

**First Progress Report for Bosnia and Herzegovina under
Renewable Energy Directive 2009/28/EC as adapted by the
Ministerial Council Decision 2012/04/MC-EnC**

Article 15 of Ministerial Council Decision 2012/04/MC-EnC requires Contracting Parties to submit a report to the Energy Community Secretariat on progress in the promotion and use of energy from renewable sources covering the points referred to in Article 22 of Directive 2009/28/EC by 31 December 2014, and every two years thereafter.

1. Sectoral and overall shares and actual consumption of energy from renewable sources in the preceding 2 years (n-1; n-2 e.g. 2015 and 2014) (Article 22 (1) a of Directive 2009/28/EC).

It is important to note that the data in Table 1, 1a and 1c are derived from EUROSTAT due to the fact that at the moment Bosnia and Herzegovina doesn't have relevant data, especially when it comes to the biomass sector. However, currently, in cooperation with all relevant actors, a study is being prepared to give concrete answers on the use of energy from renewable sources by sectors in gross final energy consumption.

Furthermore, the share of energy from renewable sources in gross final consumption varies depending on the climate conditions during the year, hydrology (from which depends production of electricity from hydropower) and the number of days of heating (from which the amount of biomass used for heating depends).

Table 1: The sectoral (electricity, heating and cooling, and transport) and overall shares of energy from renewable sources¹

	2015 <i>Year n-1</i>	2014 <i>Year n-2</i>
RES-H&C ² (%)	54,8%	56,2%
RES-E ³ (%)	44,5%	41,1%
RES-T ⁴ (%)	0,4%	0,5%
Overall RES share ⁵ (%)	41,1%	41,5%
<i>Of which from cooperation mechanism⁶ (%)</i>	0	0
<i>Surplus for cooperation mechanism⁷ (%)</i>	0	0

Table 1a: Calculation table for the renewable energy contribution of each sector to final energy consumption (ktoe)⁸

	2015 <i>Year n-1</i>	2014 <i>Year n-2</i>
(A) Gross final consumption of RES for heating and cooling	1393,5	1587
(B) Gross final consumption of electricity from RES	510,3	477,3
(C) Gross final consumption of energy from RES in transport	4	5
(D) Gross total RES consumption ⁹	1905,4	2066,3
(E) Transfer of RES to other Contracting Parties or Member States	0	0
(F) Transfer of RES from other Contracting Parties and 3rd countries	0	0
(G) RES consumption adjusted for target (D)-(E)+(F)	00	0

¹ Facilitates comparison with Table 3 and Table 4a of the NREAPs.

² Share of renewable energy in heating and cooling: gross final consumption of energy from renewable sources for heating and cooling (as defined in Articles 5(1)(b) and 5(4) of Directive 2009/28/EC divided by gross final consumption of energy for heating and cooling. The same methodology as in Table 3 of NREAPs applies.

³ Share of renewable energy in electricity: gross final consumption of electricity from renewable sources for electricity (as defined in Articles 5(1)(a) and 5(3) of Directive 2009/28/EC divided by total gross final consumption of electricity. The same methodology as in Table 3 of NREAPs applies.

⁴ Share of renewable energy in transport: final energy from renewable sources consumed in transport (cf. Article 5(1)(c) and 5(5) of Directive 2009/28/EC divided by the consumption in transport of 1) petrol; 2) diesel; 3) biofuels used in road and rail transport and 4) electricity in land transport (as reflected in row 3 of Table 1). The same methodology as in Table 3 of NREAPs applies.

⁵ Share of renewable energy in gross final energy consumption. The same methodology as in Table 3 of NREAPs applies.

⁶ In percentage point of overall RES share.

⁷ In percentage point of overall RES share.

⁸ Facilitates comparison with Table 4a of the NREAPs

⁹ According to Art.5(1) of Directive 2009/28/EC gas, electricity and hydrogen from renewable energy sources shall only be considered once. No double counting is allowed.

* Data in Tables 1, 1a and 1c are Eurostat data provided by the Energy Community and refer to the final consumption of energy. Data for 2015 are not yet available. Data on final energy consumption were obtained from a survey implemented by the Agency for Statistics of BiH. However, there is a gap between the consumed energy and domestic raw material (Table 4).

