



Prosumers in the Energy Community

Legal and regulatory framework for support and treatment of small-scale generators
Special focus on solar photovoltaic (PV) systems connected to the distribution network

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I. INTRODUCTION

1. About ECRB

The Energy Community Regulatory Board (ECRB) operates based on the Treaty establishing the Energy Community (hereinafter ‘the Treaty’). As an institution of the Energy Community¹ ECRB advises the Energy Community Ministerial Council and Permanent High Level Group on details of statutory, technical and regulatory rules and makes recommendations in the case of cross-border disputes between regulators.

ECRB is the independent regional voice of energy regulators in the Energy Community. ECRB’s mission builds on three pillars: providing coordinated regulatory positions to energy policy debates, harmonizing regulatory rules across borders and sharing regulatory knowledge and experience.

2. Scope of the report

The share of distributed energy sources² is rapidly increasing which impacts the energy markets in various aspects that are of regulatory relevance: from a system point of view, self-consumption is an additional tool to meet renewable energy targets, can help to reduce network losses and peak loads, increase energy efficiency, improve demand response³ and consumer engagement as consumers can choose to produce part of the electricity for their own needs. At the same time, the effects on networks cannot be neglected. The broad range of relevant aspects also explains that prosumers can be looked at from very different angles such as e.g. consumer empowerment or the creation of investment potentials.

The purpose of this survey is to assess the **legal and regulatory framework for support and treatment of small scale generators in the analysed markets with special focus on solar photo voltaic (PV) systems connected to the distribution network.**

The report investigates

- the definition of prosumers/self-consumption generators
- the criteria for prosumer classification
- capacity limits for prosumers

¹www.energy-community.org.

² Article 2(32) of Electricity Directive 2019/944 (OJ L 158 of 14.06.2019, p 125 *et seq*) defines ‘distributed generation’ as ‘generating installations connected to the distribution system. Electricity Directive 2019/944 is not yet applicable in the Energy Community Contracting Parties.’

³ Article 2(20) of Directive 2019/944 defines ‘demand response’ as ‘the change of electricity load by final customers from their normal or current consumption patterns in response to market signals, including in response to time-variable electricity prices or incentive payments, or in response to the acceptance of the final customer’s bid to sell demand reduction or increase at a price in an organised market [...] whether alone or through aggregation’; Article 2(18) *leg cit* defines ‘aggregation’ as ‘a function performed by a natural or legal person who combines multiple customer loads or generated electricity for sale, purchase or auction in any electricity market’.

- authorization procedures
- the legal and regulatory framework
- existing support schemes and other incentives
- connection- and supply agreements
- the role of national regulatory authorities (NRA; 'regulators') and distribution system operators (DSO); as well as
- customer protection aspects.

The report reflects the recommendations of the Policy Guideline issued by Energy Community Secretariat on grid connection of prosumers (hereinafter 'the Policy Guideline'),⁴ as well as the requirements of Directive 2018/2001 on the promotion of the use of energy from renewable sources despite the fact that this legal act is not yet part of the Energy Community *acquis communautaire* ('acquis').⁵

The report covers the Energy Community Contracting Parties (CP) **Albania, Bosnia and Herzegovina,**⁶ **Georgia, Kosovo*,**⁷ **Moldova, Montenegro, North Macedonia, Serbia and Ukraine** as well as the Energy Community Observer country **Armenia** and the Energy Community Participant country **Greece**.

3. Methodology

Data and analyses contained in the present report are based on information and data provided by the regulatory authorities of the analysed markets.

⁴ https://www.euneighbours.eu/sites/default/files/publications/2018-02/PG_01_2018_ECS_RE_grid.pdf.

⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001&from=EN>. The provisions of Article 21 *leg cit* are in detail listed in the Annex of the present survey.

⁶ Data for Bosnia and Herzegovina has been provided by the entity regulators FERK (Federation BiH) and RERS (Republika Srpska). The State level regulatory authority, SERC, does not have competences for distribution.

⁷ Throughout this document, this designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Advisory Opinion on the Kosovo* declaration of independence.

II. ASSESSMENT

1. Definition of prosumers in legislation

Prosumers are generally defined as electricity consumers that produce part of their electricity needs from their own power plant and use the distribution network to inject excess production and to withdraw electricity when self-production is not sufficient to meet own needs.⁸

EU legislation *per se* does not know a definition of 'prosumers' but rather uses the term 'self-consumption' (-generators): Article 2(1) of Directive 2018/2001 defines a [renewables] **self-consumer** as a 'final customer⁹ operating within its premises located within confined boundaries or, where permitted [by a Member State], within other premises, who generates renewable electricity for its own consumption, and who may store or sell self-generated renewable electricity, provided that, for a non- household renewables self-consumer, those activities do not constitute its primary commercial or professional activity'.

The present chapter analysis whether the term 'prosumer' is defined in national legislation of the analyzed markets at all and, if so, to which extent the definitions are aligned with the above terminology.

⁸ Secretariat, Policy Guideline, chapter 1.

⁹ According to Article 2(3) of Directive 2019/944 a final customer means 'a customer who purchases electricity for own use'.

Table 1: Definitions of self-consumption generators and prosumers

	Definition of self-consumption generators in legislation	Definition of prosumers in legislation
Albania	Primary legislation (Energy Law Article 3(88)): self-producer is a person who produces electricity and consumes mainly for its own needs most of the energy produced.	There is no clear prosumer definition but essentially, the definition self-producers in the Energy Law also covers the concept of prosumers.
Armenia		<p>Primary legislation: Article 4(1) of the Law on Energy introduces the definition of autonomous generators: according to this provision, an autonomous generator is a legal or natural person producing electricity for its own needs and whose installed capacity of installations does not exceed the total capacity of electricity consumption of its installed equipment, but not more than 150 KW (according to the transitional provisions of Article 59 of the Energy Law until to 31.12.2022, the total capacity of solar based installations can at maximum reach the total capacity of electricity consumption of its installed equipment, but not more than 500 KW.)</p> <p>Secondary legislation: the temporary trading rules of the Armenian electricity wholesale market¹⁰ add to the definition in primary legislation that autonomous generators must be connected to the distribution grid.</p> <p>These provisions correlate with the commonly used definition of prosumers.</p>

¹⁰ Approved by act of the regulator N344-N of 9.8.2017.

	Definition of self-consumption generators in legislation	Definition of prosumers in legislation
<p>Bosnia and Herzegovina</p>	<p>Primary legislation:</p> <p><u>FBiH</u>:¹¹ Article 3 ((34) Law on Electricity of FBiH defines a producer for self-consumption as a natural person or legal entity who produces electrical energy for own consumption.</p> <p>Secondary Legislation:</p> <p><u>RS</u>:¹² Article 4 of the rulebook on stimulating generation of electricity from renewable energy sources and in efficient co-generation defines “consumption for one’s own needs” as consumption of electricity in own facilities, at the location of the generation facility in which it is not included the consumption of a generation facility for its own needs. The same definition exists in the rulebook on issuance of certificates for a generation facility that generates electricity from renewable energy source (RES)¹³ and in efficient co-generation.</p> <p><u>FBiH</u>: Article 3 litera (w) of the rulebook on licensing defines a producer for self-consumption as a person or legal entity who produce electrical energy for own consumption.</p>	<p><u>FBiH</u>: there is no definition of prosumers in existing legislation.</p> <p><u>RS</u>: in the existing primary and secondary legislation there is no explicit definition of a prosumer but it can be considered covered by the definition of a customer/generator given in Article 35 of the Law on renewable energy sources which prescribes the rights of a customer/generator to the net metering¹⁴ as follows: “End- users connected to the voltage level of 0,4 kV who provide electricity for own needs via generation of electricity from a generation facility which uses renewable energy sources with an installed capacity not exceeding 50 kW may takeover electricity from the distribution network and deliver it to the distribution network following the principle of „net metering’.</p>

¹¹ Federation Bosnia Herzegovina.

¹² Republika Srpska.

¹³ Article 2(1) of Directive 2018/2001 defines ‘energy from renewable sources’ or ‘renewable energy’ as ‘energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas’.

¹⁴ Net metering is an electricity billing mechanism that allows consumers who generate some or all of their own electricity to use that electricity anytime, instead of when it is generated. Energy which customer generates for themselves is metered (or measured), so that any excess electricity which is generated can be banked to the customer’s account for future consumption. Net billing, on the other hand, allows solar customers to generate electricity for personal use, and sell any excess energy to the utility company at wholesale or “avoided cost” prices, while purchasing power at the retail rate. See further chapter II.10.

