

Second Annual Report under the Energy Efficiency Directive

BOSNIA AND HERZEGOVINA

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Relations of Bosnia and Herzegovina

June 2018

A. Key statistics and indicators

This is the Second Annual Report under the Energy Efficiency Directive prepared by Bosnia and Herzegovina, based on the Template proposed by the Energy Community Secretariat and fully consistent with the requirements of the Energy Efficiency Directive - EED (2012/27/EU). Explanations for all numbers provided in the following table are given below, including the sources of information.

Data on primary and final energy consumption are given for year 2016.

Estimation of key statistics and indicators in 2016	Value	Unit
Total primary energy consumption (*)	6,735	ktoe
Total final energy consumption (*)	3,727	ktoe
Final energy consumption – Transport (*)	1,207	ktoe
Final Energy consumption – Industry (*)	926	ktoe
Final energy consumption – Households (*)	1,139	ktoe
Final energy consumption – Services (*)	435	ktoe
Gross value added by sector – Industry (*)	2,938.16	mil. EUR
Gross value added by sector – Services (*)	3,004.70	mil. EUR
Disposable income of households (*)		mil. EUR
Gross domestic product (GDP) (**)	15,288	mil. EUR
Electricity generation from thermal power plants (*)	1,041	ktoe
Electricity generation from combined heat and power (*)	18	ktoe
Heat generation from thermal power generation (*)	135	ktoe
Heat generation from combined heat and power plants, incl. industrial waste heat (*)	36	ktoe
Fuel input for thermal power generation (*)	3,424	ktoe
Passenger kilometres (pkm), if available (**) ¹	1,706,372	thous. pkm

¹ http://www.bhas.ba/saopstenja/2018/TRA_01_2017_Q4_0_BS.pdf

Estimation of key statistics and indicators in 2016	Value	Unit
Tonne kilometres (tkm), if available (**) ²	3,739,191	thous. tkm
Combined transport kilometres (pkm + tkm), in case that separate values for pkm and tkm are not available (**)	5,445,563	
Population (**) ³	3. 511	millions

Table 1: Key energy statistics data

(*) Energy statistics - EUROSTAT data Energy balance for BiH May 2018 edition/ Agency for Statistics of BiH

(**) State Statistical office

B. Overview of energy consumption trends

The trends in energy consumption for B&H are here given for years 2014-2016. In that sense, the energy balances provided by BHAS in 2014 - 2016 are used.



Figure 1: Final and primary energy consumption (left) and final energy consumption per sectors (right) in 2014 – 2016 .

As it is shown in Figure 1, the energy statistics show the values of TPEC and TFEC for Bosnia and Herzegovina for the period 2014 – 2015. It should be noted that the BHAS, for the first time, published the total statistical energy balance for Bosnia and Herzegovina for the years 2014 - 2016, including the revision of total statistical energy balance for year 2014. The First EED Report was made using previous data from previous energy statistics, which caused the change of statistical TPEC and TFEC indicators for the period 2014 – 2016. Therefore, there was a change in the TFEC trajectory for the same period, from the one trajectory that was presented to the NEEAP BiH document. Now, the aforementioned

² http://www.bhas.ba/saopstenja/2018/TRA_01_2017_Q4_0_BS.pdf

³ www.bhas.ba/tematskibilteni/NUM_00_2017_TB_0_BS.pdf

statistical indicators, according to the official energy statistics, are essentially distant from the responding trajectories defined by NEEAP, as it is shown in the following table:

Year	2014	2015	2016
TFEC - without energy efficiency measures, reference scenario	4093,00	4155,50	4241,40
TFEC – NEEAP BiH, 12% TPES reduction in 2020	4093	4083,99	4074,98
TFEC data from the BHAS energy balances (ktoe)	3075,00	3212,00	3466,00

Table 2: Key energy statistics data

According to the presented results, TPEC and TFEC, for the period 2014 - 2016, move within the allowed limits in relation to the target trajectory defined by the NEEAP. However, since the target trajectory is defined using a reference scenario, based on old statistics, achieving goals cannot be considered to follow the real situation.

The inconsistency in energy statistics is a significant difficulty in planning the implementation of energy efficiency in Bosnia and Herzegovina. On the one hand, the goals and the complete plan of their realization are defined on the previous statistics, while monitoring the implementation is done according to the data from the updated statistics. This leads to inconsistency and it is impossible to monitor the efficiency of the system for increasing energy efficiency itself.

It is necessary to find a solution to the newly emerging situation. These energy balances have to be revised one more time. In this regard, MoFTER together with BHAS is in process of forming the Energy statistics Working group aiming to improve and upgrade the quality of data.

C. National energy efficiency targets

By the end of 2020, Primary Energy Consumption (PEC) will be reduced by 12% compared to forecasted consumption without energy efficiency measures. In absolute terms, in comparison to the forecasted TPEC of 8,031.98 ktoe without any energy efficiency measures, this amounts to 7,068.14 ktoe with implementation of planned energy efficiency measures or a reduction of consumption by 963.84 ktoe.

The reduction of Primary Energy Consumption 2020 target, in amount of 963.84 ktoe, includes the following:

- **Primary energy savings achieved through energy efficiency measures in final energy consumption sectors** - The stated final energy savings of 11%, compared to the baseline year value (2005-2010 average) of 15.24 PJ, will result in primary energy savings in 2020 in the amount of 637.01 ktoe,
- **Primary energy savings achieved through energy efficiency measures in energy generation, transmission and distribution** - it was estimated that, by 2020, implementation of planned measures could result in a maximum of 330 ktoe of primary energy savings against the

forecasted consumption without measures, which represents approx. 4% of the forecasted primary consumption in 2020.

The following table below shows the forecasted values of primary and final energy consumption in 2020 for Bosnia and Herzegovina, Federation BiH, Republika Srpska and Brčko District BiH, for the scenario without energy efficiency measures and for the scenario with 12% savings compared to total primary energy consumption without energy efficiency measures.