Table 1.b: Total actual contribution (installed capacity, gross electricity generation) from each renewable energy technology in Bosnia and Herzegovina to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in electricity¹⁰

	2015 Year n-1		2014 Year n-2	
	MW	GWh	MW	GWh
Hydro ¹¹ :	2140,39	5556,63	2114,58	5938,65
non pumped				
<1MW	18,94	58,57	15,83	55,20
1MW–10 MW	53,76	72,94	31,05	90,91
>10MW	1627,70	5172,59	1627,70	5447,38
pumped	440	252,53	440	172,82
mixed ¹²	0	0	0	0
Geothermal	0	0	0	0
Solar:	9,36	6,59	3,00	1,14
photovoltaic	9,36	6,59	3,00	1,14
concentrated solar power	0	0	0	0
Tide, wave, ocean	0	0	0	0
Wind:	0,3	0,029284	0,3	0,027549
onshore	0,3	0,029284	0,3	0,027549
offshore	0	0	0	0
Biomass ¹³ :	0,04	0	0	0
solid biomass	0	0	0	0
biogas	0,4	0	0	0
bioliquids	0	0	0	0
TOTAL	2150,10	5563,25	2117,87	5966,79
of which in CHP	0	0	0	0

Table 1c: Total actual contribution (final energy consumption¹⁴) from each renewable energy technology in Bosnia and Herzegovina to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in heating and cooling (ktoe)¹⁵

	2015 Year n-1	2014 Year n-2
Geothermal (excluding low temperature geothermal heat in heat pump applications)	0	0
Solar	0	0
Biomass ¹⁶ :	1393,5	1587
solid biomass	1393,5	1587
biogas	0	0
bioliquids	0	0
Renewable energy from heat pumps:	0	0
- of which aérothermal		
- of which geothermal		
- of which hydrothermal		
TOTAL	0	0
Of which DH ¹⁷	0	0
Of which biomass in households ¹⁸	1393,5	1587

¹⁰ Facilitates comparison with Table 10a of the NREAPs.

¹¹ Normalised in accordance with Directive 2009/28/EC and Eurostat methodology.

¹² In accordance with new Eurostat methodology.

¹³ Take into account only those complying with applicable sustainability criteria, cf. Article 5(1) of Directive 2009/28/EC last subparagraph.

¹⁴ Direct use and district heat as defined in Article 5.4 of Directive 2009/28/EC.

¹⁵ Facilitates comparison with Table 11 of the NREAPs.

¹⁶ Take into account only those complying with applicable sustainability criteria, cf. Article 5(1) last subparagraph of Directive 2009/28/EC.

¹⁷ District heating and / or cooling from total renewable heating and cooling consumption (RES- DH).

¹⁸ From the total renewable heating and cooling consumption.

Table 1d: Total actual contribution from each renewable energy technology in Bosnia and Herzegovina to meet the binding 2020 targets and the indicative interim trajectory for the shares of energy from renewable resources in the transport sector (ktoe)^{19, 20}

	2015 Year n-1	2014 Year n-2
Bioethanol/ bio-ETBE	0	0
<i>Of which Biofuels²¹ Article 21.2</i>		
<i>Of which imported²²</i>		
Biodiesel	0	0
<i>Of which Biofuels²³ Article 21.2</i>		
<i>Of which imported²⁴</i>		
Hydrogen from renewables	0	0
Renewable electricity	3,47*	2,25*
<i>Of which road transport</i>		
<i>Of which non-road transport</i>	3,47*	2,25*
Others (as biogas, vegetable oils, etc.) – please specify	0	0
<i>Of which Biofuels²⁵ Article 21.2</i>		
TOTAL	3,47*	2,25*

**Based on the data from the Agency for Statistics of BiH, the RES Electricity in railway transport is calculated pursuant to Article 3, Item 4.a) of the RES Directive 2009/28/EC:*

„(a) by calculating a denominator (i.e. the total amount of energy consumed in transport for the purposes of the first subparagraph) only gasoline, diesel, biofuels used in road and rail transport and electricity are taken into account;

(b) by calculating the numerator (i.e. the amount of energy from renewable sources used in transport for the purposes of the first subparagraph) all types of energy from renewable sources used in all modes of transport shall be taken into account;

(c) by calculating the contribution of electricity produced from renewable sources and used in all types of electrical means of transport for the purposes of items (a) and (b), Member States may decide to use either an average share of electricity from renewable sources in the Community or share of electricity from renewable sources energy in its country measured two years before the year in question. Furthermore, in calculating the consumption of electricity from renewable sources in all types of road power electric vehicles, it is considered that consumption is two and a half times higher than the energy content of electricity generated from renewable energy sources."

