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**Generating Electricity
from Renewable Sources
in CEE & SEE**

Energy Industry Group

Bosnia & Herzegovina

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Country General Information

Capital: Sarajevo

Location: Bosnia and Herzegovina ("BiH") is a South-Eastern European country situated on the north-western part of the Balkan peninsula. It borders on the north, west and south with Croatia, and on the east and south with Serbia and Montenegro.

Surface: 51,197 km²

Population: 9,104,772

Climate: There are three types of climate: continental and moderate-continental, mountain and mountain-basin and Mediterranean.

Resources: BiH is rich in water resources, forests (approximately 53% of the total surface area), various minerals such as zinc, lead, bauxite, and manganese, coal (more than 60% is lignite and the rest is brown coal), metal resources (ore, stone salt, asbestos, gypsum, etc.), and fertile land. BiH rivers have great hydropotential estimated at 18,600 GWh annually, however, only 40% of this hydropotential is currently in use. Considering its surface area, BiH is one of the richest countries in Europe when it comes to forests. Furthermore, BiH also has significant wind power potential, especially in the south of the country.

Electricity Grid: The total length of the national electricity transmission grid is 6,458.78 km. The grid is comprised of overhead power lines with a nominal voltage of 400 kV, 220 kV and 110 kV, electrical power stations with a voltage of 400 kV, 220 kV, 110 kV and 35 kV, as well as underground 110 kV cables. The BiH power system comprises 153 high voltage power stations and four (4) middle voltage power stations.

Electricity Transmission, Distribution and Supply: Electricity transmission is a regulated natural monopoly and is provided by the joint stock company Elektroprijenos BiH ("**Transco**"). Transco performs all activities relating to electricity transmission in BiH, including, inter alia, construction, maintenance and extension of the transmission grid. Electricity distribution in BiH is performed by four (4) public enterprises, i.e. Elektroprivreda of BiH d.d.- Sarajevo and Elektroprivreda Hrvatske zajednice Herceg Bosne d.d. Mostar in the Federation of Bosnia and Herzegovina ("**FBiH**"), Mješoviti holding ERS Trebinje in the Republic of Srpska ("**RS**") and Komunalno Brčko d.o.o. Brčko in the Brčko District of BiH ("**Brčko District**"). The electricity market is based on bilateral transactions between licensed participants, since the country has not yet established an electricity stock exchange. The supply of electricity within the territory of BiH is performed by thirty (30) licensed companies out of which,

eight (8) are licensed by the RS Regulatory Commission for Energetics ("RERS"), twenty-one (21) are licensed by the FBiH Regulatory Commission for Energy ("FERK") and one (1) is licensed by the BiH Regulatory Commission for Electricity ("DERK") for supply within the Brčko District territory. All these companies may carry out their licensed activities freely within the territory of BiH, regardless of which regulatory commission issued their licences.

Official Language(s): Bosnian, Croatian and Serbian.

EU Member: no. BiH signed the Stabilisation and Association Agreement with the EU on 16 June 2008, by which it established the framework for the implementation of comprehensive legal, administrative and economic reforms that would lead the country to EU membership. BiH submitted its application for EU membership on 15 February 2016. On 15 December 2022, the European Council officially granted candidacy status to BiH.

NATO Member: no. BiH was invited to join the Membership Action Plan (MAP) in 2010.

United Nations Member: yes, since 22 May 1992.

Currency: Bosnian convertible mark (BAM). The Central Bank of BiH maintains monetary stability by issuing domestic currency according to the currency board arrangement, with full coverage in freely convertible foreign exchange funds under the fixed exchange rate (BAM 1 = EUR 0.51129).

Schengen: not a member of the Schengen area.

Political System, Administrative Organisation and Economy: BiH is a country consisting of two separate entities: FBiH and RS, along with a special autonomous district under the direct sovereignty of the state, (i.e. the Brčko District). In each of the three areas in question, different legal regimes are applicable. However, certain matters are regulated by national laws, which are applicable in both entities and the Brčko District. FBiH is further divided into ten (10) smaller administrative units called cantons. Besides the cantons in BiH, there are also municipalities, of which there are 79 in FBiH and 64 in RS. The political system of BiH is a parliamentary democracy in which the Parliament Assembly is the highest legislative authority and which is comprised of two (2) houses, the House of Peoples and House of Representatives. The Presidency of BiH consists of three (3) members, each member representing one of the three (3) constituent ethnic groups in BiH (Bosnian, Croatian and

Serbian). The Council of Ministers of BiH is the highest executive authority at the state level. At an entity level, both FBiH and RS have their constitutions and they are rather autonomous. The Constitution of BiH provides that state institutions have jurisdiction over the following matters: foreign affairs, foreign trade, customs, monetary politics, financing of the institutions and international undertakings of BiH, regulation of immigration, refugees and asylum, implementation of the international and inter-entity criminal regulations including relations with Interpol, establishing and functioning of the means of mutual and international communication, regulation of inter-entity transport and air traffic control. All governmental functions and competencies that are not explicitly delegated to the BiH institutions belonging to these entities. The entities also have their legislative authorities, (i.e. the FBiH Parliament and National Assembly of RS); they also have presidents and governments that consist of 16 ministers and a prime minister. The Brčko District has a government comprised of a mayor, a deputy mayor and departments such as the executive authority and the Council of the Brčko District as the legislative authority.

