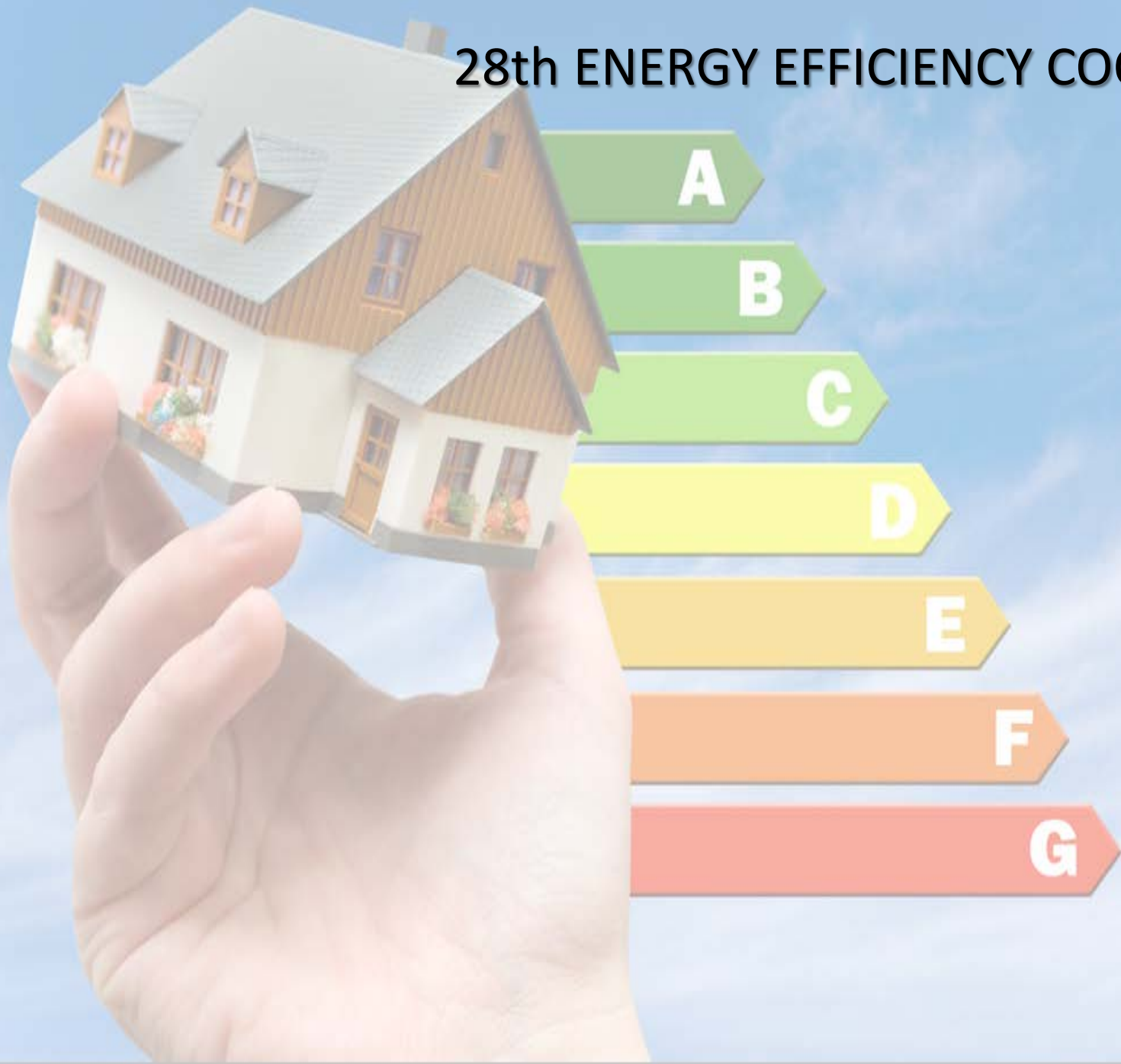


28th ENERGY EFFICIENCY COORDINATION GROUP MEETING



Overview of the transposition and implementation of EED Art. 9-11 and EED Art. 14 in Bosnia and Herzegovina