Primary and final energy consumption	BiH	FBiH	RS	BD BiH
Total final energy consumption - without EE measures; (TFEC(ktoe))	4589.70	2971.83	1532.96	84.91
Scenario without energy efficiency measures				
Total primary energy consumption - without EE measures; (TPES (ktoe))	8031.98	5200.70	2682.68	148.59
Scenario with 12% savings in primary energy consumption				
Savings in primary energy consumption (12% TPES (ktoe))	963.84	624.08	321.92	17.83
Total primary energy consumption - with EE measures; (TPES-12% (ktoe))	7068.14	4576.62	2360.76	130.76

Table 3: Overall 2020 targets by BiH and its entities

TARGETS	2016	2017	2018	2019	2020
EED ARTICLE 3 [ktoe or other unit]			297 (TFEC)		963.84 (TPEC)
EED ARTICLE 5 [ktoe or other unit]	Article 5 targets not adopted				
EED ARTICLE 7 [ktoe or other unit]		15.99	30.94	52.58	77.33
PEC [ktoe]	7131	7115	7099	7083	7068
FEC [ktoe]	4075	4066	4056	4048	4038
FEC - BUILDINGS [ktoe]	1842	1838	1833	1830	1825
FEC - INDUSTRY [ktoe]	640	639	637	636	634
FEC - TRANSPORT [ktoe]	1161	1158	1155	1153	1150
FEC – OTHERS [ktoe]	432	431	430	430	428
PRIMARY ENERGY INTENSITY [ktoe/mil.EUR]					
FINAL ENERGY INTENSITY [ktoe/mil.EUR]					

Table 4: Division of targets per sectors and per different articles of EED

The table above summarizes the target TPEC and TFEC trajectories by 2020, according to NEEAP. Sectoral TFEC trajectories for buildings, industry, transport and others were not originally given in NEEAP, and were determined for the purposes of this report based on their participation in the total TFEC according to the official statistics for 2016.

D. Update of measures implemented in last year

Updates on major legislative and non-legislative measures implemented in the previous year which contribute towards the overall national energy efficiency targets for 2020

The assessment of the progress of achieving savings in final energy consumption in Bosnia and Herzegovina, according to NEEAP targets, is carried out every three years. Therefore, the latest data are published for 2015, and the next assessment will be carried out next year and will cover the period 2016-2018. For this reason, this report does not include estimates of final energy savings in the residential sector, the public sector and services, and the industry.

On the other hand, the report provides an overview of energy efficiency activities carried out in 2018, with special emphasis on legislative measures, as well as other measures that contribute to the realization of the set goals.

A progress overview of the individual horizontal and cross-sectoral measures implemented in 2018 and is given as follows:

- **Legislative measures**

H.1 Development and application of the legislative and regulatory framework for energy efficiency in final energy consumption

The objective of this measure is further development of the legislative and regulatory framework in order to create important preconditions necessary to meet the set energy savings targets. The measure includes the following activities:

1. Finalisation of transposition of Directive 2012/27/EU on energy efficiency, Directive 2010/31/EU on energy performance of buildings and Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy, into the legislation of BiH, RS, FBiH, cantons and Brčko District BiH;
2. Drafting of regulations to embed energy efficiency considerations in the transport sector;
3. Adoption of laws and by-laws to establish horizontal and vertical coordination mechanisms for implementation of EEAP BiH

The progress with the implementation of the measure H1 in 2018 is given as follows:

- **The Law on Energy Efficiency of the Federation of Bosnia and Herzegovina** (Official Gazette of FBiH no. 22/17) in the Federation of Bosnia and Herzegovina and the **Law on Energy Efficiency** (Official Gazette of RS, no.

59/13) and the **Law on Spatial Planning and Construction** (Official Gazette of RS, no. 40/13, 106/15) in Republika Srpska are the main governing laws in this regard in Bosnia and Herzegovina. *In 2018 there were no amendments to these laws.*

In preparation:

- At the level of the **state of Bosnia and Herzegovina** there were activities on the establishment of the regulatory framework for energy management in the buildings of BiH institutions, as follows:
 - Decision on the establishment of energy management system and information system of energy efficiency in institutions at the state level and conformity of data and ordinary reporting: *drafted, to be sent to into procedure at the Ministry of foreign trade and economic relations of BiH and further to the Council of ministers for adoption,*
- In the **Federation of Bosnia and Herzegovina**, in 2018, a series of activities are being carried out to supplement the regulatory framework in the field of energy efficiency, as follows:
 - Regulation on the implementation of energy audits and issuance of energy certificates for buildings: *final draft, currently pending for the adoption at the Government of FBiH,*
 - Regulation on conditions for granting and seizing authorizations for carrying out energy audits and energy certification of buildings: *final draft, currently pending for the adoption at the Government of FBiH,*
 - Rulebook on minimum requirements for energy performance of buildings: *final draft, currently pending for the adoption at the Federation Ministry of Physical Planning,*
 - Rulebook on energy efficiency information system: *final draft, currently pending for the adoption at the Federation Ministry of Energy, Mining and Industry,*
 - Rulebook on energy audits in large enterprises and industry: *work in progress, expected final draft by the end of 2018 – to be adopted by the Federation Ministry of Energy, Mining and Industry,*
 - Rulebooks on regular inspections of heating and air conditioning systems: *final draft, to be sent for adoption at the Federation Ministry of Energy, Mining and Industry,*
 - Methodology for allocating indicative energy saving targets: *final draft, to be sent for adoption at the Federation Ministry of Energy, Mining and Industry,*
 - Methodology for the calculation of minimum requirements for energy performance of buildings based on cost-optimal criteria: *final draft, to be sent for adoption at the Federation Ministry of Physical Planning,*
 - Methodology for the implementation of analysis of the use of alternative energy systems when issuing building permits for

buildings: *final draft, to be sent for adoption at the Federation Ministry of Physical Planning,*

- Amendments to the **Law on Spatial Planning and Land Use in the Federation BiH** (Official Gazette of the Federation BiH, no. 02/06, 72/07, 42/08, 04/10, 13/10, 54/10) introducing energy efficiency criteria in construction of new and reconstruction of existing buildings under jurisdiction of FBiH: *work in progress, expected final draft by the end of 2018 – to be adopted by the Federation Ministry of Physical Planning,*
- Amendments to 10 cantonal laws on construction, introducing energy efficiency criteria in construction of new and reconstruction of existing buildings under jurisdiction of cantons and municipalities: *work in progress, expected final draft by the end of 2018 – to be adopted by 10 respected cantonal ministries,*
- Guidelines for establishment of public sector energy management in FBiH: *work in progress*
- In **Republika Srpska**, the following regulatory papers are being in progress in 2018:
 - Amendments to the **Law on Energy Efficiency** (Official Gazette of RS, no. 59/13) introducing energy management in commercial sector, services and industry: *drafted, to be sent to into procedure at the Ministry of Industry, Energy and Mining of Republika Srpska,*
 - Rulebook on energy management system: *work in progress, to be sent for adoption at the Ministry of Industry, Energy and Mining of Republika Srpska,*
 - Rulebook on implementation of training for energy management system: *work in progress, to be sent for adoption at the Ministry of Industry, Energy and Mining of Republika Srpska,*
 - Rulebook on energy efficiency information system: *work in progress, to be sent for adoption at the Ministry of Industry, Energy and Mining of Republika Srpska,*
- In **Brcko District**, there hasn't any progress with the legal and regulatory framework for energy efficiency made in 2018. There is still lack of energy efficiency legislation.