The BiH economy is essentially a transitional economy that relies primarily on the export of metals, energy, textiles and furniture. BiH has preferential trade agreements with Member States of the Central European Free Trade Agreement (CEFTA). Within the BiH financial system, the banking sector is dominated by foreign banks, especially those from Austria and Italy, with the exception of only one domestic state-owned commercial bank. The banking sector is fairly liquid and well capitalised. BiH has observer status with the WTO since 1999 and negotiations for joining this organisation are still ongoing. The energy sector in BiH is one of the current and future key drivers of the BiH economy, considering that there are plenty of possibilities to invest in RES given its high, yet currently underdeveloped potential. The energy sector can potentially be a source of national employment in the future by opening up new job opportunities and attracting foreign direct investment. The national currency is pegged to the euro through a currency board arrangement, established by the Law on the Central Bank of BiH in 1998. The currency board established and maintained trust in the national currency and has created strong trade links with EU partners.

1. Defined Terms for the Main Permits Required for RES-Electricity Generation Facilities

Building Permit	Administrative deed issued by the competent entity, cantonal or municipal body before commencement of the construction of the RES-Electricity facility. The building permit in BiH includes an obligation of the investor to commence with the construction of the RES-Electricity facility within a certain period of time, usually between one (1) and three (3) years from the date of issuance of the construction permit.
Concession Right¹	If the applicable concession law requires it, the investor must obtain a concession right in order to exploit a natural resource and/or to produce RES-Electricity. The concession is granted by the decision issued by the concession grantor following the completion of the tender or self-initiative procedure, in accordance with the applicable concession law. Upon issuance of the decision granting the concession right, the concessionaire signs a concession agreement with the concession grantor, which regulates the rights and responsibilities of the parties in relation to the granted concession and performance of the future concession activity.
Connection Conditions	Technical document issued by Transco if the RES-Electricity facility is to be connected to the transmission grid. The Connection Conditions are issued based upon a technical solution for connection to the transmission grid. Once the Connection Conditions are issued, the investor must submit a statement to Transco, declaring the acceptance of the Connection Conditions.

¹ In BiH there are 14 applicable laws on concessions, i.e. one (1) on the state level, two (2) on the entities level, one (1) on the Brčko District level and ten (10) on the cantonal levels. Each law provides the list of the activities and natural resources for which the concession should be obtained, in order to perform the certain commercial activity

Environmental Permit	Administrative deed evidencing the compliance of the RES-Electricity facility with the environmental requirements as provided by the law, which also prescribes all relevant conditions and measures for mitigation and prevention of adverse effects on the environment during the construction and operation of the RES-Electricity facility.
Liability and Responsibility for Grid Connection and/or Capacity Upgrades, Improvements or Expansion of Grid	The applicable statutory regulations provide that electricity producers bear the cost of connection of the RES-Electricity facility to the distribution or transmission grid. One of the advantages defined in the BIH Rulebook on Access is that producers of RES-Electricity pay only 50% of the regular access fee to the transmission grid. Furthermore, the Grid Code of Independent System Operators ("ISO") provides that all electricity producers connected to the transmission grid, which change the technical parameters of their system, must not create a negative influence on the transmission grid. All producers connected and using the transmission grid may be temporarily curtailed with or without prior written notice only for those reasons prescribed in the Grid Code. If a producer is curtailed without justified reason by the operator of the grid, they are entitled to damage compensation. All producers connected to and using the grid shall be treated in a non-discriminatory manner.
Licence for Generation of Electricity from the RES-Electricity Facilities	The licence is issued by the competent regulatory commissions (i.e. FERK, RERS or DERK, depending on the location of the facility) enabling the investor to produce electricity from the constructed RES-Electricity facility. In FBiH, RS and in the Brčko District, the licence for generation of RES-Electricity is not required for facilities with an installed capacity of up to 1 MW.
RES-Electricity	Electricity obtained from RES sources, such as wind, solar, aerothermal, geothermal, hydrothermal and waves, hydraulic, biomass and biogas;

RES Support Scheme

A comprehensive incentivising system established in accordance with the FBiH, RS and Brčko District laws on use of RES and efficient cogeneration. In FBiH, the RES Support Scheme is based on feed-in tariffs, which provide for a guaranteed repurchase of electricity from producers that obtained the status of a privileged producer. In FBiH, the mandatory repurchase of electricity at the price set by the feed-in tariffs may be granted for a maximum period of twelve (12) years. Furthermore, producers of RES-Electricity in FBiH have priority access to the grid, while qualified producers also have priority of dispatch. *Note: A new Law on RES and Efficient Cogeneration (as defined below) establishing a new RES Support Scheme was adopted in FBiH in August 2023, and it shall apply as of 2 May 2024 – please see Section 6.2.1 for more information.*