¹⁹ For biofuels take into account only those compliant with the sustainability criteria, cf. Article 5(1) last subparagraph.

²⁰ Facilitates comparison with Table 12 of the NREAPs.

²¹ Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

²² From the whole amount of bioethanol / bio-ETBE.

²³ Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

²⁴ From the whole amount of biodiesel.

²⁵ Biofuels that are included in Article 21(2) of Directive 2009/28/EC.

2. Measures taken in the preceding 2 years and/or planned at national level to promote the growth of energy from renewable sources taking into account the indicative trajectory for achieving the national RES targets as outlined in your National Renewable Energy Action Plan. (Article 22(1)a) of Directive 2009/28/EC)

Table 2: Overview of all policies and measures

Name and Reference No. of the Measure	Type of Measure*	Expected Result**	Targeted Group and Activity***	Existing or Planned****	Start and End Dates of the Measure
Strategic Policy of the Energy Sector in BiH	Planned	Determinants of development of BiH energy sector including renewable energy, are defined based on entity strategies	All subjects in energy sector	Planned	2017
Development and improvement of Renewable Energy Action Plan of Bosnia and Herzegovina in accordance with the entity action plans	Planned	Bosnia and Herzegovina implements and regularly updates program provisions defined by the Action Plan	All subjects in energy sector	Planned	2016 onwards
Development, management and reporting on Projects of Energy Community Interest (PECI)	Planned / financial	Efficient participation of Bosnia and Herzegovina in development and interoperability of priority corridors and areas of trans-European energy infrastructure (according to EU Regulation 347/2013)	All subjects in energy sector Carriers of development projects for RES plants	Planned	2016
Harmonization of incentive programs with other countries	Financial	BiH will have active exchange of renewable energy incentives using statistical transfers (Article 6 of Directive 2009/28 / EC)	Carriers of development projects for RES plants	Planned	2016

		and joint projects (Article 9 of Directive 2009/28 / EC)			
Progress report concerning promotion and use of renewable energy sources	Planned	BiH regularly reports (every two years) to the Secretariat of the Energy Community issues defined in Article 22 of Directive 2009/28 / EC	All subjects in energy sector	Planned	2017

In addition to these measures, there are entity measures defined in entity action plans.

* Indicate if the measure is (predominantly) regulatory, financial or soft (i.e. information campaign).

**Is the expected result behavioural change, installed capacity (MW; t/year), energy generated (ktoe)?

***Who are the targeted persons: investors, end users, public administration, planners, architects, installers, etc? or what is the targeted activity / sector: biofuel production, energetic use of animal manure, etc)?

**** Does this measure replace or complement measures contained in Table 5 of the NREAP?

2.a Please describe the progress made in evaluating and improving administrative procedures to remove regulatory and non-regulatory barriers to the development of renewable energy. (Article 22(1)e) of Directive 2009/28/EC).

Currently, a state level assessment of the existing administrative procedures for obtaining licenses and permits for renewable energy projects has not been evaluated. The Ministry of Foreign Trade and Economic Relations of BiH has formed a Working Group in which the relevant BiH institutions participate with the aim of implementing the adapted Regulation 347/2013. At the last meeting held with the representatives of the Secretariat of the Energy Community it was found that BiH made the greatest progress on the implementation of the aforementioned Regulation.

It can be unofficially stated that the implementation of the existing measures for the achievement of set goals has yielded certain results. There is a need for a regulatory framework for the production and stimulation of RES-E. Generation of thermal energy from RES is not supported. The necessary regulation is lacking, as well as sufficient infrastructure in the heating and cooling sector. Also, there is no regulatory framework or support scheme for the use of biofuels in the transport sector, however, it is planned in the foreseeable future. The procedures for issuing necessary licenses and permits are regulated by applicable regulations.

2.b Please describe the measures in ensuring the transmission and distribution of electricity produced from renewable energy sources and in improving the framework or rules for bearing and sharing of costs related to grid connections and grid reinforcements. (Article 22(1)f) of Directive 2009/28/EC).

Connection to the grid is regulated by the Rulebook on Connection adopted by the State Electricity Regulatory Commission (SERC) ("Official Gazette of BiH", No. 95/08). RES electricity producers who are connected to the grid pay 50% of the fixed part of the connection costs.