H.2 Drafting and adoption of strategic and planning documents on energy efficiency

The measure includes the following activities:

1. Adoption of: EEAP BiH inclusive of BD, RS and FBiH; Operating plans for EE improvements in the institutions of BiH, RS, BD, and FBiH and its cantons; Municipal EEAPs, cantonal EEAPs and energy efficiency plans and programmes for LSGUs and major energy consumers;

2. Drafting and adoption of the following strategic and planning documents: a. Building Renovation Strategy for BiH, FBiH, RS and BD BiH; b. Strategy for EE information, professional development and education in BiH, RS, FBiH and BD BiH; c. Assessment of potentials for EE improvements in the transport sector

The progress with the implementation of the measure H1 in 2018 is given as follows:

- The **BiH's framework energy strategy** is consisted of the Framework energy strategy of the FBiH, up to 2035, and the updated Energy Strategy of Republika Srpska. *It was adopted by the Council of Ministers of BiH on 29th August 2018.* The strategy introduces energy efficiency as one of the main pillars of the energy sector in BiH.
- The House of Representatives of the Parliamentary Assembly of BiH issued **Recommendations for energy sector reform** in July 2018. These recommendations as one of the priorities define the commitment to energy efficiency as a key element of the energy transition and the role of regulatory bodies in the implementation of this policy needs to be defined.
- The **National energy efficiency action plan 2010-2018 (NEEAP)** is also consisted of the entity action plans and parts related to the level of BiH institutions and District Brčko. *It was adopted by the Council of Ministers of BiH in December 2017.*

In preparation:

- At the level of the **state of Bosnia and Herzegovina** there were activities to complement the strategic and planning frameworks of energy efficiency, as follows:
 - Building renovation strategy of BiH: *work in progress, expected final draft by the end of 2018.*
- In the **Federation of Bosnia and Herzegovina**, in 2018, a series of processes have been launched in order to complement the strategic and planning frameworks of energy efficiency, as follows:
 - Building renovation strategy of FBiH: *work in progress, expected final draft by the end of 2018.*
 - 8(10) cantonal Energy Efficiency action plans: *final draft approved by the Federation Ministry of Energy, Mining and Industry. To be sent further to respective cantonal adoption procedures.*
 - 27(79) Municipal Energy Efficiency improvement programs: *Work in progress, to be sent to cantonal authorities for no objection and further to respective municipal authorities for adoption*
- In **Republika Srpska**, in 2018, a series of processes have been launched in order to complement the strategic and planning frameworks of energy efficiency, as follows:

- Building renovation strategy of RS: *work in progress, expected final draft by the end of 2018.*
- 29(63) Municipal Energy Efficiency action plans: *Work in progress, to be sent to cantonal authorities for no objection and further to respective municipal authorities for adoption*
- In **Brcko District**, there hasn't any progress with the drafting and adoption of strategic and planning documents on energy efficiency made in 2018. The only strategic document in this regard is the Sustainable Energy Action Plan (SEAP) of Brcko District from 2015.

- **Non-legislative measures**

H.3 Establishment, application and development of the energy efficiency information system in all final energy consumption sectors

The objective of this measure is to ensure adequate and reliable data required for efficient energy management, development of strategic and planning documents, and monitoring of their implementation. The main activities are:

1. Establishment and operation of the common information system for energy management, a database of relevant data from all final energy consumption sectors;
2. Harmonisation of statistical chapters, areas and modules and the methodology for collection and processing of statistical EE data with EUROSTAT and Energy Community requirements;
3. Improvement of the format of action plans in the segment of reporting of actual energy savings, in order to harmonise them with the indicative targets defined in EEAP BiH;
4. Ensuring the use of the MVP platform by all institutions responsible for reporting of actual energy efficiency improvement results;
5. Establishment of an efficient system in all public institutions and companies for EE communication and coordination with the relevant horizontal and vertical levels of government.

Intensive activities have recently been carried out on the establishment of an **Integrated Information System for Energy Efficiency (EEIS)** in Bosnia and Herzegovina, made up of entity information systems. Based on the entity energy efficiency laws, the content, structure and responsibilities for data provision and processing in the EEIS will be defined in the rulebooks on the Information system.

The EEIS is made of the following modules:

- a) Inventory of buildings
- b) Energy efficiency action plans
- c) Energy savings

- d) Energy consumption
- e) Energy certificates of buildings
- f) Technical systems in buildings

Currently, achievements made in the process of establishing the EEIS in 2018, are as follows:

- At the level of the **state of Bosnia and Herzegovina** the following modules are being in the process of establishment:
 - Inventory of buildings – EMIS: *Work in progress, related procedures will be a part of the Energy Management System of BiH institutions.*
 - Energy savings - MVP of state institutions: *Work in progress, related procedures will be a part of the Energy Management System of BiH institutions.*
 - Energy consumption – EMIS of state institutions: *Work in progress, related procedures will be a part of the Energy Management System of BiH institutions.*
- In the **Federation of Bosnia and Herzegovina**, in 2018, the following developments have been made:
 - Inventory of buildings: *Work in progress (planning), the establishment is expected by the end of 2019.*
 - Energy efficiency action plans: *Work in progress (testing), the establishment is expected by the end of 2019.*
 - Energy savings: *Work in progress (testing), related procedures will be a part of the Energy Management System of FBiH. The establishment is expected in 2019.*
 - Energy consumption: *Work in progress (operational), related procedures will be a part of the Energy Management System of FBiH.*
 - Energy certificates of buildings: *Work in progress (programming), the establishment is expected in 2019.*
 - Technical systems in buildings: *Work in progress (testing), the establishment is expected in 2019. Procedures will be defined by appropriate regulations.*
- In **Republika Srpska**, in 2018, the following developments have been made:
 - Inventory of buildings: *Work in progress (planning), the establishment is expected by the end of 2019.*
 - Energy efficiency action plans: *No progress.*
 - Energy savings: *Work in progress (testing), related procedures will be a part of the Energy Management System of RS. The establishment is expected in 2019.*
 - Energy consumption: *Work in progress (operational), related procedures will be a part of the Energy Management System of RS.*
 - Energy certificates of buildings: *Fully operational.*
 - Technical systems in buildings: *No progress.*
- In **Brcko District**, there haven't been any efforts to establish an EEIS made so far.

H.4 Public energy efficiency information and motivation campaigns

The objective of this measure is to raise the awareness and provide basic information about the importance of EE to target groups in all final energy consumption sectors, to motivate them to implement EE measures and achieve savings. The measure includes campaigns with different topics related to all final consumption sectors. Potential tools for communication with target groups are: (a) Radio, television, web portals, printed media; (b) Websites of institutions responsible for implementation of individual EEAP measures, and/or dedicated EE websites/FB pages; (c) Workshops, conferences and similar events for target group representatives from various sectors; (d) Public events as part of Energy Days, usually organised by LSGUs in the course of implementation of EEAP/SEAP; etc.