Both in RS and the Brčko District, the RES Support Scheme for small installations is based on feed-in tariffs or premiums for consumption of electricity for personal use or sale on the market. In RS, the mandatory repurchases of electricity at the feed-in tariff or the right to premiums may be granted for a maximum period of fifteen (15) years, whereas in the Brčko District it may be granted for a maximum period of ten (10) years. The RES Support Scheme for large installations is based on the market premium, which is variable and calculated as the difference between the selling price from the auction procedure and the reference market price. The Brčko District has yet to adopt relevant bylaws regulating implementation of the RES Support Scheme.

In addition to the monetary aspects of the RES Support Schemes in FBiH, RS and the Brčko District, the RES Support Schemes are financed by the funds paid and collected from all end-customers of electricity.

Energy Permit and Permit for Construction of the RES-Electricity Facility

In FBiH, an energy permit is an administrative act issued by the Federal Ministry for Energy, Mining and Industry by means of which the investor will obtain the right to construct or reconstruct a RES-Electricity facility. An energy permit must be obtained before submitting a request for a building permit to the competent authority.

In RS, the investor is obligated to obtain a permit for construction of the RES-Electricity facility, except for:

- Electricity installations (energetska postrojenja) of biomass, biogas, landfill gas and gas from wastewater treatment plants;
- Plants for landfill gas and gas wastewater treatment plants;
- Solar plants with photovoltaic cells of installed capacity up to and including 250 KW, on the ground and on buildings, regardless of the installed power.

As with the energy permit, this permit is obtained subject to having a building permit. In the Brčko District, DERK issues the licence for the construction of a RES-Electricity facility where the installed capacity exceeds 1 MW.

2. Strategic Priorities for Development of the RES Sector until 2035

The BiH Framework Energy Strategy established the following five (5) strategic priorities for development of the RES sector until 2035:

- Standardisation of cooperation mechanisms with other countries in order to implement measures and programmes for stimulating RES-Electricity production;
- Prescribing the benefits of connecting to the transmission system for power plants that generate RES-Electricity, if it provides a safe system of operation and is based on transparent and non-discriminatory data;

- Increase of the share of RES-Electricity generation (that enters the incentive system) in overall electricity generation, along with adequate system organisation;
- Regulating the utilisation of the minimum levels of energy from RES for construction of new, or renovating existing facilities, and enactment of regulations to govern the implementation of cogeneration in the heating and cooling sector; and
- Achievement of the goal of a 10% share of RES in energy generation for transport in 2020, and continued promotion of biofuels through 2035.

3. Executive Summary – RES Market Status and Development of RES-Electricity Facilities

3.1 Market Overview – Factsheets

- The RES-Electricity market in BiH has seen significant development since the enactment of the FBIH Law on the Use of RES and Efficient Cogeneration, as well as the RS Law on RES and Efficient Cogeneration in 2013, (including various implementation bylaws adopted by the competent regulators);
- On 30 March 2016, the Council of Ministers of BiH adopted the BiH National Renewable Energy Action Plan ("NREAP") until 2020. NREAP was developed based on the action plans for RES in FBiH and RS. By adoption of the NREAP, BiH moved a step forward to compliance with the requirements of Directive 2009/28 EC;
- NREAP set the overall goal for BiH of a 40% share of RES in gross final energy consumption by 2020. Such a high share of RES in gross final energy consumption was determined on the basis of the high RES share in 2009 as the baseline year. According to the Action Plan for Usage of RES in FBiH, the goal is to reach a 41% share of RES, and according to the Action Plan for Usage of RES in RS, the goal is to reach a 48% share of RES by 2020;
- In November 2017, as a party to the Energy Community Treaty, BiH submitted its First Progress Report to the Energy Community Secretariat under Directive 2009/28/EC. The obligation of submitting the progress reports on renewable energy to the Secretariat arises from Article 22 (1) of Directive 2009/28 EC;