	Definition of self-consumption generators in legislation	Definition of prosumers in legislation
Georgia	<p>Primary legislation: the Law on Electricity and Natural Gas defines a <i>micro power plant</i> as a renewable source of power with the capacity not exceeding 100 kW, possessed by a retail customer and connected to the electricity distribution network at the consumption point of the retail customer.</p> <p>Secondary legislation: Resolution N20 of GNERC on the Approval of the Rules of Electricity (Capacity) Supply and Consumption also includes definition of a micro power plant: a renewable source of power with the capacity not exceeding 100 kW, possessed by a retail customer or a group of retail customers and connected to the electricity distribution network at the consumption point of the retail customer(s).</p>	
Greece	<p>Primary legislation: Law 3468/2006 defines an autonomous producer as a producer generating power from RES and whose unit is not connected to the grid.</p>	<p>Primary legislation: Law 3468/2006 defines a self-producer as a producer who generates power from RES or HECHP¹⁵ units, mainly for his own use, and channels any surplus power into the grid. Moreover, Law 4001/2011 defines a self-producer, in general, as a producer who generates power mainly for his own use, and channels any surplus into the transmission or distribution system.</p>
Kosovo*	<p>Secondary legislation: the Rulebook on Support Scheme for Renewable Energy Sources Generators defines ‘self-consumption generators’ as prosumers who are able to feed excess electricity generation to the grid for future consumption or pay to the supplier the electricity consumed in case of a negative balance.</p> <p>The same <i>Rulebook</i> defines ‘prosumers’ as an electricity customer who is at same time and at the same site the owner of a micro RES generating facility,¹⁶ connected to the grid and having right to self-consume the generated electricity as well as to deliver the excess of generated electricity to the supplier.</p>	

¹⁵ High Efficiency Combined Heat and Power. Article 2 (1) Directive 2018/2001 defines this term in line with Article 2(3) of Directive 2012/27 (OJ L 315 of 14.11.2012, p 1 *et seq*) that refers to a catalogue of requirements listed in Annex II of said legal act among which the following criteria: ► cogeneration production from cogeneration units shall provide primary energy savings [calculated according to point (b)] of at least 10 % compared with the references for separate production of heat and electricity; ► production from small-scale and micro-cogeneration units providing primary energy savings may qualify as high- efficiency cogeneration.

¹⁶ Article 2(39) of Directive 2012/27 defines ‘a micro-cogeneration unit’ as a cogeneration unit with a maximum capacity below 50 kW.

	Definition of self-consumption generators in legislation	Definition of prosumers in legislation
Moldova	The legislation does not contain such a definition.	<p>Primary legislation: there is no clear definition of this notion, but according to Art. 39 (1) of the Law on promoting the use of RES, a final consumer, who owns a power plant, which produces electricity from RES for his own use and who has signed with the supplier a contract for the supply of electricity at a regulated price, has the right to deliver the surplus of electricity produced to the electricity network; the supplier respectively is obliged to conclude, at the request of the respective final consumer, a contract for the application of the net metering mechanism.</p> <p>This provision correlates with the commonly used definition of prosumers.</p>
Montenegro	<p>Primary legislation: Article 96 paragraph 1 Energy Law defines that a final customer that generates electricity from RES in facilities of up to 50 kW installed capacity or in HECHP units of up to 50kWe installed capacity shall have the right to exchange electricity that it delivers to the system and takes from the distribution system.</p>	
North Macedonia	<p>Secondary legislation: Article 4 of the Rulebook on RES¹⁷ contains a condition for maximum installed capacity of the generation facility that can be installed by the consumers and the type of RES that can be used.</p> <p>The power plan should be a photovoltaics or small wind power plant and it should be installed on the facilities which are owned by the customer. For households the maximum installed capacity should not exceed 4kW and for small consumer, budget user or single user not exceed 20kW.</p>	<p>Secondary legislation: a prosumer is a household, a small consumer, a budget user and a single user that owns an object for electricity generation from a renewable energy source, where it uses the generated electrical energy for its own consumption, and the surplus electricity is returned in the distribution grid (Rulebook on renewable energy sources, Article 4(1)).</p> <p>A prosumer is a customer connected to the distribution system that owns an object for electricity generation from a renewable energy source, where it uses the generated electricity for its own consumption, does not own a license for electricity generation and the surplus electricity is delivered in the distribution grid (Article 68, draft distribution grid code).</p>

¹⁷ Official Gazette No. 112/19.

	Definition of self-consumption generators in legislation	Definition of prosumers in legislation
Serbia	<p>Primary legislation: according to Article 70 of the Energy Law, and Article 3 of the by-law on conditions and procedure for acquiring the status of a privileged electricity producer, an energy entity may acquire the status of a privileged electricity producer or the status of a producer of electricity from renewable sources, if, among others conditions, the power plant in question has a special metering point, separated from metering points in other technological processes, for measuring electricity, i.e. thermal energy that is taken over and delivered, with clear marked metering devices in accordance with Energy Law and Distribution /Transmission Grid Code.</p> <p>According to Article 2(1) of the Energy Law a license is not required for performing electricity generation at facilities having a total approved power of up to 1 MW, unless the same energy facility generates electricity at two or more energy facilities with a total approved power exceeding 1 MW, regardless of whether they are connected to the system via one or more connections.</p>	
Ukraine	<p>Secondary legislation: a generating facility of a private household is a group of interrelated equipment and facilities designed for generation of electricity converted from solar irradiance energy and/or wind energy, which is installed within the boundaries of a private household.</p> <p>According to the changes in the Electricity Law approved in April 2019, non-households (including energy cooperatives) can also install self-consumption generators with a capacity up to 150 kW from solar, wind, biomass, biogas, hydro and geothermal energy.</p>	

The information in the table above shows that the term “prosumer” is only defined in the (primary or secondary) legal framework of Greece, Kosovo*, Montenegro and North Macedonia. Legislation of Albania, Armenia and Bosnia and Herzegovina (Republika Srpska) however include definitions of “self-consumption” (“generation”) that are essentially mirroring all elements of the prosumer definition concept. Similarly, in Moldova the Law on promoting the use of energy from renewable sources defines the term “final customer” in line with the prosumer concept. In Bosnia and Herzegovina (Federation BiH), Serbia and Ukraine definitions of “self-consumption” (“generation”) are in place that are, however, not reflecting all elements of a prosumer; namely, in particular, they lack a notion of the right to sell excess electricity.

Several Contracting Parties (CP) define residential and small commercial prosumers in relation to the size or the power capacity of the installation, even though capacity ranges vary: this is the case for Bosnia and Herzegovina (Republika Srpska; maximum 50 kW and connection 0.4 kV voltage level), Kosovo* (micro-generating facility; cf. chapter 4), North Macedonia (maximum 4kW for households; maximum 20kW for small consumer, budget users or single users) as well as Armenia (maximum 150 kW).

It can be concluded that **In most of the analyzed markets a definition of self-consumption generators and prosumers exists** in primary or secondary legislation, even though in some cases flagging under a different term. In general it is defined as an electricity customer who is at same time and at the same site the owner of a facility generating energy from renewable sources (RES), connected to the grid and having the right to self-consume the generated electricity as well as to deliver excess electricity to the supplier/grid. In several cases, residential and small commercial prosumers are defined in relation to the size or the power capacity of the installation.

2. Regulatory framework for prosumers

A separate regulatory framework for prosumers exists only in Greece and North Macedonia. In all other analyzed markets, there is no separate legal procedure that deals exclusively with prosumers but issues that have to do with or are related to prosumers are regulated by other rules - for example, by Rules of Electricity (Capacity) Supply and Consumption in Georgia and the Rule on Support Scheme for Renewable Energy Sources Generators and Rule on Authorization Procedure for Construction of new Generation Capacities from Renewable Energy Sources in Kosovo*.

3. Legal categorization of RES generating facilities

The present chapter analyses the legal categorisation of RES generating facilities. Based on the data provided, it can be concluded that **in all CPs, Armenia and Greece, criteria for classification of RES generating facilities exist** in either and/or primary and secondary legislation. Criteria for categorization of RES generating facilities are primarily included in the laws on RES, energy laws or secondary legislation dealing with RES support schemes. It has to be noted that not all categorisations make explicit reference to generation from RES. This link however, can be inherently assumed; having in mind that self-consumption generation from other than RES can be excluded.¹⁸ The following table provides a more in-depth overview.

Table 2: Categorization of RES generating facilities

	Categorization of RES generating facilities	Comments
Albania	YES	Primary legislation <ul style="list-style-type: none"> Article 3 RES Law - producer which produces electricity from renewable energy sources and in the case of hydro power with an installed capacity up to 15 MW for a generating unit and benefiting from support schemes, in accordance with the provision of this law. Decision no. 369 dated 26.4.2017 for approval of the methodology for determining the price of electricity for building sources from sun and wind.