EE information is regularly published on the websites of:

- Ministry of industry, energy and mining of Republika Srpska,
- Ministry of spatial planning, civil engineering and ecology of Republika Srpska,
- Federation Ministry of Spatial Planning,
- Environmental protection and energy efficiency fund of Republika Srpska,
- Environmental protection fund of Federation of BiH
- Association of Local Authorities of RS;

The efficiency segments within the websites of Environmental protection and energy efficiency fund of Republika Srpska (<http://ekofondrs.org/energetskaefikasnost.html>) and the Environmental protection fund of Federation of BiH (<http://www.fzofbih.org.ba>) are to inform LSGUs, public institution, general public and other target groups of the news in this area (legislation, events), organisational and technical solutions for energy management (EE library). etc.

Moreover, the energy efficiency web portal (<http://energetskaefikasnost.org/>), as part of the “Bosnia Energy Efficiency Project” (BEEP), is implemented through the Ministry of spatial planning, civil engineering and ecology of Republika Srpska and the Federation Ministry of Spatial Planning. A part of this project is a promotional campaign “Raising Awareness about Energy Efficiency”. In addition to project-related reporting, this portal informs the public about other EE activities such as conferences, campaigns, training, educational materials (glossary of EE terms, brochures about specific aspects of EE,) as well as EE-related news and interesting facts from other countries and the EU.

H.5 Introduction and implementation of the system for energy efficiency education, training and professional development

The objective of this measure is to gain new and increase existing professional knowledge, skills and competences of the implementers of sectoral measures, required for adequate and timely completion of assigned tasks in order to achieve sectoral final energy savings targets set in this EEAP BiH. This measure makes a

qualitative leap away from information and motivation campaigns which provide only introductory information on individual areas and topics related to energy efficiency.

In the preceding period a number of important conferences and similar events were held on topics of energy efficiency in various final energy consumption sectors. The most important are the following:

- **Fourth Energy Summit 2018** - The Fourth Energy Summit in Bosnia and Herzegovina (BiH) organized the USAID Energy Sector Investments Project (USAID EIA) in BiH and the German International Cooperation (GIZ) through the projects "Promotion of Renewable Energy in BiH" and "Promotion of Energy Efficiency in BiH ", in Neum from 25 to 27 April 2018. Fourth Energy Summit in BiH presented recommendations for energy sector reform that could be the cornerstone of economic development in BiH. Below, see key messages and voting results.
- **RENEXPO BiH 2017** – November 8-9 2017; 4th International trade fair and conferences on renewables, energy efficiency, environment protection and water treatment in Bosnia and Herzegovina. Within the fair, a two-day energy efficiency conference was held, organized by the German International Cooperation (GIZ).
- **ENERGA 2018** - The ENERGA International Fair was held under the slogan "Think about the Future" and its program and organizational concept expresses its dedication to a modern, viable and efficient future in the field of energy, mining, environmental protection and the supporting industry. Numerous exhibitors, domestic and foreign companies in the field of electricity, gas and oil, coal, solar energy, wind energy, biomass and energy efficiency, and more than 150 participants, have been presented in the fair and conference activities over 1000 square meters conferences, which during the three fair days through sessions and panels treated 20 current topics in the field of energy, with special emphasis on strategic energy priorities and investment potentials of BiH.
- **Conference "Energy management in buildings"** – December 6-7, 2017. The conference is organized by the Ministry of Physical Planning, Civil Engineering and Ecology of the Republika Srpska and the Fund for Environmental Protection and Energy Efficiency of Republika Srpska, supported by the German International Cooperation (GIZ).
- **Conference "Improving energy efficiency in local communities"** – May 29-30., 2017. The conference is organized by the Ministry of Physical Planning, Civil Engineering and Ecology of the Republika Srpska and the Fund for Environmental Protection and Energy Efficiency of Republika Srpska, supported by the German International Cooperation (GIZ).
- International scientific-professional **Conference "SFERA 2018"** - Mostar. 28-29.03.2018; The conference reviews scientific, technological achievements and professional orientations in the context of production, application and design of air conditioning, ventilation, heating and cooling systems. The aim of a discussion that combines the past, current achievements and future vision of

these elements is the exchange of knowledge and experience in various fields of engineering as well as the opening of the possibility of establishing international and domestic cooperation.

H.6 Inclusion of energy efficiency topics into the general education system

The objective of this measure is to increase the level of knowledge of new generations about the necessity of rational energy management for environmental protection, energy security and sustainable growth, and the use of EE as an efficient mechanism for attainment of these goals. The main activities are:

1. Development of priority EE topics defined in the strategies for energy efficiency communication, professional development and education for all education levels, and their inclusion in the curricula;
2. Training of teachers at all levels of education for adequate teaching about EE;
3. Equipping schools with appropriate literature about EE-related topics and other teaching aids;

No progress has been reported in this regard in 2018.

H.7 Establishment of a system for training and certification of licensed professionals for energy auditing of buildings, public utilities, industrial plants and technological processes, and for issuing energy certificates

The objective of this measure is to create key conditions for adequate collection of information needed for efficient energy management and EE improvements, as follows: (a) Current energy consumption (in buildings, utility systems, industrial plants and technological processes); (b) EE measures; and (c) Viability of investments (cost-benefit analysis and ranking of measures by financial viability). The main activities are:

1. Establishment and implementation of the training, qualification and certification system for licenced energy auditors;
2. Determination of the energy audit methodology, required content of energy audit reports, and the procedure for energy audits of buildings, utility services systems, industrial plants and technological processes;
3. Implementation of independent controls of issued energy certificates in order to ensure the required quality of the overall process and the results of energy audits and certificates.