- The RS Action Plan for Usage of RES was revised in 2018. The dynamic quotas for solar power plants were increased from 8 MW to 12.2 MW and dynamic quotas for biomass were decreased from 14.83 MW to 12.96 MW;
- The FBiH Action Plan for Usage of RES was also revised in 2018. The dynamic quotas for solar power plants were increased from 11 MW to 23 MW and dynamic quotas for biogas were set at 1.2 MW;
- At the beginning of 2018, a working group was formed, in order to develop a concept for the reform of the RES Support Schemes in BiH ("Working Group"). The members of the Working Group are the Ministry of Foreign Trade and Economic Relations of BiH, the Federal Ministry of Energy Mining and Industry, the Ministry of Industry, Energetics and Mining of RS, DERK, FERK, RERS, and the RES Operators in FBiH and RS;
- In March 2018, the first large wind power plant ("WPP") in BiH commenced operations. The WPP generates 50 MW of installed capacity and its investor is a public enterprise Elektroprivreda HZ HB d.o.o. Mostar;
- In September 2018, the Working Group made a final report on a new concept for the reform of the RES Support Schemes in BiH, which proposed a feed-in premium for large installations (installed capacity exceeding 500 KW) and feed-in tariffs for smaller installations. In addition, certain tax relief mechanisms were proposed as part of the new concept for the RES Support Scheme;
- In April 2019, amendments to the RS Law on RES and Efficient Cogeneration were enacted, by means of which generation of electricity from WPPs is excluded from the RES Support Scheme;
- In July 2019, BiH submitted the Third Progress Report under Directive 2009/28/EC;
- On 29 August 2019, the Council of Ministers of BiH adopted the Framework Energy Strategy for BiH until 2035. The purpose of the Framework Energy Strategy is to identify key priorities required for the development of the energy sector in BiH.
- In 2020, RS adopted a revised Action Plan for Usage of RES, pursuant to which dynamic quotas for 2021 were set as follows: solar power plants: 24.83 MW; biomass: 4.16 MW;
- In 2021, FBiH adopted the Decision on Establishing Binding Targets for the Use of Renewable Energy Sources in the FBiH, pursuant to which (with amendments in 2022) dynamic quotas for solar power plants have been increased to 140.56 MW; dynamic quotas for biomass have been increased to 15 MW, and the dynamic quotas for biogas were increased to 10 MW.

- In June 2021, BiH submitted the Fourth Progress Report under Directive 2009/28/EC;
- In March 2022, the new RES Law was adopted in RS;
- In June 2022, the new Law on RES and Efficient Cogeneration was adopted in the Brčko District;
- On 31 July 2023, the FBiH adopted a set of energy laws aimed at harmonising domestic energy legislation with the European Union and Energy Community acquis, these laws included. the following:
 - Law on Electricity of the FBiH,
 - Law on the Use of RES and Efficient Cogeneration, and
 - Law on Energy and Regulation of Energy Activities in the FBiH.

The Law on Electricity of the FBiH and the Law on Energy and Regulation of Energy Activities in the FBiH entered into force on 17 August 2023. The Law on the Use of RES and Efficient Cogeneration entered into force on 2 November 2023 and shall be applied as of 2 May 2024 ("Law on RES and Efficient Cogeneration");

- In August 2023, BiH submitted the Fifth Progress Report under Directive 2009/28/EC.

3.2 RES Market Status, Permitting, Grid Connection, Licensing of RES-Electricity Facilities

General Market Data

RES Target 2020 provided by NREAP

The overall goal for BiH includes a 40% target share of RES in gross energy final consumption by 2020.

In 2021 it was reported that 36.56% of the target had been achieved.²

² Source: BiH Fifth Progress Report on promotion and use of energy from renewable sources, 2020-2021 published on 31 August 2023

Overall installed General Capacity including RES (overall production)³	In 2022, the installed capacity of all production facilities in BiH was 4,655.62 MW, whereas the overall electricity production was 15,035.96 GWh.
Installed capacity by technology⁴	Pumped Hydro – 420 MW Small Hydro – 181.89 MW Wind power – 135 MW Solar – 101.56 MW Biogas – 1.59 MW Biomass – 1.12 MW

RES Support Scheme

Mandatory repurchase of electricity produced in the RES-Electricity facility at the guaranteed prices

In FBiH, a producer that obtains the status of privileged producer is entitled to a mandatory repurchase of electricity generated in the RES-Electricity facility for a period of twelve (12) years. The privileged producer concludes a standard model power purchase agreement ("PPA") with the RES Operator.

In RS, the producer that fulfils the requirements for a mandatory repurchase can conclude a PPA with the Elektroprivreda RS acting as the RES operator for a duration of fifteen (15) years.

In accordance with the Law on RES and Efficient Cogeneration adopted in June 2022 in the Brčko District, mandatory repurchases of electricity at the feed-in tariff may be granted for a maximum period of ten (10) years. A producer that meets the requirements for a mandatory repurchase can conclude a PPA with the Office for the Incentive System. However, it is important to note that the Brčko District has yet to adopt relevant bylaws regulating implementation of the RES Support Scheme.

³ Source: DERK's Annual Report for 2022

⁴ Source: DERK's Annual Report for 2022

RES-Electricity facilities eligible for mandatory repurchase of electricity at the guaranteed prices

In FBiH, the following RES-Electricity facilities are eligible for mandatory repurchase:

- hydro power plants ("HPPs") with an installed capacity of up to 10 MW;
- WPPs regardless of the installed capacity;
- solar power plants ("PVs") of up to and including 1 MW of installed capacity;
- geothermal power plants of up to and including 10 MW of installed capacity;
- biomass power plants of up to and including 10 MW of installed capacity;
- biogas power plants of up to and including 1 MW of installed capacity;
- waste power plants of up to and including 5 MW of installed capacity;
- efficient cogeneration facilities of up to and including 5 MW of installed capacity.