9th March 2022

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Metering and billing for electricity, gas and heating, EED Art. 9-11

Draft
NEEAP BiH
2019-2021

M1: Development of technical and economic justification for the introduction of energy metering systems for end customers

DBM1 : Introduction of metering and billing according to actual consumption in district heating, cooling and hot water supply systems

DBM2: Introduction of intelligent metering systems and roll out of smart meters for natural gas and/or electricity

Draft EEAP RS
2019-2021

M1: Introduction of intelligent metering systems and roll out of smart meters for natural gas and/or electricity

M2: Introduction of metering and billing according to actual consumption in district heating, cooling and hot water supply systems

Adopted
EEAP FBiH
2019-2021

Status of transposition of EED art.9-11 in BiH

RS

RS EE Law stipulates the following (Article 21):

Distribution system operators, energy distributors and retail energy sales companies shall offer to the final customer the purchase and installation of individual meters for measuring energy consumption at competitive prices, in the following cases:

- a) if the energy supply to the final customer is performed without measurement,
- b) a building undergoes major renovations and
- c) the connection to the power grid undergoes renovation.

RS Energy Law stipulates the following (Article 34):

(1) Undertakings dealing with supply of end users with energy should at least once a year, along with the bill, inform the customers on impact of the method of energy use on environment and sustainable development and, in an appropriate way, educate and direct the customers to use energy in a prudent and cost-effective way.

(2) In order to create conditions for cost-effective and efficient use of energy by end users, the calculation of energy is made according to the actually metered energy.

FBIH

FBIH EE Law stipulates the following (Article 43):

Distribution system operator, energy supplier, small distribution system operator and small supplier are obliged to install their own individual metering devices for final energy consumers provided at competitive prices, ... and which will provide final energy consumers with accurate data on current and total energy consumption and time of use, wherever technically feasible and financially justified in relation to possible energy savings.

...if technically feasible, billing and invoicing of energy consumption is based on actual energy consumption. The invoice / bill is accompanied by appropriate information that provides final energy consumers with a detailed report on current energy costs.

Heating and cooling, EED Art. 14



No.	Measure
GH.BiH.1	Preparation of cost-benefit analysis for measures to increase energy efficiency in heating and cooling
BiH.2	Preparation of assessment of the potential for the application of high-efficiency cogeneration and heating and cooling
BiH.3	Promotion and support to entities in the implementation of measures for the development of energy efficient district heating and cooling infrastructure, high-efficiency cogeneration and heating and cooling using waste heat and RES
GH.BiH.4	Promotion and support to the entities in the implementation of the legal obligation to perform cost-benefit analysis
GH.BiH.5	Promotion and support to the entities in the introduction of the obligation to include into the current procedure for approving the construction of new power plants the criteria for issuing licenses for performing electricity generation activities
GH.BiH.6	Promotion and support to the entities in the harmonization of provisions related to guarantees on the origin of electricity from high-efficiency cogeneration, i.e. to the conditions for providing support to cogeneration and district heating systems
GH.BiH.7	Promotion and support to the entities in further improvement of the information system and reporting on energy efficiency in the sectors of electricity generation and heating and cooling, including efficient cogeneration
GH.BiH.8	Establishment and implementation of a system for monitoring the implementation of major policy measures in heating and cooling

Status of transposition of EED Art. 14 in BiH

RS

Partially transposed within the EE law and the Energy Law.

Heating has been covered only at the local level, in individual municipalities and cities.

In order to achieve the set goal of reducing primary energy consumption in the coming period measures defined within the draft EEAP RS will be implemented.