Please note: Energy audits, energy audit reports and energy certification of buildings, utility services systems and industrial processes form an integral part of measure H.9

In Bosnia and Herzegovina, systems for **training and certification of licensed professionals for energy auditing of buildings** and for issuing energy certificates have been established:

- In the **Federation of BiH:**
 - The program for **training and certification of licensed professionals for energy auditing of buildings** and for issuing energy certificates is established
 - 550 energy auditors of buildings with background in mechanical, electrical and civil engineering and architecture were trained and licensed to date,
 - The program for **training and certification of licensed professionals for regular inspections of HVAC** will be established by adopting the Rulebooks on regular inspections of heating and air conditioning systems. *Under development.*
 - The program for **training and certification of licensed energy managers of public buildings** will be established by adopting the Rulebook on energy efficiency information system. *Under development.*
 - The program for **training and certification of licensed energy managers in industry** will be established by adopting the Rulebook on energy audits in large enterprises and industry. *Under development.*
- In **Republika Srpska,**
 - The program for **training and certification of licensed professionals for energy auditing of buildings** and for issuing energy certificates is established.
 - 70 energy auditors of buildings with background in mechanical, electrical and civil engineering and architecture were trained and licensed to date,
 - The program for **training and certification of licensed energy managers of public buildings and industry** will be established by adopting the Rulebook on energy management system and the Rulebook on implementation of training for energy management system. *Under development.*
- In **Brcko District,** there haven't been any efforts on establishment of of a system for training and certification of licensed professionals for energy auditing of buildings, public utilities, industrial plants and technological processes, and for issuing energy certificates an EEIS made so far.

H.8 Metering and informative billing of energy consumption to end consumers

The objective of this measure is to motivate electricity, heat and natural gas consumers to use energy rationally and to undertake appropriate EE measures. The measure includes the following main activities:

1. Development of sustainable tariff models for billing of heating according to actual consumption, in the form of recommendations for consideration/adoption by heating suppliers;

2. Installation of individual meters to measure actual consumption of electricity, natural gas, district heating and hot water by end-users, in accordance with EU directives;
3. Provision of information to consumers (e.g. on the energy bill), as required by EU directives

No progress on implementation of metering and informative billing of heat consumption to end consumers has been made up to date.

H.9 Introduction and implementation of energy management, inclusive of energy audits

The objective of this measure is to establish a systemic process for continuous reduction of energy consumption. The measure applies to: (1) Service and industry sector buildings; (2) Utility services (public lighting, water supply and waste water treatment, district heating systems); (3) Industrial processes and plants. Each of the above segments/actors subject to measures includes the following activities:

1. Adoption of a decision on introduction of energy management; Appointment of the responsible person/team;
2. Creation of an internal organisational structure for EE in public institutions and companies, and in companies operating in the commercial services and/or industry sector
3. Securing the financing required for introduction of energy management;
4. Collection of data on past energy consumption and identification of areas (buildings, systems, processes, equipment, etc.) which substantial consumption of energy;
5. Development and operation of the database (structurally harmonised with the Energy Management Information System in measure H.3 (activity 1));
6. Development of an energy management/energy efficiency plan;
7. Energy auditing and energy certification of buildings, utility service systems, industrial plants and technological processes;
8. Implementation of planned measures, monitoring results, reporting;
9. Regular measurement, recording and analysis of energy consumption, with corresponding revision of the EEAP

Currently, a number of by-laws are being prepared at all levels in Bosnia and Herzegovina, which will define the functioning of the energy management system in the public sector, services and industry. The focus is on the establishment of energy management in the units of local self-government, and its establishment at higher administrative levels is foreseen. The energy management in the public-sector buildings is being introduced through different programs, as follows:

- At the level of the **state of Bosnia and Herzegovina** the energy management system is in the process of establishment:
 - After the adoption of Decision on the establishment of an energy management system and information system of energy efficiency in institutions at the state level, the establishment of an energy

management system at the level of BiH institutions will be initiated. The launch of activities is expected by the end of 2018.

- Currently, a pilot project is being prepared to enhance the current system of energy parameter readings in the buildings of BiH institutions and introduce real-time energy management procedures. It is to be expected that the project will be implemented in 2019.
- In the **Federation of BiH**:
 - Energy Management has so far been introduced into 3 municipalities (Zenica, Bihać, Livno),
 - The obligations of public bodies arising from the Energy Efficiency information system regulations will result in the establishment of organizational energy management structures at all levels in the FBiH. In 2019, a wider establishment of energy management is expected.
- In **Republika Srpska**,
 - By 2018, the Energy Management System had been introduced into 5 municipalities (Gradiška Bijeljina, Prijedor, Laktaši, Zvornik).
 - In some municipalities, by 2018 the EMS had been introduced only partially by operationalisation of an energy management software (Banja Luka, Novi Grad, Modrića, Teslić, Dubica)
 - In 2018, the Energy Management System has been introduced into 12 municipalities Mrkonjić Grad, Ribnik, Istočni Drvar, Drinić, Sokolac, Vlasenica, Han Pijesak, Istočni Stari Grad, Pale, Istočna Ilidža, Trnovo, Istočno Novo Sarajevo)
 - The obligations of public bodies arising from the energy management system system regulations will result in the establishment of organizational energy management structures at all levels in RS. In 2019, a wider establishment of energy management is expected.
- In **Brcko District**, there haven't been any efforts on establishment of the energy management system of public buildings and industry made so far.

H.10 Strengthening of capacities in institutions responsible for energy efficiency

The objective of this measure is to establish and develop efficient financing, implementation and monitoring mechanisms for EE measures in final energy consumption. The measure includes institutional strengthening of the ministries, funds/agencies, their employees and tangible/technical resources, further development of mechanisms for securing the funding required for performance of activities within their legally prescribed scope of competence in the area of EE.

In fulfilling its mandate and tasks, the coordination activities of the MoFTER shall rely upon close work with the working groups (WG). Two types of the WGs are envisaged as (i) Working group 'On Energy Efficiency in Bosnia and Herzegovina' (WG-EEBiH),

and (ii) several technical working groups (TWG). The status of the coordination activities between institutions responsible for energy efficiency, in 2018 is as follows:

- Similar to EECG under the ECS, the MoFTER shall establish a permanent working group 'On Energy Efficiency in Bosnia and Herzegovina' (WG-EEBiH). The WG-EEBiH is an umbrella platform for exchanging practices in the field of energy efficiency, with specific monitoring tasks and reporting on the progress of fulfilment of obligations towards the EnC. *Under establishment.*
- Apart from the WG-EEBiH, on initiative of the MoFTER and based on position of the WG-EEBiH, various technical working groups (TWG) shall be established on an ad-hoc basis, the duration of which will start and last till the moment the issue is satisfactorily completed. Such working groups should regularly (preferably on a quarterly basis) report on progress to the WG-EEBiH. As follows:
 - TWG 'On buildings of state institutions of BiH' *Under establishment.*
 - TWG 'On energy efficiency obligation schemes': *Working.*
 - TWG 'On building renovation strategy (residential and commercial buildings)' *Under establishment.*
 - TWG 'On high-efficiency cogeneration and efficient district heating and cooling': *Not existing.*
 - TWG 'On energy efficiency in transmission and distribution of energy (gas and electricity)': *Under establishment.*
 - TWG 'On energy efficiency in public procurement': *Not existing.*
 - TWG 'On promotion of energy efficiency in industry and SMEs': *Not existing.*