In line with the new Law on the Use of RES and Efficient Cogeneration establishing a new system of RES Support Scheme in FBiH to be applicable as of 2 May 2024, the following RES-Electricity facilities are eligible for mandatory repurchase:

- PVs with an installed capacity of up to and including 150 kW;
- WPPs with an installed capacity of up to and including 250 kW;
- biomass and biogas power plants with an installed capacity of up to and including 500 kW.
- In RS, the following RES-Electricity facilities are eligible for mandatory repurchase:
 - HPPs, WPPs, PVs on ground with an installed capacity of up to and including 150 kW;
 - PVs on objects, power from biomass and biogas, landfill gas and gas from wastewater treatment plants with an installed capacity of up to and including 500 kW;

Other Incentives

- In FBiH RES-Electricity facilities have advantages in terms of supply of electricity, for example, advantages in dispatch as well as advantages in terms of allocation of rights of facilities with an installed capacity of less than 150 KW, without reporting their daily schedule to the RES Operator.
- In RS, RES-Electricity facilities for small installation plants have benefits when connecting to the grid, in terms of time and in certain cases the cost for analysis of connection to the grid. Preferential access to the network (dispatching) to be mandatorily provided by the system operator to whose grid the generator is connected.

Grid Connection Specifics**Connection documentation and approvals**

- Based on the elaboration of the technical solution for connection to the transmission grid, the TSO will issue the Connection Conditions to the investor;
- Based on the issued Connection Conditions and building permit, the investor can conclude the connection agreement with Transco in accordance with the Grid Code. The connection agreement regulates all technical, legal and economic conditions for connection of the RES-Electricity facility to the transmission grid.
- Once the connection is constructed, Transco issues the approval for connection of the high voltage facility to the transmission grid.
- The consent for operational launch of the high voltage facility is issued by ISO based upon the approval for connection and request of the owner of the RES-Electricity facility.
- The consent for the temporary operation of the facility is issued by ISO, in order to conduct all functional and compliance tests in accordance with the Grid Code.
- Once the functional and compliance tests are performed, ISO issues the consent for the permanent work of the facility.

All of the above-mentioned approvals, documents and steps are applicable only if the RES-Electricity facility is to be connected to the high voltage transmission grid. If the RES-Electricity facility is to be connected to the distribution grid, the approvals will be obtained, and agreements concluded with the operator of the distribution grid in accordance with the rules and procedures of the operators of distribution grids.

Costs	The producer bears the costs for preparing the elaboration of the technical solution for connection to the transmission grid. Furthermore, the producer bears the costs for construction of the connection to the grid. The costs for the connection consist of a fixed and variable part. The producers from RES-Electricity facilities pay only 50% of the fixed costs for the connection.
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Licensing

Licences	<p>Once the RES-Electricity facility is constructed and the user permit is obtained, the producer can obtain the licence for generation of electricity in the RES-Electricity facility. The licence in FBiH is issued by FERK.</p> <p>In RS, the licence for generation of electricity is issued by RERS.</p> <p>In Brčko Distrikt, the license for generation of electricity is issued by DERK.</p> <p>Throughout BiH (i.e. FBiH, RS and the Brčko District), the licence for generation is not required for RES-Electricity facilities which have an installed capacity of up to 1 MW.</p>
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Duration of Administrative Procedure	Sixty (60) days from the submission of the full documentation for all the above-mentioned licences.
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Licence's Validity	The licence for generation of RES-Electricity in FBiH, RS and the Brčko District is issued for a duration of up to thirty (30) years.
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4. Key Changes to the RES Support Scheme since 2016

In FBiH, the new 2023 Law on RES and Efficient Cogeneration introduced a new system of incentives for small-scale and large-scale facilities, through feed-in tariffs for small-scale facilities ("**FIT auctions**") and feed-in premiums for large-scale facilities ("**FIP auction**").

FIP auctions are envisaged for large-scale facilities at least once every two years and in line with available scale of auctions, which will compete for fixed premiums for delivered electricity. The main condition for participating in FIP auctions is possession of an urban permit/location permit or a certificate issued by a competent body stating that such a permit it is not required. The criteria for ranking offers is the lowest offered fixed premium added to the market price.

FIT auctions are envisaged for small-scale facilities every year, in line with technologic quotas, which will compete for a guaranteed purchase price. The main condition for participating in FIT auctions is possession of a construction permit or a certificate issued by a competent body stating that a construction permit is not required. The criteria for selection of the most favourable bidder is the lowest offered guaranteed purchase price.