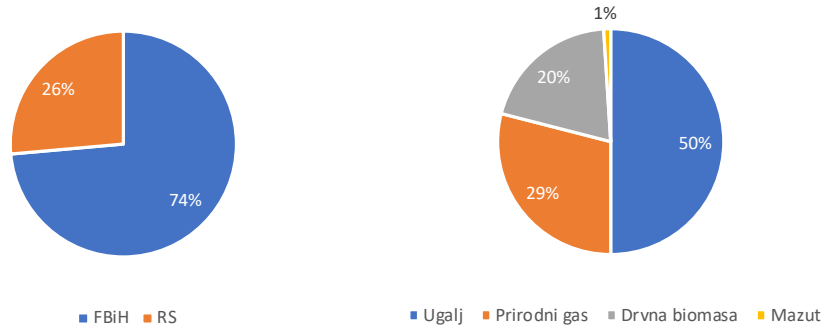
FBiH

Partially transposed within the EE law.

Heating has been covered only at the local level, in individual municipalities and cities. In order to achieve the set goal of reducing primary energy consumption in the coming period measures defined within the adopted EEAP FBiH will be implemented.

Assessment of the potential for the application of high-efficiency cogeneration and heating and cooling

- ✓ Creation of the Assessment of the potential for the application of high-efficiency cogeneration and heating and cooling in BiH has been conducted
- ✓ Distribution of total annual heat production in 2017 for BiH, by entities and by type of fuel:



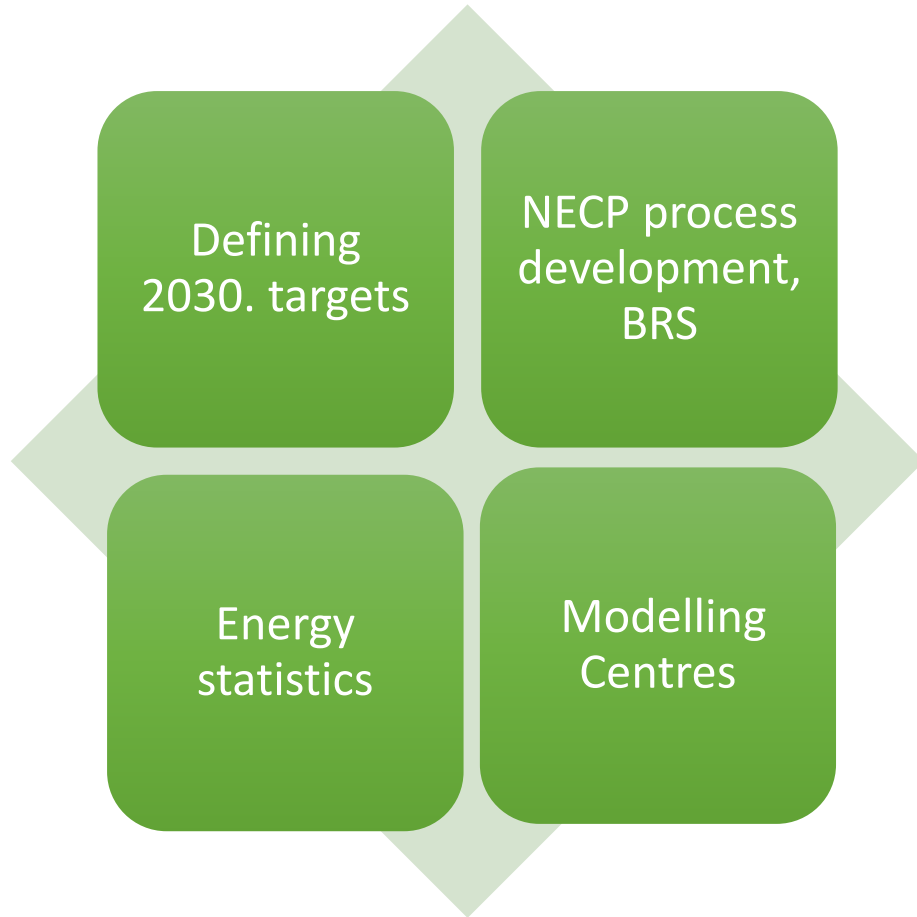
- ✓ The total heated area of all DHS in BiH is 10,048,516 m². Most DHS charge for the heat supply services is in the combined form, i.e. flat rate per heated area (KM/m²) and according to the actual consumption (KM/MWh). The average collection rate of all analyzed companies engaged in the supply of thermal energy is 86.3%.
- ✓ An analysis of the potential for expanding district heating systems for selected areas has been made.