The Law on Renewable Energy Sources and Efficient Cogeneration in RS defines that distribution companies, at their expense, shall analyse the possibilities and conditions for connection of producers of energy from RES and Efficient Cogeneration.

The Rulebook on conditions for connection of power plants to the grid adopted by Elektroprivreda Republike Srpske in 2014 regulates the conditions of connection and advantages in accessing the grid for producers of electricity from renewable energy sources as well as the distribution of connection costs for the joint connection of several producers.

3. Please describe the support schemes and other measures currently in place that are applied to promote energy from renewable sources and report on any developments in the measures used with respect to those set out in your National Renewable Energy Action Plan. (Article 22(1)b of Directive 2009/28/EC).

Entities have different support schemes.

Republika Srpska

Incentives for RES-E generation, as a support scheme for promoting the use of energy from the RES, have been in place since January, 1st 2012 and have given significant results. As an incentive mechanism, feed-in tariffs and feed-in premiums were chosen. Feed-in premium is less applicable because the "green energy" market has not been developed. In the future, the possibility of stimulating energy from RES in the heating and cooling sector as well as the use of biofuels in transport will be analysed. Administrative and other activities of the incentives system are performed by the Operator of the Incentives System in accordance with the Rules of Procedure for the Implementation of the Incentives System. Until the establishment of the Operator, administrative and financial affairs of the incentives system shall be performed by Elektroprivreda Republike Srpske.

The Law on Renewable Energy Sources and Efficient Cogeneration (RES&EC) stipulates that producers of RES-E and efficient cogeneration can receive the following types of incentives:

- a) Grid connection benefits,
- b) Grid access benefits,
- c) Right to mandatory purchase of electric power,
- d) Right to the feed-in tariff, and
- e) The right to a premium for consumption for own needs or sale on the Republika Srpska market.

As a result of these measures, by the end of 2015, 13 SHPPs of total installed power of 33.88 MW and 26 SPP of total installed power of 2.15 MW was installed. In total, 11 SHPPs of total installed power of 44 MW and 10 SPPs of total installed capacity of 1.42 MW are currently under construction.

Federation of BiH

Based on the Law on the Use of Renewable Energy Sources and Efficient Cogeneration, 05.06.2014, the Government of the FBiH adopted a Decision on Supporting Electricity Production from Renewable Energy Sources and Efficient Cogeneration and Determining of the Incentive Amount.

The decision is to regulate the following:

- a) method of determining and collecting a levy from end users of electricity,
- b) method of distribution of collected levy to support privileged producers of RES-E,
- c) criteria regarding the size of individual plants for each technology that may have the status of the privileged producer and precise defining of the term "plant" for different technologies for exploitation of RES and EC,
- d) maximum time for plant construction and connection to the grid during which the investor will have guaranteed status of the potential privileged producer, in line with

the REAP for each technology defined in Article 3, Paragraph (1) Item y) of the Law on RES&EC,

e) the plan for collecting levy for incentives to users of RES&EC for a 10-year period in line with dynamic quotas referred to in Articles 5, 18 and 19 of the Law on RES&EC and guaranteed prices.

Feed-in tariff is the chosen support scheme. In the future, the possibility to support RES energy in the heating and cooling sector and use of biofuel in transport will be analysed.

Table 3: Support schemes for renewable energy

Entities have different support schemes

Support plans for RES year n (e.g. 2014)		Per unit		Total (M€)*
Hydro Energy				
Instrument (indicate relevant data)	Obligation/quota (%)			
	Penalty/purchase option/purchase price (€/unit)			
	Average certified price			
	Tax exemption/refund			
	Investment subsidies (donated capital or loans) (€/unit)			
	Production incentives			
	Feed-in tariff	RS (0.036 – 0.0511) €/kWh	FBiH (0.06 – 0.15 €/kWh)	2.4057
Feed-in premium	RS (0.0231 - 0.0382) €/kWh	FBiH -	0	
Tenders				
Wind energy				
Instrument (indicate relevant data)	Obligation/quota (%)			
	Penalty/purchase option/purchase price (€/unit)			
	Average certified price			
	Tax exemption/refund			
	Investment subsidies (donated capital or loans) (€/unit)			
	Production incentives			
	Feed-in tariff	RS 0.057 €/kWh	FBiH (0.08 – 0.19 €/kWh)	0
Feed-in premium	RS 0.0439 €/kWh	FBiH -	0	
Tenders				
Biomass				
Instrument (indicate relevant data)	Obligation/quota (%)			
	Penalty/purchase option/purchase price (€/unit)			
	Average certified price			
	Tax exemption/refund			
	Investment subsidies (donated capital or loans) (€/unit)			
	Production incentives			