The new law in FBiH also introduces new categories of participants using renewable energy sources: (a) prosumers – enabling end users to produce electricity for their own needs; and (b) renewable energy communities – enabling citizens to unite and construct renewable energy facilities.

In RS, a new RS Law on RES was adopted in 2022. The most significant change is the introduction of the concept of the electricity buyer-producer (prozjumer). This term refers to final customers operating within premises located in limited areas that (i) produce electricity for their own consumption, or (ii) can store or sell the electricity they produce from renewable energy sources to customers who do not fall within the category of households, where these activities do not represent their main commercial or professional activity. The buyer-producer uses the electricity thus produced for its own needs and injects the surplus into the distribution network. The buyer-producer relies on two-way meters that register how much electricity has been delivered and how much has been taken from the distribution network. Hence, the buyer-producer is paid or charged for electricity based on the difference between the quantities of electricity delivered and taken.

The end customer has the right to build a power plant that uses renewable energy sources and to connect it to the internal electrical installations of its facility for its own consumption. The installed power of the power plant, when applying the net metering or net calculation scheme, may not exceed the approved connected power of the end customer's facility. The end customer acquires the status of buyer-producer by connecting the power plant to the internal electrical installations of its facility and by obtaining a production plant (power plant) certificate in accordance with this law. It also has rights and obligations under this law, and under the law governing electricity, to increase this power to 500 KW, which is one of the recommendations of the Energy Community.

Furthermore, the existing RES Support Scheme system in RS, which included feed-in tariffs or guaranteed purchase prices, was retained for plants with small installations defined as such by law. Only those companies that have location requirements and environmental permits can apply for auctions, and it is possible to apply only for part of the installed power for which the construction is planned. A Renewable Energy Community or Energy Cooperative can also receive subsidies in the form of a premium if the installed power is less than 150 KW. The RES Support Scheme for plants with large installations is based on the market premium, which is variable and calculated as the difference between the auction sale price and the reference market price. The auction sale price remains unchanged for as long as the right to incentives endures, except where there is a change of more than 10% in the BAM to EUR exchange rate in BiH.

The Brčko District adopted its Law on RES and Efficient Cogeneration in June 2022. The law introduces, for the first time, a RES Support Scheme for small and large installations in the Brčko District. Small installations will be incentivized with feed-in tariffs or premiums for consumption of electricity for personal use or sale on the market. The mandatory repurchases of electricity at the feed-in tariff or the right to premiums may be granted for a maximum period of ten (10) years. The RES Support Scheme for large installations is based on the market premium, which is variable and calculated as the difference between the selling price from the auction procedure and the reference market price.

4.1 The Rulebook on Obligatory Share and Offtake of Electricity Generated from RES

In December 2016, FERK adopted the Rulebook on Obligatory Share and Offtake of Electricity Generated from RES by which it determined the following: (i) obligations and procedures for offtake of minimum quantities of electricity generated in RES-Electricity facilities at the annual level; (ii) obligations and procedures by which the fulfilment of the conditions set out in the Rulebook will be proven; and (iii) obligations for repurchase of the electricity from qualified producers at the reference price until the establishment of the RES market and fulfilment of the quotas related to the mandatory goals stipulated by the applicable law for all suppliers to end-customers in FBiH, as well as for qualified buyers who import electricity for their own needs.

In accordance with the Rulebook, all suppliers and qualified buyers are obligated to offtake a certain portion of the electricity produced in the RES-Electricity facilities. The percentage of the obligatory offtake is determined in advance so that the suppliers and qualified buyers can allocate funds for purchase of their obligatory offtake. The percentage of this obligatory offtake is determined by FERK's decision, to be made until 15 December of the respective year at the latest, for the following year. The RES Operator in FBiH concludes individual contracts with each supplier or qualified buyer by which all mutual rights and responsibilities regarding the offtake, metering and payments of the electricity between the parties, will be regulated. The contracts also include the obligation of the RES Operator to issue to the supplier or qualified buyer the confirmation for off taken electricity generated from a RES-Electricity facility, as well as the obligation of the supplier or qualified buyer to provide a certain payment security.

Taking into account that a new Law on the Use of RES and Efficient Cogeneration was adopted in FBiH, it is anticipated that the new bylaws regulating obligatory share and offtake of electricity generated from RES will be adopted in the following months.

In RS, the procedure for determining the obligatory share of RES-Electricity that must be off-taken by suppliers and qualified buyers is provided in the Rules on Realisation of the Incentive System in RS. The Rules were adopted in January 2012 by the RES Operator and, taking into account that the new RES Law has been adopted, it is anticipated that new bylaws will soon be adopted as well.

4.2 Repurchase of the Electricity Generated from RES at the Referent Price

Besides the feed-in tariffs, as part of RES Support Schemes in both entities, the producers of RES-Electricity are entitled to the mandatory repurchase of the electricity at the reference price if their production is included in the obligatory quotas set by the entity's action plans for RES. The producers conclude power purchase agreements with the RES operators by which the RES operators assume the obligation to repurchase the entirety of the RES-Electricity at the reference price. Unlike the feed-in tariffs, the reference price is not fixed and can be revised by the FERK or RERS usually at least once a year or more often if needed.