¹⁸ This is also confirmed by the definition of 'self-consumption' in Article 2(1) of Directive 2018/2001; cf. chapter II.1.

	Categorization of RES generating facilities	Comments
Armenia	YES	<p>Primary legislation</p> <ul style="list-style-type: none"> • According to Article 4 (1)(13) of the Law on Energy an autonomous generator is a legal or natural person producing electricity for the satisfaction of their own needs, whose installed capacity of installations does not exceed the total capacity of electricity consumption of its installed equipments, but not more than 150 kW. • According to transitional provisions of Energy Law (Article 59) up to December 31 of 2022, the installed capacity of installations based solar energy of self-producers can reach the total capacity of electricity consumption of its installed equipments, but not more than 500 KW.
Bosnia and Herzegovina	YES	<p>Primary legislation</p> <p><u>RS</u>: Article 5 of the Law on RES and efficient co-generation defines a RES generating facility as</p> <ul style="list-style-type: none"> • a hydro power plant with the installed capacity up to 10 MW inclusive, • a wind farm, • a solar plant with photovoltaic cells of the installed capacity of up to 1 MW inclusive, • a geothermal plant of the installed capacity of up to 10 MW inclusive, • a bio-mass plant of the installed capacity of up to 10 MW inclusive, • a bio-gas plant of the installed capacity of up to 1 MW inclusive; • generates electricity in the efficient co-generation facility of the installed capacity of up to 30 MW inclusive; <p>Secondary legislation uses the same definition in the Rulebook on stimulating generation of electricity from renewable energy sources and in efficient co-generation (Article 6).</p> <p>FBiH: The Decree on Encouraging the Production of Electricity from Renewable Energy Sources and Efficient Cogeneration and Determining Incentive Fees (Official Gazette of the Federation of BiH, No. 48/14)</p> <p>Article 20</p> <p>(Conditions for acquiring the status of a privileged producer)</p> <p>(1) The status of a privileged producer may be acquired by legal entities and natural persons whose status of a qualified producer has been established in accordance with Article 20, paragraph (2) of the Law on RES and EC and that possess the Permit for operation for the production of electricity of the Regulatory Commission for the performance of activities of electricity generation</p>

		<p>for the following types of production plants, or power plants: a) hydro power plants with installed power of up to 10 MW, b) wind power plants, c) solar power plant, with installed power of up to and including 1 MW, d) geothermal power plant with installed power of up to and including 10 MW, e) biomass power plants with installed power of up to and including 10 MW, f) biogas power plants with installed power of up to and including 1 MW, g) waste power plants with installed power of up to and including 5 MW, h) the plant of efficient cogeneration of the installed power up to and including 5 MW</p> <p><u>FBiH</u>: the Decree on Incentives for generation of electricity from RES and efficient cogeneration and determination of incentive fees¹⁹</p>
Georgia	YES	<p>Primary Legislation: the Law on Electricity and Natural Gas provides that the size of a micro power plant shall not exceed 100 kW. Secondary legislation: GNERC Resolution No 20 on Approval of the Rules of Electricity (Capacity) Supply and Consumption repeats the Law and provides that the size of a micro power plant shall not exceed 100 kW.</p>
Greece	YES	<p>Primary legislation:</p> <ul style="list-style-type: none"> • Law 2773/1999 defined RES generating installations as the facilities that generate electricity using wind, solar, biomass, geothermal, biogas or hydro energy. • Law 3851/2010, which <i>inter alia</i>, set the fixed tariffs for the remuneration of RES, categorized the above-mentioned facilities of Law 2773/1999 into 17 categories depending on the energy used to produce electricity as well as their installed capacity. • Law 4414/2016,²⁰ which, <i>inter alia</i>, set the legislative framework for the remuneration of RES based on a market premium made a distinction between RES facilities that were obligated to participate in competitive tenders for the determination of the Reference Tariffs of their contracts as well as other RES that could use specific predetermined Reference Tariffs. The Reference Tariffs determined their remuneration level. In this regard, it categorized the RES facilities that were exempted from the participation in competitive tenders into 28 categories depending on their installed capacity and the energy used to produce electricity. This law also did make a distinction between intermittent (installations using wind, solar and hydro energy) and non-intermittent RES (installations using biomass, biogas, geothermal energy as well as solar-thermal and CHP power plants). The Law also provides a distinction between RES operating in Greek non-interconnected islands and those operating in the interconnected system of the mainland. <p>Secondary legislation:</p> <ul style="list-style-type: none"> • Ministerial Decision 1958/13.01.2012 categorized all available installations (including RES installations) into categories depending on their impact on the environment. • Ministerial Decision ΥΠΕΝ/ΔΑΠΕΕΚ/25511/882/2019 supplemented Law 4414/2016 and added 3 more categories for wind facilities.

²⁰ On details see chapter 6 of the present report.

		<ul style="list-style-type: none"> Ministerial Decision ΥΠΕΝ/ΔΑΠΕΕΚ/50234/1658/2019 supplemented Law 4414/2016 and set the Reference Tariffs for the remuneration of small PV installations (less than 500 kW) as well as PV installations operated by Energy Communities (less than 1 MW).
Kosovo*	YES	<p>Secondary legislation: the rulebook on Support Scheme for Renewable Energy Sources Generators defines as follows:</p> <ul style="list-style-type: none"> Large RES Generating Facility – means a generating facility connected to the network with a capacity above 100 kW (> 100 kW); Micro RES Generating Facility – means a generating facility connected to the network with a capacity up to 100 kW (≤100 kW);
Moldova	NO	The only provisions related to the categorization of RES, are in Article 34(1) of Law No. 10, art. 34 (1), but it relates to the definition of support mechanisms for RES.
Montenegro	YES	<p>Primary legislation: Article 98(1) Energy Law prescribes that the Ministry of Economy shall specify the types of facilities for RES generation or in high-efficiency cogeneration and their classification in groups.</p> <p>Secondary legislation: the Ministry of Economy issued rules on the types and classification of facilities for generation of electricity from RES or in high-efficiency cogeneration. In these Rules classification of facilities for RES generation is:</p> <ul style="list-style-type: none"> Facilities with installed capacity up to 1 MW connected to distribution system Facilities with installed capacity from 1 MW to 10 MW connected to distribution or transmission system Facilities with installed capacity above 10 MW connected to transmission system Facilities that are not connected to distribution or transmission system
North Macedonia	YES	<p>Secondary legislation: according to Article 5 of the decree for support measures for electricity generation from renewable energy sources, for preferential producers that use feed-in tariffs, installed capacity should not exceed:</p> <ul style="list-style-type: none"> 10MW for hydro power plants 50MW for wind power plants 1 MW for thermal power plants on biomass and biogas <p>According to Article 6 of the same Decree for preferential producers that use feed-in premiums, installed capacity should not exceed:</p> <ul style="list-style-type: none"> 50MW for Wind power plants 30MW for PV plant

Serbia	YES	<p>Primary legislation: Article 70 of the Energy Law stipulates that an energy entity may acquire the status of a privileged electricity producer for the power plant if it uses RES for the electricity generation process and meets the conditions referring to the installed power, namely: up to 30 MW for hydro power plants and for biomass power plants, biogas power plants, wind power plants, solar power plants, geothermal power plants, waste power plants, and other power plants;</p> <p>Secondary legislation: the by-law laying down the conditions and procedure for acquire the status of a privileged electricity producer, electricity producer from RES and temporarily privileged electricity producer, as well as the by-law on incentive measures for electricity production from RES define the maximal capacity for power plants on RES necessary for obtaining the status of privileged electricity producer, as well as incentive prices for electricity produced from RES</p>
Ukraine	YES	<p>For some types of RES, for the purpose of setting feed-in-tariff limits are defined as follows:</p> <ul style="list-style-type: none"> • Wind: up to 600 kW, 600-2000 kW, over 2000 kW. • Solar (ground-mounted): to 10 MW, over 10 MW. • Solar (rooftop): to 100 kW, over 100 kW. • Hydro: up to 200 kW, 200-1000 kW, 1000-10000 kW • Biomass • Biogas • Geothermal • Customers (including energy cooperatives) generating facilities with installed capacity: wind, solar, combined wind-solar, hydro, biomass, biogas, geothermal up to 150 kW <p>Private households generating facilities with installed capacity:</p> <ul style="list-style-type: none"> • wind, solar up to 50 kW

4. Definition of “small” or “micro” RES generation facilities

The present chapter analyses whether a definition of micro- and/or small-scale RES generating facilities²¹ exists in the primary or secondary legislation of the analysed markets. The following table provides a detailed description of existing provisions.