- Out of 45 analyzed environments, only 17 of them have the potential for highly efficient cogeneration. This can be achieved by covering the needs for heating and domestic hot water, but also other needs (other than heating). In this way, savings in these environments of 10% to 24% are achieved.

R.br.	Naziv grada / općine	Toplotne potrebe za grijanje MWh/god *	Toplotne potrebe za PTV MWh/god	Ukupne toplotne potrebe MWh/god	Potrebna snaga grijanja MW _{th}	Kogeneracijska tehnologija	električna snaga kogeneracije MW _{el}	Stepen iskorištenja energije iz goriva %	Potrošnja biomase u kogeneraciji t/god	UPE – grijanje %	Visokoeffikas na kogeneracija (grijanje)	UPE - grijanje+PTV %	Visokoeffikas na kogeneracija (grijanje+PTV)
1	Novi Grad Sarajevo	523.404	48.268	571.672	320,5	Parna turbina	18,22	80,8	190.529	7,8	Ne	11,2	Da
2	Novo Sarajevo	439.027	33.879	472.906	268,9	Parna turbina	15,28	80,8	159.814	7,8	Ne	10,6	Da
3	Centar Sarajevo	502.182	29.481	531.663	307,5	Parna turbina	17,48	80,8	182.803	7,8	Ne	9,9	Ne
4	Stari Grad SA	220.286	15.463	235.749	134,9	Parna turbina	7,67	80,8	80.188	7,8	Ne	10,4	Da
5	Vogošća	55.927	5.329	61.256	34,2	Parna turbina	1,80	80,8	20.358	4,0	Ne	7,8	Ne
6	Hadžići	23.398	2.007	25.405	14,3	ORC	0,69	81,7	8.418	1,1	Ne	4,8	Ne
7	Ilidža	207.947	15.202	223.149	127,3	Parna turbina	7,24	80,8	75.697	7,8	Ne	10,5	Da
8	Ilijaš	43.387	2.978	46.365	26,6	ORC	1,29	81,7	15.610	1,1	Ne	4,1	Ne
9	Zavidovići	54.165	4.273	58.438	33,2	ORC	1,61	81,7	19.488	1,1	Ne	4,5	Ne
10	Kakanj	43.559	4.142	47.701	26,7	ORC	1,29	81,7	15.672	1,1	Ne	5,2	Ne
11	Mostar	446.557	29.527	476.084	328,2	Parna turbina	18,65	80,8	195.066	2,3	Ne	5,0	Ne
12	Breza	8.445	697	9.142	5,2	Gasni motor	0,38	80,8	3.074	20,2	Da	22,5	Da
13	Visoko	65.519	4.691	70.210	40,1	Parna turbina	2,11	80,8	23.850	4,0	Ne	6,9	Ne
14	Zenica	292.982	23.993	316.975	179,4	Parna turbina	10,20	80,8	106.651	7,8	Ne	10,8	Da
15	Vitez	18.080	1.467	19.547	11,1	ORC	0,54	81,7	6.505	1,1	Ne	4,6	Ne
16	Novi Travnik	38.738	4.286	43.024	23,7	ORC	1,15	81,7	13.937	1,1	Ne	5,8	Ne
17	Bugojno	56.797	4.717	61.514	34,8	Parna turbina	1,83	80,8	20.675	4,0	Ne	7,3	Ne
18	Travnik	88.627	7.371	95.998	54,3	Parna turbina	2,86	80,8	32.262	4,0	Ne	7,3	Ne