The mandatory repurchase of electricity at the reference price by the state-owned RES operators in BiH allows investors who intend to develop certain RES-Electricity projects to model these projects, particularly for those technologies for which there are no available dynamic quotas, (i.e. for which a PPA at the feed-in tariff level cannot be concluded).

One of the main shortcomings of the PPAs at the reference price is the fact that such PPAs may be concluded only once the RES-Electricity facility is fully operational. Hence, a producer that intends to conclude a PPA at the reference price is not able to reserve the available quota by signing the pre-agreement until it completes the construction of the RES-Electricity facility. The latter could be problematic if the producer needs a lender to provide financing for the project. This is because lenders typically expect that a PPA is executed before the funds for the project are granted.

4.3 Guarantees of Origin for Electricity Produced from RES

The guarantees of origin for electricity produced from RES in RS have been regulated by the Rulebook on the Issuance of Guarantees of Origin for Electricity. The Rulebook was adopted by RERS in 2013 and entered into force in 2014 and since then, it has not been amended. Taking into account that a new Law on RES has been adopted, it is anticipated that new bylaws will be adopted soon. In FBiH, the Rulebook on the Procedure for Submitting Requests for Issuance of Guarantees of Origin for Electricity was adopted by the RES Operator in 2015, and entered into force in 2016. According to the FBiH Rulebook, the guarantee of origin can be issued only to a qualified producer, whereas privileged producers are not entitled to submit a request for issuance of the guarantee of origin for electricity produced in their RES-Electricity facilities.

The FBiH Rulebook provides that the RES Operator must adopt a special regulation by which it will regulate the automatic transfer of the guarantees of origin for the electricity generated in the RES-Electricity facilities of privileged producers. Consequently, in 2018 the RES Operator in FBiH adopted the Rulebook on the Transfer of Guarantees of Origin for Electricity Generated in a Privileged Producers' RES-Electricity Facility. This became applicable as of 1 January 2019. In accordance with this Rulebook, the guarantees of origin for electricity generated in privileged producers' RES-Electricity facilities will be automatically issued based on the data from the RES Operator database and transferred to the suppliers and qualified buyers that are obligated to repurchase a certain percentage of RES-Electricity. Once the guarantees are transferred to the suppliers and qualified buyers, they will be automatically cancelled since they cannot be further transferred or sold. The further transfer of such a guarantee of origin is strictly prohibited. The RES Operator publishes the data on issued, transferred and cancelled guarantees on their website.

5. The Balancing of the BiH Power System

Balancing responsibility requires market participants to harmonise their generation, consumption and purchase and sale of electricity during the period of imbalance. The balancing market is part of the wholesale market in BiH, and also includes the obligation for electricity market participants to assume financial responsibility for imbalances.

According to the RS Law on RES and Efficient Cogeneration, producers of RES-Electricity from facilities where the installed capacity is less than 150KW, and that have exercised the right to an incentive for the production of electricity, are not required to pay balancing costs. RES-Electricity producers whose installed capacity exceeds 150 KW and h have exercised the right to an incentive for the production of electricity, must bear all balancing costs. Producers of electricity with large installations and the right to a market premium price, must also bear all balancing costs.

The FBiH Law on Use of RES and Efficient Cogeneration provides that micro-producers of RES-Electricity (facilities with installed capacity ranges from 2 KW to 23 KW) are not obligated to bear the balancing costs. Privileged and qualified producers of RES-Electricity in facilities where the installed capacity does not exceed 150 KW are not obligated to pay the balancing costs. Otherwise, privileged and qualified producers of RES-Electricity in facilities where the installed capacity

exceeds 150 KW must pay the balancing costs, in accordance with the Rulebook on the Methodology for Distribution of the Balancing Costs for Privileged and Qualified Producers, which was never adopted. In the meantime, the new 2023 Law on RES and Efficient Cogeneration in FBiH provides that prosumers from the household category are not responsible for balancing, as this responsibility is shifted to their suppliers. Qualified producers that have a valid agreement in place with the RES Operator and are connected to the distribution and transmission grids must bear balancing costs in their balance groups.

6. Significant and/or Expected Changes as of 2023/24

6.1 A new Support System for RES-Electricity in BiH

The new 2023 Law on RES and Efficient Cogeneration in FBiH (to be applicable as of 2 May 2024) introduced a completely new RES Support Scheme for RES-Electricity facilities. Adoption of the new bylaws regulating implementation of this law is expected in the following months.

RS and the Brčko District adopted their new Laws on RES in 2022 and have yet to adopt the remaining bylaws regulating the implementation of the laws.