	Feed-in tariff	RS (0.88 – 0.096) €/kWh	FBiH (0.12 - 0.16 €/kWh)	0
	Feed-in premium	RS (0.075- 0.083) €/kWh	FBiH -	0
	Tenders			
Solar energy				
Instrument (indicate relevant data)	Obligation/quota (%)			
	Penalty/purchase option/purchase price (€/unit)			
	Average certified price			
	Tax exemption/refund			
	Investment subsidies (donated capital or loans) (€/unit)			
	Production incentives			
	Feed-in tariff	RS (0.093- 0.1583) €/kWh	FBiH (0.16 – 0.28 €/kWh)	0.5825
Feed-in premium	RS (0.0799- 0.1455) €/kWh	FBiH -	0.01584	
	Tenders			
Estimated total support in the electric power sector on an annual level				3.00404
Estimated total support in the heating sector on an annual level				0
Estimated total support in the transportation sector on an annual level				0

* Quantity of electric power for which support has been provided per unit of provided support, indicated efficiency of support for individual types of technology

3.1. Please provide the information on how supported electricity is allocated to final customers for purposes of Article 3 (6) of Directive 2003/54/EC. (Article 22(1)b) of Directive 2009/28/EC).

Elektroprivreda Republike Srpske (in the role of the Operator of the incentive system) and the Operator for Renewable Energy Sources and Efficient Cogeneration of FBiH offtake electricity from producers who generate electricity from renewable sources, indebted distribution companies that distribute the energy to end customers as electricity suppliers in accordance with applicable regulations. The incentives are provided from the levy collected by all end users in order to support generation of electricity from renewable sources. The Operator of the incentives system uses collected funds to pay the producers for the invoiced generation (consumed) of electricity from renewable sources.

4. Please provide information on how, where applicable, the support schemes have been structured to take into account RES applications that give additional benefits, but may also have higher costs, including biofuels made from wastes, residues, non-food cellulosic material, and ligno-cellulosic material?) (Article 22 (1)c of Directive 2009/28/EC).

No information.

5. Please provide information on the functioning of the system of guarantees of origin for electricity and heating and cooling from RES, and the measures taken to ensure reliability and protection against fraud of the system. (Article 22(1)d of Directive 2009/28/EC)).

The Rulebook on Issuing Guarantees of Origin of Electricity (Official Gazette of RS, no.1/14) regulates the use of guarantees of origin of RES-E. So far, there have been no requests for guarantees of origin. Large HPPs that are not in the incentive system are entitled to guarantees of origin but have not yet requested them. Guarantees of origin of heat from renewable sources have not yet been regulated.

In accordance with Part VI of the Law on the Use of Renewable Energy Sources and Efficient Cogeneration, (Official Gazette of the Federation BiH, no. 70/13 and 05/14), as well as Article 15 of Directive 2009/28/EC on the promotion of the use of energy from renewable sources, the Operator for RES and efficient cogeneration FBiH has begun to fulfil the obligations arising from the above-mentioned acts. In accordance with the aforementioned, the RES&EC Operator, after the public hearing, enacted the Rulebook on Applying for the Guarantees of Origin (Official Gazette of the Federation BiH, no. 101/15), and for which the Regulatory Commission for Energy in the Federation of Bosnia and Herzegovina, on 18.12.2015, enacted a Decision on the Approval.

Within the aforementioned Rulebook, the Operator has also developed forms for accompanying requests for issuance of guarantee of origin and is currently working on transfer forms and forms for cancellation of guarantees of origin. In addition, having in mind certain legal uncertainty as well as the obligation to draft an internal act that will regulate the automatic transmission of guarantees of origin from the plant of privileged producers, on December 23rd, 2016, the Operator for RES&EC filed a Request for Opinion from the Federal Ministry of Energy, Mining and Industry. They are still waiting for the response.

