport-specific sector renewable energy target, where a binding renewable energy share of 10% shall be achieved by 2020, only the contribution of biofuels can be assessed.

The scenario definition comprises the assessment of the prospective renewable energy policies, dedicated to provide a model-based analysis to examine to what extent currently implemented renewable energy policies (Current Policy Initiatives (CPI)), complemented by Planned Policy Initiatives (CPI+PPI) are sufficient to trigger the targeted renewable energy deployment in subsequent years up to 2020 at Contracting Party level.

Information on Current renewable energy Policy Initiatives (CPI) is primarily based on the renewable energy policy database developed within the Energy Community project: *“Assessment of Renewable Energy Action Plan Implementation and Progress of Renewable Energy in Energy Community”* and updates through additional data gathering.

Information on Planned Policy Initiatives (PPI) and Current Policy Initiatives (CPI) was collected from Contracting Parties NREAPs and the current 2016 Second Progress Reports, as well as through the RES-legal database ([www.res-legal.eu](http://www.res-legal.eu)) Since Contracting Parties reported on planned improvements in a non-homogenous manner, a comprehensive reassessment of the originally provided information was made. As a first step, measures were differentiated between current and planned measures. Next, reported country-specific measures were grouped into non-cost barriers, and financial support measures.

Note that a brief sensitivity analysis has been undertaken for the assessed case, relating to the expected future energy demand (growth): two revised scenarios of future energy demand developments up to 2020 (i.e. efficiency and reference demand development) form the basis for the assessment whereas Contracting Parties default demand trends as reported in their NREAPs are used for a sensitivity assessment. More precisely, expectations on future energy demand were originally taken from the Contracting Parties NREAPs but have been compared with actual data for the status quo (2014 and 2015) and were corrected, respectively.

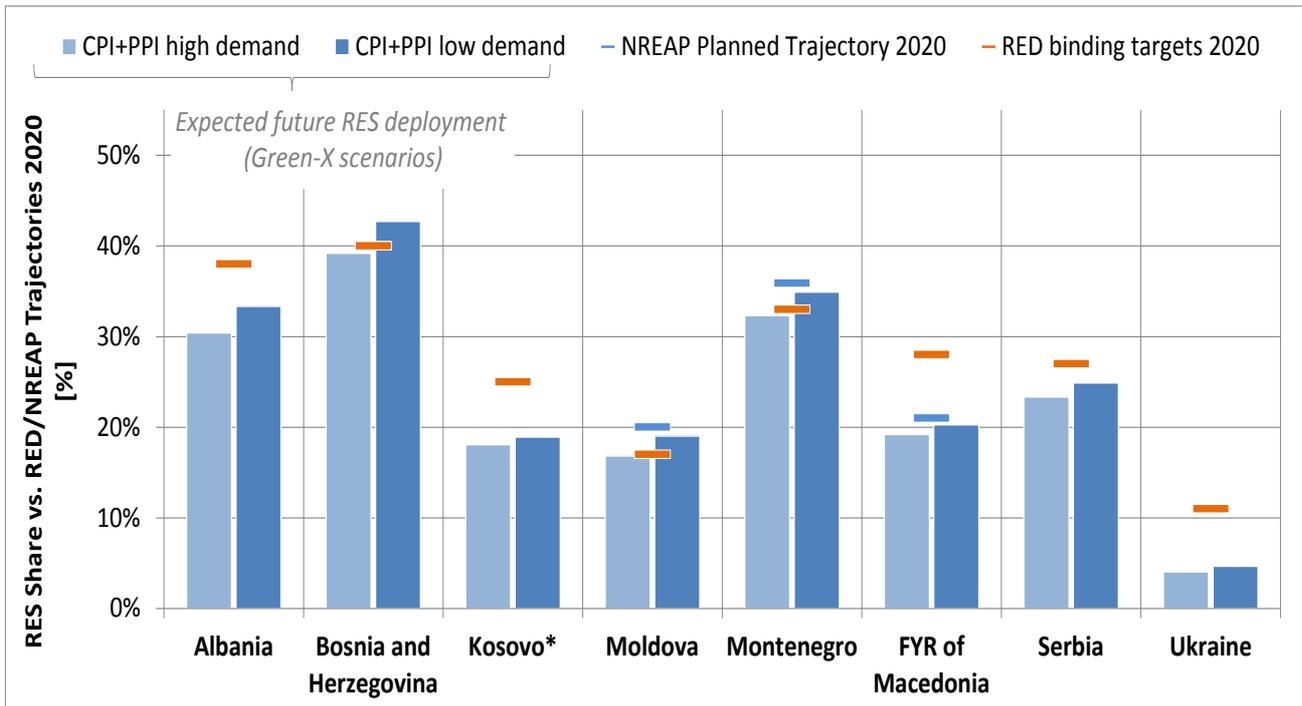


Chart 8: Expected RES share in 2020 vs. 2020 RED indicative trajectory and 2020 NREAP target (%).