6.2 The Characteristics of the New RES Support Scheme in BiH

6.2.1 FBiH

According to the explanation of the proposal of the new 2023 Law on RES and Efficient Cogeneration in FBiH, the current system of incentives through feed-in tariff is considered as an efficient but not as an economically justified instrument to incentivise the production of electricity from RES. In that regard, as mentioned above, the new law introduces mechanisms of incentives for small-scale and large-scale facilities – through FIT and FIP auctions (as defined above). Both auctions are implemented by the RES Operator.

6.2.1.1 The RES Support Scheme for Large Installations

FIP auctions are envisaged for large-scale facilities over a certain installed capacity (i.e. over 150 kW for solar power plants, over 250 kW for wind power plants, over 500 kW for biomass and biogas power plants) at least once every two years and in line with the available scale of auctions, which will compete for fixed premiums for delivered electricity. Instead of the fixed price for electricity produced in RES-Electricity facilities, producers have to sell the electricity at the wholesale market price with an added premium. The main condition for participating in FIP auctions is possession of an urban permit/location permit or certificate confirming that such a permit is not required. The criteria for ranking offers is the lowest offered fixed premium added to the market price.

6.2.1.2 The RES Support Scheme for Small Installations

Small installations will still be incentivised by feed-in tariffs. FIT auctions are envisaged for small-scale facilities of up to a certain installed capacity (i.e. up to and including 150 kW for solar power plants, up to and including 250 kW for wind power plants, up to and including 500 kW for biomass and biogas power plants) every year, in line with technological quotas, which will compete for a guaranteed purchase price. The main condition for participating in FIT auctions is possession of a construction permit or a certificate confirming that such a construction permit is not required. The criteria for the selection of the most favourable bidder is the lowest offered guaranteed purchase price.

For producers of RES-Electricity in facilities that use the produced electricity for their own needs and deliver the surplus of the electricity to the grid (prosumers), net price billing is introduced. The net price billing provides that any surplus of electricity delivered to the grid can be used later in compensation for electricity costs incurred during the period when local renewable production was not present or was not sufficient.

6.2.2 RS

The new RS Law on RES was adopted in March 2022. This new RS Law defines separate RES Support Schemes for large and small installations. Only those

companies that have location requirements and environmental permits can apply for auctions, and it is possible to apply only for part of the installed power for which the construction is planned. A Renewable Energy Community or Energy Cooperative can also receive subsidies in the form of a premium if the installed power is less than 150 KW. The RES Support Scheme for plants with large facilities is based on the market premium, which is variable and calculated as the difference between the auction sale price and the reference market price. The auction sale price remains unchanged for as long as the right to incentives endures, except where there is a change of more than 10% in the BAM to EUR exchange rate BiH.

6.2.3 Brčko District

The Brčko District adopted its Law on RES and Efficient Cogeneration in June 2022. The law introduced, for the first time, a RES Support Scheme for small and large installation in the Brčko District. Small installations will be incentivised with feed-in tariffs or premiums for consumption of electricity for personal use or sale on the market. The mandatory repurchases of electricity at the feed-in tariff or the right to premiums may be granted for a maximum period of ten (10) years. The RES Support Scheme for large installations is based on the market premium, which is variable and calculated as the difference between the selling price from the auction procedure and the reference market price.

7. Energy Storage

The new Law on Electricity of the FBiH, in force as of August 2023, introduced energy storage as a new activity in the electricity market. This enables the storing of energy produced at times when there is an excess of electric energy within the electric power system, so that it can be utilised later. The law stipulates that energy storage activity can be performed by an energy storage operator that is licensed for this activity by FERK. However, the operator is not required to obtain such a license for energy storage:

- a. using energy storage facilities with a total installed power of up to and including 500 kW;
- b. during the facilities' trial operation, and no longer than six months from the date of obtaining the use permit;
- c. in a facility located behind the billing metering point of an active customer and used exclusively for their own needs without delivering electricity to the grid; or
- d. in facilities used exclusively for the purposes of electricity distribution.

The energy storage operator is entitled to:

- a. use technologies it considers most favourable for electricity conversion and storage, while respecting the statutory conditions,
- b. access the network pursuant to statutory conditions,
- c. sell and buy electricity pursuant to statutory conditions,
- d. offer and provide auxiliary services, including balancing services, pursuant to the statutory conditions as set by law and other regulations governing individual markets.

The energy storage operator is obligated to:

- a. fulfill license requirements, if such a licence is required by law;
- b. meet statutory technical and operating conditions;
- c. fulfill statutory conditions related to energy efficiency and environmental protection;
- d. act pursuant to the rules of market competition protection when participating in the electricity market;
- e. maintain energy storage facilities in proper condition, ensure their operational readiness and safe use, in line with technical and other regulations and standards;
- f. offer and provide auxiliary services in line with the regulation governing transmission system function and provision of auxiliary services,
- g. make data necessary for the operation and management of the electric power system available to system operators,
- h. make requested data available to system operators, competent ministry, FERK and other competent authorities.

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