On January 25th, 2016, after the preliminary contacts with representatives of the Association of Issuing Bodies (AIB), the RES&EC Operator officially requested the status of an observer, to which the above-mentioned association responded positively on February 1st, 2016. It is important to point out that this is the first but necessary step, in a long and challenging series of steps that would lead to full membership in the AIB. Full membership in the AIB provides the possibility of accessing individual Member Registries to a common HUB, through which the issuance, transfer and cancellation of guarantees of origin within all member countries is made.

In the following period, it is necessary to identify the compliance of the legislation in the field of guarantee of origin in FBiH with the principles and rules of the European Energy Certificate System (EECS Principles and Rules). It is also necessary to purchase a software package and a fraud-proof database, which would prevent abuse of issued guarantees of origin. It should be followed by creation of technically and legally demanding Domain Protocol for FBiH (a document which shows how FBiH legal regulations, as well as the accompanying regulations in the domain of guarantees of origin in FBiH, are harmonised with the EECS Principles and Rules). The approval of which would follow after the audit by the AIB auditors, and the final linking of the Registry of guarantees of origin to the central AIB HUB. Another important issue is the definition of the missing Electricity Disclosure Rule Book, which, among other things, should define which body in the FBiH (or BiH - in case of synchronisation of the Guarantees of Origin Registers of both entities) is responsible for publishing data on guarantees of origin, and how this announcement is made, with the aim of double counting transaction prevention.

6. Please describe the developments in the preceding 2 years in the availability and use of biomass resources for energy purposes. (Article 22(1g) of Directive 2009/28/EC).

Table 4: Biomass supply for energy use

	Amount of domestic raw material (*)		Primary energy in domestic raw material (ktoe)		Amount of imported raw material from EU (*)		Primary energy in amount of imported raw material from EU (ktoe)		Amount of imported raw material from non EU(*)		Primary energy in amount of imported raw material from non EU (ktoe)	
	2015 Year n-1	2014 Year n-2	2015 Year n-1	2014 Year n-2	2015 Year n-1	2014 Year n-2	2015 Year n-1	2014 Year n-2	2015 Year n-1	2014 Year n-2	2015 Year n-1	2014 Year n-2
Biomass supply for heating and electricity:												
Direct supply of wood biomass from forests and other wooded land energy generation (fellings etc.)**	1460,586 m3	1487,437 m3	621,39	632,72								
Indirect supply of wood biomass (residues and co-products from wood industry etc.)**			5,3	4,2 ²⁶								
Energy crops (grasses, etc.) and short rotation trees (please specify)												
Agricultural by-products / processed residues and fishery by-products **												
Biomass from waste (municipal, industrial etc.) **												
Others (please specify)												

²⁶ Indirect supply for BiH is probably higher since these were the only available data at this point, and concern Republika Srpska only.

Biomass supply for transport:												
Common arable crops for biofuels (please specify main types)												
Energy crops (grasses, et c.) and short rotation trees for biofuels (please specify main types)												
Others (please specify)												

* Amount of raw material if possible in **m3 for biomass from forestry** and in **tonnes for biomass from agriculture and fishery and biomass from waste**

** The definition of this biomass category should be understood in line with table 7 of part 4.6.1 of Commission Decision C (2009) 5174 final establishing a template for National Renewable Energy Action Plans under Directive 2009/28/EC

Table 4a. Current domestic agricultural land use for production of crops dedicated to energy production (ha)

Land use	Surface (ha)	
	2015 Year n-1	2014 Year n-2
1. Land used for common arable crops (wheat, sugar beet etc.) and oil seeds (rapeseed, sunflower etc.) (Please specify main types)	70272	73953
2. Land used for short rotation trees (willows, poplars). (Please specify main types)	118334.4	121705.2
3. Land used for other energy crops such as grasses (reed canary grass, switch grass, Miscanthus), sorghum. (Please specify main types)	-	-

7. Please provide information on any changes in commodity prices and land use within your Contracting Party in the preceding 2 years associated with increased use of biomass and other forms of energy from renewable sources? Please provide where available references to relevant documentation on these impacts in your country. (Article 22(1) h) of Directive 2009/28/EC).

No information.

8. Please describe the development and share of biofuels made from wastes, residues, non-food cellulosic material, and lingo cellulosic material. (*Article 22(1) i) of Directive 2009/28/EC*).