Table 3: Small and micro RES generating facilities

	Definition of micro- generators in legislation	Comments
Albania	YES	Primary legislation: RES Law 7/2017 defines a small-scale power plant as: <ul style="list-style-type: none"> • power plant with installed capacity up to 2 MW for all renewable technologies; • with installed capacity up to 3 MW for wind energy
Armenia	NO	
Bosnia and Herzegovina	YES	FBIH: secondary legislation- The Decree on Encouraging the Production of Electricity from Renewable Energy Sources and Efficient Cogeneration and Determining Incentive Fees (Official Gazette of the Federation of BiH, No. 48/14) Article 15 (Classification of plants depending on the installed power) The RES and EC plants referred to in Article 14 of this Decree, depending on the installed power of the plant, are divided into: a) Micro plants: from 2 kW up to and including 23 kW, - the Law on RES and efficient cogeneration (Official Gazette FBIH 70/13) in Article 3 (2) defines a micro RES generating facility as a facility with output power in the range of 2-23kW.
Georgia	YES	Primary legislation: the Law on Electricity and Natural Gas defines a micro power plant as a renewable source of power with the capacity not exceeding 100 kW, possessed by a retail customer and connected to the electricity distribution network at the consumption point of the retail customer. Secondary legislation: GNERC Resolution N20 on Approval of the Rules of Electricity (Capacity) Supply and Consumption also includes the following definition of a micro power plant: a renewable source of power with a capacity not exceeding 100 kW, possessed by a retail customer or a group of retail customers and connected to the electricity distribution network at the consumption point of the retail customer(s). The micro power plant may be owned by the customer(s) or conveyed to them for a specific period of time, based on an agreement (lease, finance lease or other form)

²¹ Article 2(39) of Directive 2012/27 defines a ‘micro-cogeneration unit’ as a cogeneration unit with a maximum capacity below 50 kW. Article 2(38) of Directive 2012/27 defines a ‘small-scale cogeneration unit’ as a cogeneration unit with installed capacity below 1 MW. A related definition is not in place for micro-/small-scale RES generating facilities.

	Definition of micro-generators in legislation	Comments
Greece	YES	Primary legislation: in context of the license procedure PV units < 1 MW, hydroelectric units < 500 kW and CHP units < 1 MW are considered small RES generating facilities, according to the Law 3851/2010..
Kosovo*	YES	Secondary legislation: a micro RES generating facility means a generating facility connected to the network with a capacity up to 100 kW (≤ 100 kW).
Moldova	NO	
Montenegro	YES	Primary legislation: the Energy Law defines a small-scale power plant as plant with the power up to 10 MW installed capacity.
North Macedonia	NO	There is no definition for small or micro RES generating facilities in the country`s legislation.
Serbia	NO	
Ukraine	YES	Only for hydro <ul style="list-style-type: none"> • Micro Hydro power plants –with installed capacity up to 200 kW • Mini Hydro power plants - with installed capacity 200-1000 kW • Small Hydro power plants - with installed capacity 1-10 MW

It can be summarized that **in the majority of the CPs**, namely Albania, Bosnia and Herzegovina (Federation BiH), Georgia, Kosovo*, Montenegro and Ukraine **a definition of micro generators or small generators is in place** either in primary or secondary legislation. Within the definitions for micro generators as well as small generators the potential capacity of these generators is also defined, whereby the capacity limits vary ranging from the lowest level in Bosnia and Herzegovina (Federation BiH; 2-23 kW), to a limit of 100 kW applicable in both Kosovo* and Georgia to comparably higher levels in Greece (1MW), Ukraine (1-1000 kW; for hydro only) and Albania (2-3 kW) and the highest level of 10 MW in Montenegro.

5. Maximum level of installed capacity for prosumer

The present chapter assesses the maximum level of allowed installed capacity for household and small commercial prosumers in the analyzed markets. The following table provides an overview of the allowed capacity limits for prosumers.

Table 4: Upper level of installed capacity for prosumers

	Household capacity kW	Small commercial capacity kW
Albania	In accordance with the metering scheme, a small or medium-sized company or a family client may install a total capacity up to 500 kW for the production of electricity from wind or sun to cover part or all of the energy needed for the needs and inject excess energy produced into the distribution network,	
Armenia	150 kW	150 kW; up to 31.12.2022 500 kW for solar
Bosnia and Herzegovina	RS: in the net metering system up to 50 kW FBiH: no definition	
Georgia	The installed capacity of a micro power plant shall not exceed the connection capacity to the distribution network of the particular retail customer. In case of a group of retail customers, the installed capacity of the micro power plant shall not exceed the total connection capacity to the distribution network of the particular group of customers. In any event, the installed capacity of the micro power plant shall be no more than 100 kW. In addition, the total installed capacity of micro power plants connected to the distribution network shall not exceed 2% of the peak load of the distribution network owned by the specific distribution licensee. The peak load is calculated based on the previous year's indicator.	

	Household capacity kW	Small commercial capacity kW
Greece	<p>According to the Ministerial Decision 15084/382-05.03.2019, the installed capacity:</p> <ul style="list-style-type: none"> • In the Interconnected System can be up to 20 kW, or up to 50% of the agreed power consumption if exceeding the upper limit of 20 kW. • In the Non Interconnected Islands can be up to 10kW (especially up to 20kW in Crete), or up to 50% of the agreed power consumption if exceeding the upper limits. 	<p>According to the Ministerial Decision 15084/382-05.03.2019, the installed capacity:</p> <ul style="list-style-type: none"> • In the Interconnected System can be up to 100% of the agreed power consumption and not exceeding 1 MW. • In the non-Interconnected islands can be up to 100% of the agreed power consumption and not exceeding some upper limits per island (with an upper limit of 500 kW for Crete and Rhodes).
Kosovo*	100 kW	
Moldova	200 kW	
Montenegro	By Energy Law it is prescribed that final customer that generates electricity from renewable energy sources (hereinafter: customer - producer) in facilities of up to 50 kW installed capacity or in high-efficiency cogeneration facilities of up to 50kWe installed capacity shall have a right to exchange electricity that it delivers to the system and takes from the distribution system.	
North Macedonia	4kW	20kW
Serbia	A definition of prosumers does not exist ²²	
Ukraine	50 kW (only PV and wind installations)	150 kW (solar, wind, biomass, biogas, hydro and geothermal energy)

²² See chapter II.1.

The maximum allowed level of installed self-generation capacities is **defined in all analyzed markets except** in Bosnia and Herzegovina (Federation BiH) and Serbia. The highest allowed capacity limit for self-consumption is set in Albania with 500 kW for both household and small commercial customers. The analyzed data of the other CPs shows that, for household consumers the allowed capacity varies from 4 kW in North Macedonia to 200 kW in Moldova. For small commercial customers, the allowed capacity varies from 20 kW in North Macedonia to 200kW in Moldova. Also in all cases the installed capacity of the self-consumption generator shall not exceed its connection capacity to the distribution network of the particular retail customer and in case of a group of retail customers, the installed capacity of the micro power plant shall not exceed the total connection capacity to the distribution network of the particular group of customers. The exemption is Kosovo* where the maximum threshold of 100kW applies even if the connection capacity of the particular customer to the distribution network is lower. According to the data sent by Armenia where by 2022 the capacity threshold will be increased, self-producers can reach the total capacity of electricity consumption of its installed equipment, but not more than 50k KW.

6. Setting the upper level of installed capacity for household and small commercial prosumers

The analysis of the previous chapter showed that a maximum allowed level of installed self-generation capacities is defined in almost all analyzed markets.²³ The defined thresholds, however, are further limited by the fact that in all these cases, except Kosovo*, *realiter* the installed capacity of the self-consumption generator shall not exceed its connection capacity to the distribution network. The present chapter analyses which body is in charge of setting the final level of install-able capacity and the therefore applicable procedures.

²³ Except in Bosnia and Herzegovina (Federation BiH) and Serbia.