Modelling results revealed the projected future progress by 2020 (i.e. against the binding 2020 RES target) and indicates the likeliness of a Contracting Party to deliver as required by the Renewable Energy Directive (i.e. indicative shares for overall renewable energy deployment under the indicative trajectories). As a starting point, Chart 8 indicates the expected renewable energy deployment in relative terms, expressing the RES share in gross final energy demand in 2020 for each Contracting Party according to assessed Green-X scenarios. The set of assessed cases includes two distinct scenarios that differ by the expected demand developments (i.e. reference and efficiency trend, originally based on Contracting Parties NREAPs but corrected in accordance with actual demand developments). This graph allows for a comparison with targeted renewable energy volumes, showing the binding 2020 renewable energy target as given by the Renewable Energy Directive.

The results suggest that three Contracting Parties, namely Bosnia and Herzegovina, Moldova and Montenegro, are expected to reach the given 2020 target with currently implemented and planned policy measures – if energy demand will develop as planned according to the low demand case (assuming complementary energy efficiency measures). Despite the expected increase in absolute terms, Albania, Kosovo\*, Former Yugoslav Republic of Macedonia, Serbia and Ukraine would fail to achieve their 2020 renewable energy targets.

## 16. Conclusions and Recommendations

Some progress could be registered in transposition or implementation of renewable energy *acquis* by all Contracting Parties in the last reporting period. However, all Contracting Parties have missed the deadline of 1 January 2014 to fully transpose and implement the Renewable Energy Directive, as amended by the Ministerial Council, in their national legislation.

The National Renewable Energy Action Plans are adopted by all Contracting Parties and only former Yugoslav Republic of Macedonia does not planned to reach the 28% renewable energy target in 2020. Bosnia and Herzegovina is the only Contracting Party which has not submitted a Progress Report on the promotion of renewable energy for 2014-2015 and the Secretariat is urging the institutions to comply with this requirement.

Despite the commitments taken, the significant renewable energy potential in the region and the overall benefits for the environment and security of supply, the Contracting Parties are very hesitant in opening the energy markets and removing non-cost barriers to attract investments in small, distributed renewable energy projects. The progress in adoption of new legislation or amending the existing frameworks is very slow and often delayed by the institutions in charge. Therefore important compliance gaps remain in all three sectors: electricity, heating and cooling and transport.

Non-discriminatory treatment of investors is not fully ensured and transparency needs to be improved further. Administrative procedures for permitting, authorisation and connection to the grids have to be simplified, coordinated and streamlined to a greater degree. Regardless of the decrease in the cost of technologies and fairly adequate feed-in tariffs in place, access to finance remains challenging due to the relatively high political risk in the region and incomplete regulatory frameworks.

So far most Contracting Parties failed to properly address renewable energy in the heating and cooling sector, to regulate the minimum use of renewable energy in the building sector as well as the exemplary role of the public sector in the development of renewable energy in heating and cooling. These policies need to be prioritised considering the future demand for heating in the region and the potential of renewable energy resources like biomass, solar thermal and geothermal to contribute to the targets.

The assessment of the second progress reports for 2014-2015 revealed the Contracting Parties are, in general, not on track to meet their 2020 targets if no enhanced policy initiatives are put in place as the trajectories become steeper closer to 2020.

Modelling results suggest that **Bosnia and Herzegovina, Moldova and Montenegro are expected to reach the given 2020 target with currently implemented and planned policy measures** – if the energy demand will develop as planned according to the low demand case (assuming complementary energy efficiency measures). Despite the expected increase in absolute terms, **Albania, Kosovo\*, Former Yugoslav Republic of Macedonia, Serbia and Ukraine would fail to achieve their 2020 RES targets.**

**Considering the deviations of higher than 1 percentage points than the indicative trajectory, revised NREAPs would be required to be submitted by Kosovo\* and Ukraine. Serbia is below the indicative trajectory with 0.9 percentage points and improved investment conditions are expected in the coming years to bring the country back on the trajectory to 2020. In the case of Former Yugoslav Republic of Macedonia a decision on triggering Article 16 of Decision 2012/04/MC-EnC shall be made by the Ministerial Council.**

Energy statistics and consistency in reporting obligation has to improve further. For Moldova and Montenegro the deviations between data in EUROSTAT and the second progress report is significant.

Biomass consumption surveys in the last years are distorting the effort needed to reach the targets for Bosnia and Herzegovina and Montenegro. Ukraine still has to finalise the biomass consumption surveys in order to revise the official energy statistics.

Policy and legislative initiatives offering market-based support for technologies that generate energy from renewable sources with the lowest impact on the electricity price to end-customers have to be adopted, strengthened and fine-tuned during the upcoming period.

Since at this stage, the Contracting Parties have not established electricity trading platforms and the wholesale markets are not transparent, the introduction of more market based support schemes, such as the feed-in premiums, will have to wait. An intermediary step towards the introduction of a more market-based support mechanism for renewable energy development could be to consider technology neutral tendering schemes, providing they are carefully designed to limit the impacts on consumer prices.

The removal of non-cost barriers that hinder the uptake of energy from renewable sources appears indispensable to achieve the technology objectives included in the NREAPs and, therefore, to meet the binding renewable energy targets in 2020. Simplification and streamlining of administrative procedures and grid integration of renewable energy are key aspects in this respect.