Table 5: Production and consumption of Art.21(2) biofuels (ktoe)

Article 21(2) biofuels ²⁷	2015 Year n-1	2014 Year n-2
Production – Fuel type X (Please specify)	0	0
Consumption – Fuel type X (Please specify)	0	0
Total production Art.21.2 biofuels	0	0
Total consumption Art.21.2. biofuels	0	0
% share of 21.2. fuels from total RES-T	0.005	0.005

9. Please provide information on the estimated impacts of the production of biofuels and bioliquids on biodiversity, water resources, water quality and soil quality within your country in the preceding 2 years.

No information.

10. Please estimate the net greenhouse gas emission savings due to the use of energy from renewable sources (*Article 22 (1) k) of Directive 2009/28/EC*).

For the calculation of net greenhouse gas emission savings from the use of renewable energy, the following methodology is suggested:

- For biofuels: In accordance with Article 22(2) of Directive 2009/28/EC.
- For electricity and heat it is suggested to use the EU wide fossil fuel comparators for electricity and heat as set out in the report on sustainability requirements for the use of solid and gaseous biomass sources in electricity, heating and cooling²⁸, if no later estimates are available.

If a Contracting Party chooses not to use the suggested methodology for estimating the net greenhouse gas emission savings, please describe what other methodology has been used to estimate these savings.

Table 6: Estimated GHG emission savings from the use of renewable energy (t CO₂eq)

Environmental aspects	2015 Year n-1	2014 Year n-2
Total estimated net GHG emission saving from using renewable energy²⁹	1891505	2028708.6
- Estimated net GHG saving from the use of renewable electricity	1891505	2028708.6
- Estimated net GHG saving from the use of renewable energy in heating and cooling	-	-
- Estimated net GHG saving from the use of renewable energy in transport	0	0

Coal emission factor was used to calculate the estimated GHG emissions – 0.34 t/MWh.

²⁷ Biofuels made from wastes, residues, non-food cellulosic material, and lignocellulosic material.

²⁸ Report available on: http://ec.europa.eu/energy/renewables/transparency_platform/doc/2010_report/com_2010_0011_3_report.pdf.

²⁹ The contribution of gas, electricity and hydrogen from renewable energy sources should be reported depending on the final use (electricity, heating and cooling or transport) and only be counted once towards the total estimated net GHG savings.

11. Please report on (for the preceding 2 years) and estimate (for the following years up to 2020) the excess/deficit production of energy from renewable sources compared to the indicative trajectory which could be transferred to/imported from other Contracting Parties, Member States and/or third countries, as well as estimated potential for joint projects until 2020. (Article 22 (1) l, m) of Directive 2009/28/EC).

By analysing the movement of the RES energy share compared to the gross final consumption in BiH in recent years, it is evident that this indicator is moving in line with the path planned in the Action Plan.

The targets for production of supported power from solar power plants and small hydropower plants can be achieved this year. With the construction of wind farms, the planned production of which is delayed, however, it is expected the target will be achieved in the next two years.

The delay in realisation of the goals set in the Action Plan of Republika Srpska is affected by slow realisation of the planned large hydro power plants for which a concession has already been awarded (HPP Dabar, HPP Buk Bijela, HPP Mrsovo, HPP Ulog, HPP on the Bosna river etc.), and lacking regulations in the heating and cooling sector, and in the use of biofuels in transport,

The situation in the Federation of BiH is similar.

Table 7: Actual and estimated excess and/or deficit (-) production of renewable energy compared to the indicative trajectory which could be transferred to/from other Contracting Parties, Member States and/or third countries in Bosnia and Herzegovina (ktoe)^{30, 31}

	2014 Year n-2	2015 Year n-1	2016	2017	2018	2019	2020
Actual/estimated excess or deficit production (Please distinguish per type of renewable energy and per origin/destination of import/export)							

11.1. Please provide details of statistical transfers, joint projects and joint support scheme decision rules.

So far no statistical transfers, joint projects or joint support scheme decision rules have been used.

12. Please provide information on how the share for biodegradable waste in waste used for producing energy has been estimated, and what steps have been taken to improve and verify such estimates. (Article 22(1)(n) of Directive 2009/28/EC).

No information.

³⁰ Please use actual figures to report on the excess production in the two years preceding submission of the report, and estimates for the following years up to 2020. In each report Contracting Party may correct the data of the previous reports.

³¹ When filling in the table, for deficit production please mark the shortage of production using negative numbers (e.g. -x ktoe).