Table 5: Setting the maximum level of installed capacities

	Yearly average consumption	DSO approved capacity	Other
Albania	The upper installed capacity level for household and small customers is determined by the distribution operator according to the customer's request.		
Bosnia and Herzegovina	<p><u>RS</u>: according to Article 35 of the Law on RES and Article 17 of the Rulebook on stimulating generation of electricity from RES, end users connected to the voltage level of 0,4 kV which provides electricity for her/his own needs with its own generation of electricity from generation facilities which use renewable energy sources which installed capacity that does not exceed 50 kW may takeover electricity from the distribution network and deliver it to the distribution network following the principle of „net metering“ having obtained decision made by the Regulatory Commission.</p> <p><u>FBiH – NAP</u>²⁴</p>	<p><u>RS</u>: the distribution system operator is obliged to, pursuant to Article 9(1) of Rulebook on stimulating generation of electricity from RES, prescribe the terms and conditions and procedure for connection of the end user's facility to the network and pursuant to the same Article and other regulations provide necessary technical conditions and connect the end user's structures in order to enable full operational level of the net metering principle.</p> <p><u>FBiH – NAP</u></p>	
Georgia		The installed capacity of the micro power plant shall not exceed the connection capacity to the distribution network of the particular retail customer.	
Greece		In kW – see table 4	

²⁴ Cf table 4.

	Yearly average consumption	DSO approved capacity	Other
Kosovo*	Currently there is no method for determination the upper level, but all customers that are connected to the low voltage (0.4 kV) network with a capacity up to 100 kW (≤ 100 kW) have the right to become prosumers. When applying to the NRA for changing the status from a regular consumer to prosumer all applicants have to bring also the yearly average consumption, evaluation on annual kWh production of installed equipment and the consent for connection to the grid, issued by DSO		
Moldova		Article 39 of the Law on promotion use of energy from renewable sources states end users that have in property RES generators that will benefit from a net metering mechanism based on “first come – first served” principle. At the same time, the total installed capacity of these sources cannot exceed 5% of the maximal distribution grid load for the previous year.	Article 39(2) item b) of the Law on promotion use of energy from renewable sources states that the installed capacity of the RES may be up to 200 kW, but no more than the power contracted with its electricity supplier (e.g. if it has the contracted power of 5 kW, it can install no more than 5 kW of RES).
Montenegro²⁵			The Energy Law prescribed that the Agency approves the Electricity Distribution Grid Code. In the Electricity Distribution Grid Codes it is prescribed that the upper level of installed capacity for household is 34.5 kW. The Energy Law defines that a small sized customer which is not included in the category of households, represents a customer that purchases electricity or gas for its own consumption, has less than 50 employees, its electricity consumption in the previous calendar year does not exceed 30,000 kWh / its natural gas consumption in the previous calendar year does not exceed 100,000 m ³ , while its annual income does not exceed €8,000,000 or its total assets (property by the income statement) do not exceed €8,000,000

²⁵ General definition of maximum level of installed capacities; not specifically related to prosumers only.

	Yearly average consumption	DSO approved capacity	Other
North Macedonia		<p>According to Article 68(1) item 1) of the draft Distribution grid code, the prosumer should not exceed the installed capacity defined in the Rulebook on renewable energy sources.</p> <p>According to Article 4(2) items 3) and 4) of the Rulebook on Renewable energy sources, the prosumer status can be obtained if the upper level of installed capacity is:</p> <ul style="list-style-type: none"> -For households, the plant cannot be more than 4kW installed capacity -For small consumer, budget user or a single user, the plant cannot be more than 20kW installed capacity. 	
Serbia²⁶		<p>Households have to be connected to the distribution system on the low voltage level (up to 1kV) with the maximum power capacity of 14.5 kW (for one phase connection, fuse current 63 A) or 43.5 kW (for three phase connection, fuse current 3x63 A).</p> <p>Small customers have to be connected to the distribution system on the low voltage level (up to 1kV) and there is no defined maximum power capacity.</p> <p>According to Energy Law Article 2(37)</p> <p>Small electricity customers are final customers (legal persons and entrepreneurs) with fewer than 50 employees and a total annual revenue of up to EUR 10 million in dinar²⁷ counter value, whose all facilities are connected to the electricity distribution system with the voltage level lower than 1 kV, and whose electricity consumption in the previous year was not higher than 30,000 kWh. Preconditions for connection to distribution network are defined in distribution code</p>	
Ukraine			Upper level of installed capacity (50 kW for households and 150 kW for non-households) is defined by the Alternative Energy Sources Law and Electricity Law

²⁶ General definition of maximum level of installed capacities; not specifically related to prosumers only.

²⁷ Serbian national currency.

In all analyzed markets, except Kosovo*, determination of the generating capacity of the generators for self-consumption for household and small commercial customers is based on DSO contracted capacities.²⁸ The installed capacity of the prosumers should not exceed the DSO permitted capacity. In all markets, also the capacity of generators for self-consumption is limited and these capacities, despite the fact that consumers may have greater capacities allowed by DSO, cannot be exceeded. The capacity limitations are regulated by primary laws on renewable energy sources, secondary rules as well as by network codes.

7. The prosumer connection point to the grid

In the majority of the analyzed markets, namely Albania, Bosnia and Herzegovina, Kosovo*, Moldova, Montenegro, North Macedonia and Ukraine, prosumers are connected to low voltage. However, in some cases – namely, Albania, Georgia and Ukraine - prosumers are allowed to be connected also to the medium voltage level while in Armenia prosumers may be connected even at high voltage because the DSO network responsibility is up to 110 kV. Also in Ukraine there is no legal and technical restrictions regarding the connection of prosumers to the high voltage level.

Table 6: Prosumer connection point to the grid

	Low Voltage	Medium Voltage
Albania	YES	YES
Armenia	YES	Prosumers are connected to the distribution grid in any case, the upper voltage level of which is 110 kV
Bosnia and Herzegovina	YES	
Georgia	YES	YES
Greece²⁹	Up to 250 kV	
Kosovo^{*30}	YES	
Moldova³¹	YES	
Montenegro³²	YES	

²⁸ Current capacity allowed for the customer.

²⁹ Low Voltage level should be 230/400V ($\pm 10\%$) and Medium Voltage levels should be 15 kV and 20 kV ($\pm 10\%$).

³⁰ Low Voltage- Voltage below 1 kV; Medium Voltage- Voltage at the level of 35 kV up to 1 kV.

³¹ In Moldova, there is no definition of voltage levels in normative acts, but according to technical normative acts – LV = 0.4kV and MV = 10kV.

³² According to Rules for functioning of the distribution system, low voltage level is up to 1 kV and medium voltage levels are 10 kV, 20 kV and 35 kV.

	Low Voltage	Medium Voltage
North Macedonia	<p>YES</p> <p>According to Article 38(2) of the draft Distribution Grid code, if the installed capacity is ≤ 100 kW and the point of connection is on a 0.4kV distribution network</p>	
Ukraine³³	YES	YES

³³ Low voltage- 0.4kV; Medium voltage- 6-35kV

8. Regulatory role in application procedures for prosumers

The present chapter presents an overview of the role of regulators in the process of receiving the status of a prosumer.

Table 7: Regulatory role on application procedures for prosumers

	Does the consumer have to apply to the NRA to get a status of prosumer	Documents and permits the consumer has to submit to the NRA	Is there any fee for application to the NRA	Has the NRA any role in planning and construction of micro/small generators
Albania	NO	NAP ³⁴	NO	NO
Armenia	NO	NAP	NO	According to Article 23(2) of the Law on Energy Generation the activity of an autonomous generator using RES during the construction (except for small hydro power plants) and generation period is not subject to licensing. A consumer that intends to construct a small hydro power plant for becoming the autonomous generator shall have the electricity (power) generation license for the construction period.

³⁴ NAP stands for not applicable.

	Does the consumer have to apply to the NRA to get a status of prosumer	Documents and permits the consumer has to submit to the NRA	Is there any fee for application to the NRA	Has the NRA any role in planning and construction of micro/small generators
Bosnia and Herzegovina	RERS: according to Article 17 of the Rulebook on stimulating generation of electricity from renewable sources in order to obtain a decision on the right to the takeover following the principle of net metering, the end user is obliged to have a certificate ³⁵ and submit to RERS the filled in form of the application for takeover following the principle of net metering. <u>FERK</u> – N/A ³⁶	<u>RERS</u> : Application for incentive with the accompanying documents which are stated in the application form and which are applicable for the incentive following the net metering principle. Standard application form published at the website of RERS http://www.reers.ba/node/212 <u>FERK</u> – N/A	<u>RERS</u> : NO <u>FERK</u> –N/A for prosumers, all other producers are obliged to pay one-off fee for application to NRA	<u>RERS</u> :_NO - according to Article 10 of the Law on renewable energy sources the Government of the Republika Srpska entity makes an Action Plan for utilization of renewable energy sources presenting the goals on the share of energy from renewable energy sources in the gross final consumption. RERS within the scope of its competences issues the licenses for construction of generation facilities of more than 1 MW and takes decision on the preliminary right to the incentive so it can be stated that it has certain impact more on the construction than on the planning of those facilities..
Georgia	NO	NAP	NO	YES: GNERC regulates the terms for connection of a micro generation plan to the distribution network.
Greece	NO: for the case of net metering (use of solar PV), but the customer has to notify the NRA about the contract of net metering with the supplier.	Copy of the contract of energy netting, for the case of net metering (use of solar PV).	NO	YES: in the planning and especially in the licensing procedure, for units ≥ 1MW.