19	Livno	14.802	1.453	16.255	9,1	Gasni motor	0,67	80,8	5.388	20,2	Da	22,9	Da
20	Bihać	127.010	8.785	135.795	77,8	Parna turbina	4,09	80,8	46.234	4,0	Ne	6,8	Ne
21	Tešanj	17.692	1.302	18.994	10,8	ORC	0,52	81,7	6.365	1,1	Ne	4,3	Ne
22	Banovići	36.948	3.348	40.296	22,6	ORC	1,10	81,7	13.293	1,1	Ne	5,0	Ne
23	Živinice	53.818	4.950	58.768	33,0	Parna turbina	1,73	80,8	19.591	4,0	Ne	7,7	Ne
24	Kalesija	9.392	1.003	10.395	5,8	Gasni motor	0,42	80,8	3.419	20,2	Da	23,2	Da
25	Tuzla	347.740	25.571	373.311	213,0	Parna turbina	12,10	80,8	126.584	7,8	Ne	10,5	Da
26	Srebrenik	17.342	1.329	18.671	10,6	ORC	0,51	81,7	6.239	1,1	Ne	4,4	Ne
27	Gračanica	67.900	4.255	72.155	41,6	Parna turbina	2,19	80,8	24.717	4,0	Ne	6,5	Ne
28	Lukavac	94.430	6.739	101.169	57,8	Parna turbina	3,04	80,8	34.374	4,0	Ne	6,9	Ne
29	Čelinac	67.240	2.983	70.223	41,2	Parna turbina	2,17	80,8	24.476	4,0	Ne	5,8	Ne
30	Prijedor	166.150	15.442	181.592	101,7	Parna turbina	5,78	80,8	60.482	7,8	Ne	11,2	Da
31	Gradiška	31.993	3.013	35.006	19,6	ORC	0,95	81,7	11.511	1,1	Ne	5,1	Ne
32	Modriča	8.848	668	9.516	5,4	Gasni motor	0,40	80,8	3.221	20,2	Da	22,3	Da
33	Derventa	3.193	393	3.585	2,0	Gasni motor	0,14	80,8	1.162	20,2	Da	23,6	Da
34	Laktaši	19.667	1.367	21.034	12,0	ORC	0,58	81,7	7.076	1,1	Ne	4,1	Ne
35	Pale	27.408	2.385	29.793	16,8	ORC	0,81	81,7	9.861	1,1	Ne	4,8	Ne
36	Sokolac	7.059	603	7.662	4,3	Gasni motor	0,32	80,8	2.570	20,2	Da	22,6	Da
37	Banja Luka	655.935	53.495	709.429	401,7	Parna turbina	22,83	80,8	238.772	7,8	Ne	10,8	Da
38	Zvornik	32.318	4.875	37.193	19,8	ORC	0,96	81,7	11.628	1,1	Ne	7,4	Ne
39	Bijeljina	131.381	10.504	141.885	80,5	Parna turbina	4,23	80,8	47.825	4,0	Ne	7,2	Ne
40	Doboj	69.578	8.357	77.935	42,6	Parna turbina	2,24	80,8	25.328	4,0	Ne	8,7	Ne
41	Ist. Sarajevo	19.889	1.686	21.575	12,2	ORC	0,59	81,7	7.156	1,1	Ne	4,7	Ne
42	Brod	10.195	799	10.995	6,2	Gasni motor	0,46	80,8	3.711	20,2	Da	22,4	Da
43	Teslić	31.146	2.578	33.724	19,1	ORC	0,92	81,7	11.206	1,1	Ne	4,7	Ne
44	Ugljevik	8.746	725	9.470	5,4	Gasni motor	0,39	80,8	3.184	20,2	Da	22,5	Da
45	Distrikt Brčko	104.864	17.561	122.425	64,2	Parna turbina	3,38	80,8	38.172	4,0	Ne	10,5	Da

Main challenges in BiH





Thank you for your attention!

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