H.11 Strengthening of existing institutional capacities for systemic energy management

The objective of this measure is to enable existing institutions at all levels of government to properly perform their tasks in the capacity of: (a) energy consumers, service providers and EE leaders; (b) planners and implementers of sustainable development, and regulators; (c) energy producers and energy suppliers. The measure includes the following activities:

1. Raising the awareness of all levels of government of the effects of energy management at the local, cantonal and federal level, and of the importance of the EEAP (implemented as part of activities in H.4);
2. Training of employees in existing institutions at all levels of government about:
 - (a) Key steps in introduction and implementation of energy management in cities, municipalities, cantons and federal institutions;
 - (b) Creation of federal, cantonal and municipal EEAPs in accordance with the law and best practice;
 - (c) Implementation of planned measures;
 - (d) Regular measurement, periodic evaluation of energy consumption, reporting and review of EEAPs at all levels;

Currently activities are underway to establish the regulatory framework of the energy management system in the public sector in Bosnia and Herzegovina at all levels of government. EMS will be defined by the following regulation:

- At the state BiH level: Decision on the establishment of energy management system and information system of energy efficiency in institutions at the state level and conformity of data and ordinary reporting.
- In FBiH: Rulebook on energy efficiency information system *and* Rulebook on energy audits in large enterprises and industry.
- In RS: Rulebook on energy management system, Rulebook on implementation of training for energy management system and Rulebook on energy efficiency information system.
- In Brčko District: No related regulation.

It is envisaged that during 2019 a series of trainings will be held to strengthen the capacity of the energy manager of the coordinator on the principles of energy consumption management.

H.12 Use of energy efficiency criteria in the public procurement system

The objective of this measure is to reduce total energy consumption by means of procurement of energy efficient goods, services and works financed from public budgets. The measure includes the following activities:

1. Creation and publishing of clear instructions and illustrative examples of documents forming a part of tender documentation (selection criteria, technical specifications, etc.) related to introduction of EE criteria;
2. Introduction and implementation of the control system to ensure that the prescribed use of energy efficiency criteria in public procurement is duly respected.

In this regard, there has no been any developments made in 2018.

H.13 Introduction and application of a financial framework for improvement of energy efficiency in final energy consumption

The objective of this measure is to create financial, fiscal, executive and institutional mechanisms necessary for adequate implementation of EE measures and attainment of planned energy savings targets.

Financing sources

- **FS1: Energy taxes**
 - **FS1.1:** Introduction of fees for electricity consumption in households, combined with support to socially vulnerable population categories;
No progress.

- **FS1.2:** Introduction of fees for electricity consumption in SMEs and industry, provided that this will not impact their export competitiveness;
No progress.
- **FS1.3:** Introduction of fees for electricity generation from oil derivatives (particularly 'dirty' fuels such as heavy fuel oil and bunker fuels) and coal;
No progress.
- **FS1.4:** Introduction of fees for consumption of heat from district heating systems, subject to the type of energy product used for heat generation;
No progress.
- **FS1.5:** Introduction of energy fees in real estate property transactions, depending on the energy class of the property.
No progress.
- **FS2: CO₂ taxes**
 - **FS2.1:** Introduction of CO₂ tax for large industrial energy consumers, according to prescribed CO₂ emissions criteria. Voluntary agreements may be reached with industrial companies to reduce this tax burden through investments in energy efficiency measures;
No progress.
 - **FS2.2:** Introduction of CO₂ tax for registration of motor vehicles according to CO₂ emission levels.
No progress.
- **FS3: Air protection fees**
Federation BiH and Republic of Srpska currently collect air pollution fees from polluters (for air emissions of SO₂, NO₂ and solid particles). These fees are collected by entity Environmental Funds and then channelled to environmental and energy efficiency projects
- **FS4: Environmental fees**
Both Federation BiH and Republic of Srpska currently collect a special environmental fee with each registration of motor vehicles. These fees are collected by entity Environmental/Energy Efficiency Funds and channelled to appropriate projects. According to the Law on the Environmental Protection Fund of FBiH, the funds are automatically distributed as follows: 70% to the cantonal account and 30% to the Fund. The Fund's available funds are then channelled to environmental and energy efficiency projects.
- **FS5: Public budgets**
 - **FS5.1:** Introduction of multi-year budgeting, in order to allow implementation of multi-year energy performance contracts;
No progress.
 - **FS5.2:** Introduction of the budget capturing mechanism, which captures actual energy savings at book value and provides a clear method for financing measures from savings.
No progress.

- **FS6: International financial institutions' funds (IFI)**
 Bosnia and Herzegovina currently has access to funding from international financial institutions for energy efficiency measures. This primarily refers to WB, EBRD and KfW funding.
- **FS7: UN funds and bilateral cooperation**
 Various agencies operate in Bosnia and Herzegovina and implement funding provided by developed countries for third country development. In the domain of energy efficiency, the most active are the United Nations Development Program (UNDP), agencies aiding based on bilateral agreements such as GIZ (German technical assistance), USAID (US cooperation), DEZA (Swiss cooperation), etc. This funding is mainly used for technical assistance in the domain of energy efficiency and for grants for energy efficiency pilot projects.
- **FS8: EU funds**
 Participation of Western Balkan countries in EU programmes is regulated by framework agreements on the general principles of a state's participation in EU programmes. By coming into force of the Framework Agreement on the general principles for the participation of Bosnia and Herzegovina in Community programmes in January 2007, Bosnia and Herzegovina gained access to individual programmes.
- **FS9: Private financing**
 Private financing is currently the predominant form of financing of energy efficiency measures in Bosnia and Herzegovina, especially in the residential sector and SMEs. Combining this financing method with other financing sources should improve the feasibility of investments in energy efficiency measures and contribute to increased economic viability of projects

Financing methods

- **FN1: Preferential loans from domestic sources**
 This financing option includes loans with terms more favourable than those prevailing in the market (low interest rates, favourable grace period and repayment period), with institutions at all levels in BiH as the source of financing.
 - *In FBiH, the prominent role is played by the Revolving Fund operated by the Environmental Fund of the Federation of BiH. Loans are placed via public calls and are available to natural and legal persons.*
 - *In RS, there are no examples of functional preferential credit lines.*
- **FN2: Subsidies and non-refundable financing**
Federation of BiH
 - *Budget spending programme with allocation criteria "Current transfers to other levels of government and Funds - for the project of thermal insulation of buildings aimed at energy savings" defined in the Budget of the Federation of Bosnia and Herzegovina and financed by the Federal Ministry of Physical Planning.*

- *Cantonal programs for non-refundable financing of EE measures (i.e. Canton Sarajevo)*
- *Environmental Protection Fund of the Federation BiH funding program*
- *Green Economic Development 2014-2018 (GED) programme*