³⁵ The certificate is issued by the Regulatory Commission at the request of the applicant pursuant to the Rulebook on issuance of the certificate for generation facilities which generate electricity from renewable energy sources.

³⁶ N/A-stands for cases where information is not available.

	Does the consumer have to apply to the NRA to get a status of prosumer	Documents and permits the consumer has to submit to the NRA	Is there any fee for application to the NRA	Has the NRA any role in planning and construction of micro/small generators
Kosovo*	YES	Annual energy consumption; evaluation on annual kWh production of installed equipment; consent for connection to the grid, issued by the DSO; and consent from the relevant municipality.	NO	NO
Moldova	NO	NAP	NO	NO
Montenegro	NO	NAP	NO	NO
North Macedonia	NO	NAP	NO	NO
Ukraine	NO	NAP	NO	NO

According to the roles and procedures established in the analyzed markets, only in Bosnia and Herzegovina (Republika Srpska) and Kosovo* customers have to **apply to the regulator for a status change from a regular customer to a prosumer**. In the other analyzed countries customers have to apply directly to the DSO. In Bosnia and Herzegovina (Republika Srpska), end users are obliged to have a certificate and submit to the regulator the completed form of the application for takeover following the principle of net metering. Certificates are issued by the regulator at the request of the applicant. In Kosovo*, a legal or natural person that plans to construct new generation capacities for self-consumption is obliged to submit a written request to the regulator which, after reviewing all requested evidences, will issue a decision. Also in Greece, for the case of net metering (use of solar PV) there is no need for application to the regulator but customers have to notify the regulator of the contracts of net metering with the suppliers.

In all analysed markets **fees** are not applied for receiving the status of a prosumer.

In the majority of the analysed markets, namely Albania, Kosovo*, Moldova, Montenegro, North Macedonia and Ukraine, regulators have no role in **planning and construction** of micro/small generating facilities. Only in Georgia GNERC regulates the terms for connection of a micro power plant to the distribution network whereas in Armenia only small hydro generators shall have the electricity (power) generation license for construction period.

9. Exemptions from license requirements for micro/small generators

In almost all analyzed markets, **micro and small generators³⁷ are exempted from licensing requirements**. Also it can be noted that in all markets generators with a total approved installed capacity **less than 1 MW** are not subject to licensing. The situation differs in Ukraine, where for households – with less than 50 kV and for non-households – less than 150 kV, the license is not required, but for other RES generators license is required; for non-RES generators smaller than 5MV license is not required. More information on licensing conditions may be found in the table below.

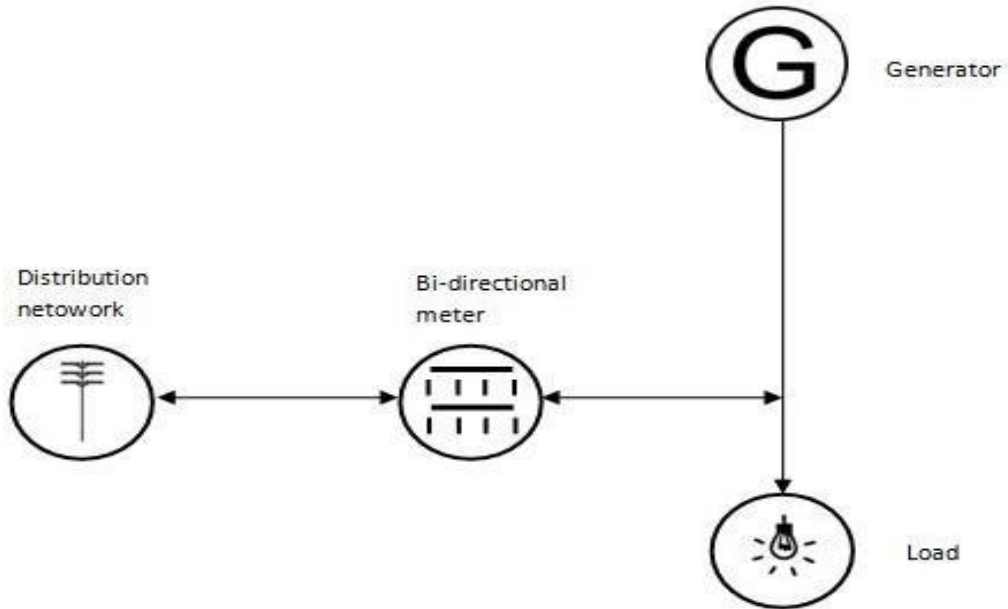
³⁷ On definitions see chapter II.4.

Table 8: License exemptions

License exemption in place?	
Albania	YES
Armenia	YES: according to Article 23 (2) of Law on Energy the activity of an autonomous generator using RES during the construction (except for small hydro power plants) and generation period are not subject to licensing.
Bosnia and Herzegovina	RES: YES - pursuant to Article 51 of the Law on electricity licenses for construction and generation are only issued for facilities with a capacity of more than 1 MW. FERK: Law on Electricity in the Federation of Bosnia and Herzegovina (Official Gazette of the Federation of BiH, number 66/13 and 94/15), Article 85. In the FBiH, all production facilities are licensed except for production facilities for their own needs.
Georgia	YES: the Law on Electricity and Natural Gas exempts generation of electricity by micro power plants from licensing requirement
Greece	YES: for units smaller than 1MW
Kosovo*	YES
Moldova	YES: for units smaller than 5MW
Montenegro	YES: for units smaller than 1MW
North Macedonia	YES: according to Article 38 of the Energy Law a license is not required for generation of electricity from RES intended for own consumption, whereby the surplus of the produced energy shall be transferred to the power distribution network under conditions and in a manner determined in accordance with the regulations and rules adopted on the basis of this Law.
Serbia	YES: according to the Article 21 of the Energy Law a license is not required for performing electricity generation at facilities having a total approved power of up to 1 MW, unless the same energy facility generates electricity at two or more energy facilities with a total approved power exceeding 1 MW, regardless of whether they are connected to the system via one or more connections.
Ukraine	YES

10. Self- consumption schemes

The present chapter analyses the self-consumption schemes³⁸ in place in the analyzed markets. As a starting point, the following graph illustrates self-consumption schemes:



Net-metering is a simple arrangement that ensures consumers that install a generator (usually photovoltaic (PV) systems) receive a one-for-one credit for any electricity their systems generate and export to the grid within a billing period. In this case, production and consumption are compensated over a longer period (up to one year). Under a net-metering scheme, all kWh of the generator are equally valorized.

Net-billing is an arrangement by which the consumer receives one-for-one monetary credits for every kWh of exported to the grid. Every kWh is valorized either at a single price or at a price which corresponds to the time of production. Credits are awarded over a determined time-frame, typically one year. It is equivalent to a net-metering scheme, but with monetary compensation instead of energy compensation.

The table hereinafter summarizes the self-consumption schemes in the analysed markets.

³⁸ “Self-consumption scheme” means the commercial arrangement applied to value self-consumed energy and excess energy injected into the grid.