The target of 10% share of renewable energy in transport will most probably not be met due to the severe delay in adoption and implementation of the legal framework for sustainability of biofuels and bioliquids. Without prompt establishment of effective policy measures, it can hardly be expected that this status may change in future and that renewable energy in transport, specifically biofuels, can contribute to fulfilment of mandatory target by 2020 in any of the Contracting Parties. Blending obligations partly combined with tax exemptions for the sustainable use of biofuels are simple and straightforward policy measures that enable the creation of the market for biofuels. This would significantly increase overall renewables deployment in all Contracting Parties that have failed to previously achieved and, consequently, increase overall progress in terms of reaching the binding 2020 RES targets.

**Therefore, the Secretariat recommend to the Ministerial Council to take the appropriate decisions to bring the Contracting Parties on track to reach the 2020 renewable energy targets and to enable a sustainable energy development in the Energy Community.**

## Annex 1 – Overview of the Contracting Parties progress in meeting the interim targets<sup>19</sup>

Contracting Party	2009 RES share	1 <sup>st</sup> interim target (2011-2012)	2013 RES share	2014 RES share	2 <sup>nd</sup> interim target (2013-2014)	2015 RES share	3 <sup>rd</sup> interim target (2015-2016)	2020 RES target
Albania	31,2%	32,6%	30,2%	32%	33,2%	34,9%	34,3%	38%
Bosnia and Herzegovina	34,0%	35,2%	24,2%	42,3%	35,8%	41,6%	36,7%	40%
Kosovo*	18,9%	20,1%	18,6%	19,5%	20,7%	18,5%	21,6%	25%
former Yugoslav Republic of Macedonia	21,9% <sup>20</sup>	23,1%	18,5%	19,5%	23,7%	19,9%	24,6%	28%
Moldova	11,9%	12,9%	12,6%	14,9%	13,4%	14,2%	14,2%	17%
Montenegro	26,3%	27,6%	35,5%	37,2%	28,3%	37,7%	29,3%	33%
Serbia	21,2%	22,4%	19,8%	23,1%	22,9%	21%	23,8%	27%
Ukraine	5,5% <sup>21</sup>	6,6%	2,7%	3,3%	7,2%	4,3%	8%	11%

<sup>19</sup> In accordance with energy balances (Eurostat, 2017 )

<sup>20</sup> RES share in Eurostat statistics is 17,24% after the revision of biomass data for 2009

<sup>21</sup> RES share in Eurostat statistics is 2,2% without biomass data based on consumption surveys

## Annex 2 – Installed renewable energy capacities in Contracting Parties<sup>22</sup>

<b>ALBANIA</b>		2015	2014
Total renewable energy (MW)		<b>1798</b>	<b>1725</b>
Hydropower, out of which		1798	1725
	- small hydropower (<10MW)	268	210
	- pumped storage	0	0
Wind		0	0
Solar		0	0
Biogas		0	0

<b>BOSNIA AND HERZEGOVINA</b>		2015	2014
Total renewable energy (MW)		<b>2170</b>	<b>2132</b>
Hydropower, out of which		2159	2128
	- small hydropower (<10MW)	100	79
	- pumped storage	420	420
Wind		0	0
Solar		11	4
Biogas		0	0

<b>KOSOVO*</b>		2015	2014
Total renewable energy (MW)		<b>44</b>	<b>44</b>
Hydropower, out of which		43	43
	- small hydropower (<10MW)	11	11
	- pumped storage	0	0
Wind		1	1
Solar		0	0
Biogas		0	0

<b>FORMER YUGOSLAV REPUBLIC OF MACEDONIA</b>		2015	2014
Total renewable energy (MW)		<b>716</b>	<b>682</b>
Hydropower, out of which		658	630
	- small hydropower (<10MW)	96	68
	- pumped storage	0	0
Wind		37	37
Solar		17	15
Biogas		4	0

<sup>22</sup> 20114, 2015 data – EUROSTAT and Second Progress Reports of Contracting Parties

<b>MOLDOVA</b>		2015	2014
Total renewable energy (MW)		21	21
Hydropower, out of which		16	16
	- small hydropower (<10MW)	0	0
	- pumped storage	0	0
Wind		1	1
Solar		1	1
Biogas		3	3

<b>MONTENEGRO</b>		2015	2014
Total renewable energy (MW)		659	652
Hydropower, out of which		656	651
	- small hydropower (<10MW)	7	2
	- pumped storage	0	0
Wind		0	0
Solar		3	1
Biogas		0	0

<b>SERBIA</b>		2015	2014
Total renewable energy (MW)		2915	2910
Hydropower, out of which		2898	2897
	- small hydropower (<10MW)	63	54
	- pumped storage	614	614
Wind		1	1
Solar		11	7
Biogas		5	5

<b>UKRAINE</b>		2015	2014
Total renewable energy (MW)		6734	6720
Hydropower, out of which		5883	5851
	- small hydropower (<10MW)	90	84
	- pumped storage	1186	1186
Wind		428	411
Solar		423	411
Biogas		52	47