Republika Srpska

- *The Environmental Protection and Energy Efficiency Fund funding program*
 - *Green Economic Development 2014-2018 (GED) programme*
- **FN3:** Foreign (preferential) credit lines
 - *GEFF in the Western Balkans is a credit line facility of up to €85 million to the Western Balkan participating financial institutions to on-lend to residential sector for energy efficiency and renewable energy projects. GEFF provides loans through local Participating Financial Institutions: UNICREDIT BANK, UUNIKREDIT BANK BANJA LUKA, SPARKASSE, PARTNER*
 - *WeBSEFF is a credit line facility of up to €135 million to participating financial institutions in the Western Balkans to on-lend to businesses and municipalities investing in energy efficiency and renewable energy projects. Raiffeisen Bank and UniCredit Bank Mostar are the partners in this project. Loans are available to both public and private sector.*
 - *KfW credit line: Raiffeisen Bank is the project partner and operates a 1,000,000 EUR credit line for energy efficiency projects. Loans are approved for a maximum period of 7 years, including a grace period of up to 3 years. The additional advantage for clients (investors) is that the cost of preparation of project documentation is included in the cost of the loan.*
 - *The Bosnia Energy Efficiency Project (BEEP) is the largest energy efficiency project in Bosnia and Herzegovina, with total planned investments over the next three years of 19 million USD in the Federation BiH and 13 million USD in the Republic of Srpska.*
 - **FN4:** Public budgets / Regular budget lines / Multi-year budgets

Public budgets are adopted according to the relevant laws at every level of government, for a period of one fiscal year. A portion of public budget funding is already being invested in different direct and indirect energy efficiency programmes and measures at all levels of government in Bosnia and Herzegovina. Increased investments from public budgets are necessary to ensure implementation of programmes.

 - *No progress with introduction of a multi-year budget planning*
 - *No progress with introducing budget capturing.*
 - **FN5:** Energy efficiency obligation schemes (EEO) for energy suppliers/distributors

- **FN5.1:** Introduction of the energy efficiency obligation scheme and/or alternative energy efficiency measures for electricity suppliers/distributors;

See chapter F.

- **FN5.2:** Introduction of the energy efficiency obligation scheme and/or alternative energy efficiency measures for heat suppliers/distributors;

No progress.

- **FN6:** Income tax incentives (investment-based tax deductions)

Bosnia and Herzegovina currently do not have investment-based tax deductions or incentives for investments in energy efficiency measures applicable to all four sectors covered by this EEAP. Introduction of tax incentives stimulates the use of materials and technologies which increase energy efficiency, motivates companies to contribute to the objectives of this EEAP BiH through energy savings, and provides a foundation for introduction of energy efficiency criteria into the public procurement system in Bosnia and Herzegovina.

- *No progress with introduction of o Investment-based reduction of the tax base or investment-based deduction;*
- *No progress with introduction of o Investment-based tax deduction or investment-based tax credit.*

- **FN7:** ESCO market and PPP

Bosnia and Herzegovina presently do not have the conditions in place for the creation of an ESCO market (Energy Service Company) and energy performance contracting.

- **FN8:** Technical assistance in project identification and preparation of loans and/or public procurements

There are currently several technical assistance programmes in Bosnia and Herzegovina:

- GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), in the following programmes:
 - Open Regional Fund for South-East Europe – Energy Efficiency (ORF-EE),
 - Promotion of Energy Efficiency in Bosnia and Herzegovina, with the goal to strengthen the role of local communities as drivers of energy efficiency measures.
- USAID (United States Agency for International Development), within the Energy Investment Activity (EIA) programme.
- UNDP (United Nations Development Program)

E. Central Government buildings (Article 5)

According to the Article 5 Bosnia and Herzegovina must ensure that 1% of the total building floor area of heated and/or cooled buildings owned and occupied by the central government is renovated each year to meet the energy performance requirements referred to in EED Article 5(1). The 1% rate will be calculated based on the total building floor area of the buildings owned and used by the central government, state and entity, whose total useful floor area is over 500 m² and as of 01 January 2019, over 250 m². As part of the “Green Economic Development” project, UNDP conducted “Detailed Energy Audits for 16 Public Buildings Under the Jurisdiction of Central BiH Institutions”, the “Energy Efficiency Study of Public Buildings Under the Jurisdiction of Central BiH Institutions” and the “Action Plan for Increasing Energy Efficiency in Facilities Under the Jurisdiction of Central BiH Institutions” covering approx. 60 Central BiH Institutions (state level institutions). The mentioned Action Plan will serve to identify buildings that will be part of the set target of 1% of the total building area owned and used by the central government next year. Moreover, the detailed energy audits and/or energy efficiency study will be done for certain number of public buildings on entity levels which will be part of the total number of the central government buildings. Furthermore, the conducted typology of public buildings, as well as the Energy Management Information System - EMIS, which contains a database of approximately 5,000 buildings with actual energy consumption data, will serve as a good basis for creation of the inventory of the central government buildings. Process of creation of the inventory of the central government buildings already started by technical assistance of the UNDP. In parallel, for each building in the inventory, UNDP is working on collecting the data of the floor area and data on energy characteristics, relevant energy data that implies energy consumption or data from the energy audits, EE Studies, energy certificates, etc.

Considering that through the mentioned project, and through other activities carried out at the level of BiH and the entities, a certain number of buildings have already passed the process of EE renovation, after completion of the inventory of the central government buildings, a clear picture will be obtained. Administratively, the annual target of 1% of the total area of use for Bosnia and Herzegovina should be subliming targets for the following administrative units: (i) state level central government institutions, (ii) central government institutions in the Federation of Bosnia and Herzegovina, (iii) central government institutions in the Republika Srpska, and (iv) central government institutions in the Brcko District of BiH. Although there is still no official consensus around the number of the central government institutions by relevant ministries (state and entity), since there is still no established official technical working group for Article 5, UNDP is working on data collection. However, to meet the requirements related to the Article 5, and as a first step in the process, to determine the exact number of the central government institutions at different government levels, the consent must be obtained by relevant ministries / technical working group.

F. Energy efficiency obligations (Article 7)

The Energy Efficiency Obligation Scheme Outline and Proposed Approach for Bosnia and Herzegovina⁴ that has been developed by the EEO Working Group in BiH⁵ sets the overall structure for the Energy Efficiency Obligation (EEO) scheme in BiH. Furthermore, the EEO Working Group in BiH developed the Guidelines for the Development of EEO Legislation⁶ proposing the framework of the EEO model that should be defined in primary and secondary legislation of both entities and District Brcko, given the complex structure of the country and its jurisdictions. Figure 2 is a basic illustration of the proposed EEO model structure and roles, as defined in the EEO Scheme Outline document.