Table 9: Self consumption schemes

	Net metering	Net billing	other
Albania			According to Article 10 paragraph 1 of the Law on RES, the purchase price of electricity from hydro power with installed capacity up to 2 MW and other priority producers is set by ERE in accordance with the methodology approved by the Council of Ministers, upon the proposal of the Minister. The methodology determines the criteria for calculating the price, based on reasonable return on the value of the investments, according to the type of technology used.
Armenia	<p>Within the framework of electricity swap between the generator using RES and the DSO, compensation is not provided for the amount of electricity supplied (given) throughout the year, which is equal to the amount of electricity received (given) from the other side during the given year. By the annual results, the DSO acquires electricity over the volume that is not subject to compensation supplied by a producer using renewable energy sources by:</p> <ul style="list-style-type: none"> • 50% of the tariffs set for each month by regulator for the particular consumer group, except for the cases provided by the next two points; • in the case of small hydropower plants - equal tariff set by the by the regulator for the given group of small HHP's (constructed on natural flow, on irrigation system or on drinkable water pipeline); • in the case of electricity generation plants using solar and wind energy sources - equal to the lowest tariff set by the regulator for the industrial scale power plants using solar energy source, if that tariff is below of 50% of the tariff defined in the point 1 		

	Net metering	Net billing	other
Bosnia and Herzegovina	<p>RERS</p> <ul style="list-style-type: none"> • The DSO is obliged to read the metering device and inform the Incentive system operator and supplier of end user on the realized generation, namely consumption of electricity of end user which is entitled to the takeover of electricity following the net metering principle. • The supplier of end user is obliged to, at the request of the end user conclude a contract on takeover of electricity following the net metering principle. • Net balance of the two-way metering device of the active electricity is the basis for calculation and payment or settlement between the contracting parties for taken over namely delivered electricity. • In case that reading of the two-way metering device of the active electricity in the calculation period shows that end user took over more electricity than it delivered it to the network, the end user pays the difference between the taken over and delivered electricity pursuant to the contracted tariff rates for supply. • In case that reading of the two-way metering device of the active electricity in the calculation period shows that the end user delivers more electricity to the network that it took over from it, the difference between the delivered and taken over electricity is transferred to the next calculation period in the favor of end user. <p>FERK – N/A</p>		<p>RERS</p> <p>The net metering system is not implemented in praxis despite the legal provision, due to problems with interpretations of the Indirect Taxation Authorities.</p> <p>FERK – N/A</p>

	Net metering	Net billing	other
Georgia	YES		<p>If during the billing period the volume of electricity generated and delivered to the distribution network exceeds the volume of electricity received from the network and consumed by the customer, the customer will be credited for the difference in the next bill.</p> <p>Each year, the customer's credit as provided in bill for the month of April is considered as the electricity delivered by the customer to the network and purchased by the distribution licensee and the latter has the obligation of final settlement of the bill for the year (previous 12 months). The price for settlement is the average weighted price of purchased electricity, as foreseen in the tariff of the relevant distribution licensee, set by GNERC.</p>
Greece	The prosumer is compensated through the channeling of any surplus power into the grid, through offsetting in clearing accounts/ bills.		
Kosovo*	<ul style="list-style-type: none"> • Suppliers off take all electricity produced and deliver all electricity consumed by prosumers within a billing period; • Suppliers account for the prosumer balance of the billing period, based on which the monthly invoice is prepared; • If the prosumer balance is positive, the prosumer is credited in energy (kWh) in the next billing period; • Any outstanding positive balance on the last billing period of a calendar year is reset to zero (0 kWh) without compensation from the supplier; • If the prosumer balance is negative, then the supplier invoices the prosumer for the value of the prosumer balance. • Suppliers are obliged to enter into a prosumer agreement with any prosumer with whom they have an electricity supply contract • The prosumer agreement sets, among others, the obligation for the supplier to offtake all electricity generated by the prosumer. 		

	Net metering	Net billing	other
Moldova	According to the legislation, the final consumer, who produces electricity from renewable sources for his own use and who has signed with the supplier a contract for the supply of electricity at a regulated price, has the right to deliver the surplus of electricity produced to the electricity network, and the supplier respectively, it is obliged to conclude, at the request of the respective final consumer, a contract for the application of the net metering mechanism, according to the law.		
Montenegro		YES	<p>Article 96 of Energy Law prescribes:</p> <ul style="list-style-type: none"> • A final customer that generates electricity from renewable energy sources in facilities of up to 50 kW installed capacity or in high-efficiency cogeneration facilities of up to 50kWe installed capacity shall have a right to exchange electricity that it delivers to the system and takes from the distribution system. • The supplier who supplies such customers shall buyout the surplus of generated electricity which is to be determined at a monthly level. • The DSO performs separate metering of quantity of generated and consumed electricity at the connection point and submit them on a monthly basis to the supplier. • Should the quantity of generated electricity be higher than overtaken, the supplier shall determine, bill and pay the difference in quantity of electricity to the customer at a price equal to the price of electricity delivered to that customer - producer in the accounting period, excluding payment of network services and charges, according to the law. • Should the generated quantity of electricity be lower compared to the overtaken one, the supplier shall determine and calculate the difference of electricity, while the customer shall pay the difference per price of the supplier for the respective voltage level, which encompass payment for electricity, network services and charges according to this law.

	Net metering	Net billing	other
North Macedonia		In accordance with Article 4 paragraph (3) of the Rulebook on RES the generated and delivered electricity should be measured by meters installed by the DSO. Article 5 of the Rulebook on RES precisely defines the methods for payment of excess of generated electricity taken off by the supplier and the payments of the customer when it buys for electricity consumption.	
Serbia			There is no definition of prosumers in Serbia, so net-metering scheme is not provided. However, Distribution Grid Code defines that at producers' connection point a separate meter has to be provided for electricity produced and injected to the system as well as a separate meter for electricity taken from the system. This can be realized by using one meter which will register separately injected and taken electricity or by building separate network connections with separate meters for metering injected and electricity taken from distribution system.
Ukraine			Customers with RES generating facilities get paid for net electricity they injected into the network with feed in tariffs.

Based on the current regulatory framework it can be concluded that **all analyzed markets, except Albania and Serbia, have regulated or introduced two self-consumption schemes for small-scale renewable energy technologies** – i.e. net metering and/or net billing.

Net metering is introduced in Armenia, Bosnia and Herzegovina, Georgia, Kosovo* and Moldova. In Montenegro and North Macedonia **net billing** is introduced, whereas in Ukraine all customers with RES generating facilities get paid for net electricity they injected into the network with **feed-in-tariffs**. It is interesting also to highlight that in Georgia both support schemes are combined: for cases where the prosumer balance is positive at the end of the year, the price for settlement is the average weighted price of purchased electricity as foreseen in the tariff of the relevant distribution licensee, set by GNERC. In Greece, net metering is introduced whereby the prosumer is compensated through the channeling of any surplus power into the grid, through offsetting in clearing accounts/ bills.

11. Information on prosumers available to regulators - register on prosumers and installed capacity

A register of on prosumers and installed capacities³⁹ is only established with the regulatory authorities of Bosnia and Herzegovina-Republika Srpska and Kosovo*. In other cases, the records or registers on prosumers are kept by the DSO. In Georgia, the regulator receives full information on the customers with micro power plants through the quarterly and annual reports of the distribution system operators.

Table 10: Information on prosumers available to regulators.

	YES	NO
Albania		NO
Armenia		NO
Bosnia and Herzegovina	RERS (The system did not go live yet).	FERK – N/A
Georgia		There is no official registry, but GNERC receives full information on the customers with MPPs through the quarterly and annual reports by the DSO
Greece		Record is kept by DSOs
Kosovo*	YES	
Moldova		NO
Montenegro		NO
North Macedonia		NO
Serbia		NO
Ukraine		NO

³⁹ There is a legal requirement in Bosnia and Herzegovina-Republika Srpska, however it is still not implemented in practice.

12. Necessary documents for prosumer applications

The following table provides an overview of the documents a customer has to provide to the distribution system operators of the analyzed markets when applying for grid connection as prosumer.

Table 11: Required documents

	List of documents	Document and Description
Albania		<p>Installed power 0-20 kW</p> <ul style="list-style-type: none"> • Request for electricity supply • Identity verification (photocopy of identity card or passport) • Certificate of ownership of the object through ownership registration documents such as: sale, donation act, real estate lease, lease, documentation relevant to the objects that are in the process of legalization) • Photocopy of certificate of registration (for non-family entities) • The facility's location plan on a scale of 1:1000 (two copies), (specified surface area contour coordinates). • Installation statement and grounding protocol, issued by a licensed electrical engineer. <p>Installed power 20-50 kW</p> <ul style="list-style-type: none"> • Request for electricity supply • Identity verification (photocopy of identity card or passport) • Certificate of ownership of the object through registration documents ownership such as: sale act, donation act, shareholding share act, lease contract, relevant documentation for objects that are in the process legalization) • Photocopy of certificate of registration (for non-family entities) • The electrical project of the facility, approved by the competent authorities according to legislation in force • Planning of all equipment in the facility • License of the electrical engineer who has made the electrical project of the facility. • The facility's location plan at the scale of 1:1000 (two copies), (specified object track coordinates). • Installation statement and earthing protocol, issued by an electrical engineer licensed. • Detailed engineering report regarding the project and calculation of it data, performed by a licensed electrical