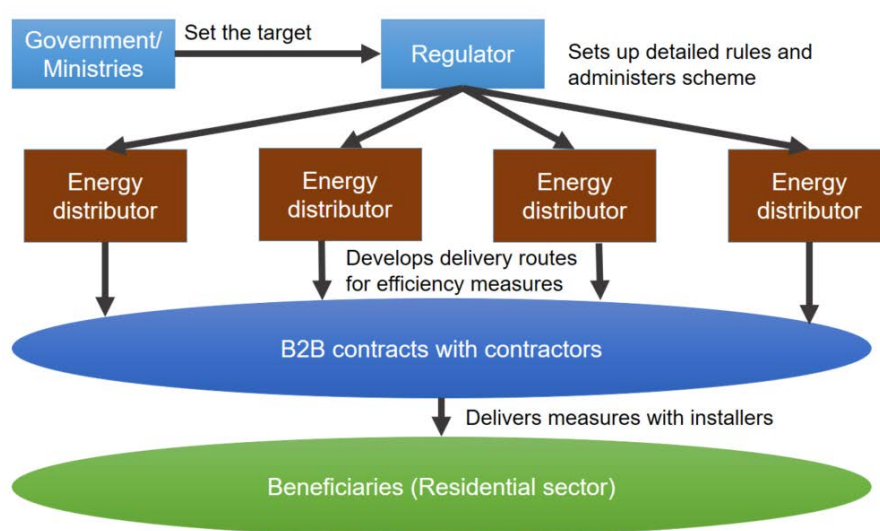


Figure 2: EEO Model Architecture

In order to put an EEO mechanism in place in Bosnia and Herzegovina, there are four steps that must be taken: (1) draft and pass amendments to the Entity Energy Efficiency Laws⁷. (2) formulate the EEO calculation methodologies. (3) issue a decree/regulation on implementation of EEO, and (4) issue detailed implementation regulations and/or guidelines. There are four parties in each Entity that are involved in putting the EEO mechanism in place: the parliaments, ministries, governments and regulators. The process is illustrated in the table below:

⁴ <http://www.usaideia.ba/dpa/document.php?id=96353>

⁵ USAID Energy Investment Activity established a Working Group to develop the Energy Efficiency Obligation (EEO) Scheme model for Bosnia and Herzegovina. Representatives of the relevant ministries, energy regulatory commissions, electricity utility companies, energy efficiency/environment funds, and Chambers of Commerce make up the EEO Working Group.

⁶ <http://www.usaideia.ba/dpa/document.php?id=89374>

⁷ <http://www.usaideia.ba/dpa/document.php?id=89377>

Document	Party Responsible for Development	To Whom	Action Required	Deadlines for Development
1. Amendments to the existing Entity EE laws to authorize the EEO mechanism.	Entity Ministries. in consultation with the Regulators	Entity Governments Entity Legislatures	Passage of amendments	Developed
2. Regulation/ Decree on implementation of EEO	Entity Ministries. in cooperation with the Regulators	Entity Governments	Issuance of Regulation/ Decree by the Governments	Developed
Timeline: 90 days after adoption of the amendments to the Law				
3. EEO Savings Target Methodology	Regulators	Entity Ministries	Issuance of Methodology by the Entity Ministries	Developed
Timeline: 60 days after the issuance of the EEO Regulation/Decree				
4. EEO Collection Fee Calculation Methodology	Regulators	Regulators	Issuance of Methodology	Developed
Timeline: 60 days after the issuance of the EEO Savings Target Methodology				
5. Detailed EEO Rulebook	Regulators	Regulators	Issuance of Regulation/ Guidelines	December 2018
Timeline: 120 days after the issuance of the EEO Regulation/Decree				

Table 5: EEO legislative development road map

The EEO Working Group has developed the Amendments to the existing Entity EE laws. The EEO Decree., EEO Savings Target Methodology and EEO Collection Fee Calculation Methodology are currently being revised and the draft EEO Rulebook that sets out the regulators' procedures for administering the EEO has been finalized. In addition, the EEO Model has been included in the adopted FBiH Energy Efficiency Action Plan, the draft Energy Efficiency Action Plan for Republika Srpska and Energy Efficiency Action Plan. The EEO is also defined in the BiH Framework Energy Strategy.

The final EEO Model document, including the necessary primary and secondary legislation documents is being finalized. Following this procedure, the adoption procedure for the EEO model implementation with the relevant state and entity institutions will be initiated as of the beginning of 2019.

In July 2018 House of Representatives of the BiH Parliamentary Assembly adopted set of recommendations for the energy sector reform. One of the recommendations developed is the need to decide on energy efficiency as a key element of energy transition and determine

the role of regulatory bodies in the implementation of this policy. These recommendations were developed in order to support the implementation of the energy efficiency obligation (EEO) scheme and the broadening of the jurisdictions of the regulatory commissions in order for them to assume their role in the EEO.

National Energy Efficiency Action Plan of Bosnia And Herzegovina for the period 2016 - 2018⁸ defines the following programs related to the energy efficiency obligation schemes:

- PRG.03 FBiH: Program for energy efficiency obligation schemes in the Federation BiH through electricity distributors.
- PRG.04 FBiH: Program for energy efficiency obligation schemes in the Federation BiH through heating energy distributors.
- PRG.03 RS: Program for energy efficiency obligation schemes in the Republic of Srpska through electricity distributors.
- PRG.03 RS: Program for energy efficiency obligation schemes in the Republic of Srpska through heating energy distributors.

The programs should introduce the energy efficiency obligation schemes in both entities, by targeting the reduction of Final Energy Consumption in a three-year period. The National Energy Efficiency Action Plan 2010-2018 (NEEAP) presents four-year cumulative targets for final energy savings implemented through the obligation schemes, as shown in the following table:

<i>ktoe</i>	BiH		FBiH		RS		<i>TOTAL</i>
	PRG.03	PRG.04	PRG.03	PRG.04	PRG.03	PRG.04	
Year 1	13.17	2.29	9.1	1.58	4.07	0.71	15.99
Year 2	26.35	4.59	18.2	3.16	8.15	1.43	30.94
Year 3	44.79	7.79	30.94	5.37	13.85	2.42	52.58
Year 4	63.23	14.1	43.68	9.73	19.55	4.37	77.33

Table 6: NEEAP four-year cumulative targets for final energy savings implemented through the obligation schemes

⁸ The BiH Council of Ministers adopted the National Energy Efficiency Action Plan (NEEAP) for 2016-2018, which was preceded by the adoption of the FBiH Energy Efficiency Action plan in July 2017 and the adoption of changes and amendments to the RS Energy Efficiency Action Plan in November.