		<p>engineer.</p> <p>Installed power 50 - 100 kW</p> <ul style="list-style-type: none"> • Request for electricity supply • Identity verification (photocopy of identity card or passport) • Certificate of ownership of the object through the documents of property registration such as: sale, donation act, share act real estate, lease, relevant documentation • for objects that are in the process of legalization) • Photocopy of certificate of registration (for subjects unfamiliar) • The electrical project of the facility, approved by the competent authorities according to the legislation in force • Planning of all equipment in the facility License of the electrical engineer, who has made the electrical project of facility • The facility's location plan at the scale of 1:1000 (two copy), (specified object track coordinates). • Installation Statement and Grounding Protocol, issued by a licensed electrical engineer. • Detailed engineering report related to the project and calculation of data, performed by electrician equipped with license. • Building permit for the building • Electric load chart • Analytical relationship for assessment of cost
<p>Bosnia and Herzegovina</p>	<p>The rulebook on conditions for connection of the plants to the electric distribution network prescribes the documents which should be enclosed to the application for issuance of the electric power consent and also during other proceedings.</p>	<p>RERS</p> <p>Rule book with annexes is available at the website: http://ers.ba/ci/podsticaj-proizvodnje-iz-obnovljivih-izvora-i-u-efikasnoj-kogeneraciji/ As well as at the website of all five DSOs in Republika Srpska.</p> <p>FERK – N/A</p>

List of documents		Document and Description
Georgia	Application for connection of a micro power plant to the distribution network	The application form is approved by GNERC. It is a two-page document, where the information about the applicant and the micro power plant shall be provided.
Greece	Application form to DSO	The application must include -at least- personal information of the prosumer, information about the building, technical data about the installation (Solar PV), and evidence of ownership status of the property where the PV system will be installed, along with existing contracts.
Kosovo*	Application for connection to the distribution network <ul style="list-style-type: none"> • Project design; • Capacity request; • Consent from the relevant municipality 	The application must include: <ul style="list-style-type: none"> • All personal data's of the customer, address, point of connection, capacity request, etc. • Electricity design of installment; • Urban technical condition
Moldova	<ul style="list-style-type: none"> • Act that attests the property or the use right for the plant and/or for the field were the plant was build. • Act that attest the right to represent the applicant (if it is necessary) • Decision to register the legal entity • The plan for the location of the power plant 	
Montenegro	<ul style="list-style-type: none"> • Urban-technical conditions • Revised design or main project of the object being the subject of connection • A photocopy of the identity card of the applicant or an excerpt from the register by tax number and a bank account for legal entities 	With the request form for connection the applicant enclose the following documentation: <ul style="list-style-type: none"> • Urban-technical conditions with map of a detailed urban plan in digital (CD) and paper form in which infrastructure networks and roads are built and guidelines and conditions for construction of infrastructural and communal facilities, • Revised design or main project of the object being the subject of connection, done in accordance with the law, technical regulations, standards and recommendations of DSO (in digital (CD) and paper form), • A photocopy of the identity card of the applicant or an excerpt from the register by tax number and a bank account for legal entities

	List of documents	Document and Description
North Macedonia		<p>Article 69 paragraph (3) of the draft distribution grid code:</p> <ul style="list-style-type: none"> • Proof of ownership of the object on whose internal installation a production plant is installed. • Basic project for the production plant • Decision for placement or approval for construction of a production plant issued by a competent body in accordance with the Law on Construction <p>Article 71 of the draft distribution grid code: after obtaining the connection solution, the DSO is obliged to put the plant under voltage, after submitting a request from the prosumer. With the request for putting the plant under voltage, the prosumer should submit:</p> <ul style="list-style-type: none"> • A certificate from an authorized company or a person that the internal connection and the internal installation in the facility are performed in accordance with the applicable standards • Supply contract in accordance with the rulebook on renewable sources
Ukraine		<p>The application for connection with copy of documents:</p> <ul style="list-style-type: none"> • A copy of the title document evidencing the title to or the right to use such facility, or, if there is no facility, the title to or the right to use the land plot. <p>If no cadastral number is indicated in the certificate of title to the land plot – a copy of the topographic and geodesic plan or plan for developing the area, with the indication of the land plot location;</p>

13. Grid connection costs and their determination

The present chapter provides an overview of the costs for grid connection and their determination in the analysed markets whereby grid connection costs for general consumers and prosumers do not differ: consumers that are already connected to the grid and want to become prosumers are not subject to additional connection charges to the extent the total capacity installed equipment is not exceeded but only administrative costs for issuing the connection permit are charged. When dealing with new consumers, the connection costs to distribution network will be calculated based on connection charging methodology or distribution grid codes. The following table gives an in-depth oversight.

Table 12: Are there additional costs for connection of prosumers and their determination

	Yes	No	other
Albania		<p>T1 - Tariff Of The Study And Assessment Of The Approval Of Design</p> <p>T1 is a fixed fee associated with the costs of studying the new connection project and studying and updating the connection point with the GIS methodology. By categorization of the clients and the voltage level where the new connection is required is defined:</p> <ul style="list-style-type: none"> • For family clients - T1 = 8.12 € • For low-cost non-household customers - T1 = 40.61€ • For customers connected to medium voltage 6/10/20/35 kV - T1 = 186.81€ • For additional power, connection modification, connection transfer T1 = 0€ 	

	Yes	No	other
Armenia		Taking into account that the installed capacity of installations of the self-generator does not exceed the total capacity of electricity consumption of its installed equipment, there are no costs in relation to the grid connection	
Bosnia and Herzegovina		RERS Self-generators pay the connection costs as all other customers.	FERK All generators have certain costs in relation to the grid connection depending on connection point.
Georgia	GNERC sets the fees for connection of the MPP to the distribution grid.		
Greece	Costs are determined by the DSO		
Kosovo*	New customers will be charged in accordance with connection charges methodology	If the customer is already connected there are no additional charges	
Moldova	The costs for the connection are born by the applicant. The costs are determined by a methodology approved by ANRE.		
Montenegro	Article 180 of Energy Law foresees that the applicant for connection to the electricity or gas transmission or distribution system, or for increase of the connection capacity shall pay the connection charge. The charge comprises: <ul style="list-style-type: none"> • costs for creating connection to the system; • costs for creating technical conditions in the system. 		

	Yes	No	other
North Macedonia	<p>According to Article 70 paragraph (3) of the draft distribution grid codes, the connection fee for the prosumers shall consist only of the administrative costs for issuing the connection permit in accordance with the DSO price list, provided that the total power of the issued connection solution for connecting producers and prosumers to the distribution network does not exceed the different values per transformer station, divided in 4 categories:</p> <p>TS (MV/LV) - 630kVA, total installed capacity = maximum 200kW TS (MV/LV) - 400kVA, total installed capacity = maximum 120kW TS (MV/LV) - 250kVA, total installed capacity = maximum 80kW TS (MV/LV) - 100kVA, total installed capacity = maximum 35kW.</p> <p>If the aforementioned limit is exceeded, the connection cost will be calculated according to real costs for connection.</p>		
Serbia	<p>Connection costs are determined by Methodology for calculation of connection cost, issued by the regulator. On the basis of this methodology the DSO is obliged to calculate cost of connection in each case, and to issue a decision on connection in accordance with Administrative Law. This decision may be subject of appeal which may be submitted to the regulator for resolving.</p>		
Ukraine	<p>Connections costs are determined on a general basis.</p> <p>1) If the distance to the connection point less than 300 m, then costs include a value of the cost of service for connection of 1 kW of capacity, established by the regulator for a definite term for each DSO.</p> <p>2) If the distance to the connection point more than 300 m, then costs include:</p> <p>1. the value, established by the Regulator for every DSO, of component in the cost of service for connection of 1 kW of capacity, which is differentiated by such indicators:</p> <ul style="list-style-type: none"> • type of electric power installation that is being connected (electric power installation intended for production of electricity, or for consumption of electricity); • category of electricity supply reliability; • level of voltage in connection point (110/35/10(6)/0,4 kW); • contracted capacity; • location of the electric power installation (city or rural area); • workload of transformer substation; <p>2. The cost of creating a linear unit of electric network.</p>		

14. Contractual relations of prosumers with network operators and suppliers

This chapter analyses the contractual relations prosumers have to enter into with network operators and suppliers in the assessed markets. Details are provided in the following table.

Table 13: Contractual relations

	DSO	Supplier
Albania	The agreement of new connection to the distribution network (ANNEX 1_ New Connection Agreement and ANNEX 2 - Fees for new connections) are part of the Regulation on new connections to the distribution system approved by the ERE Board Decision No. 166, dated 10.10.2016, as amended by Decision No. 177, dated 08.11.2016 of the ERE Board)	Not defined
Armenia	The Self-generator signs an electricity supply and compensation contract with the DSO which exemplary form has been set by the regulator's Resolution №273N of October 10, 2016	-
Bosnia and Herzegovina	RERS: contract on connection, contract on access FERK – N/A	RERS: contract on supply following the net metering principle FERK – N/A
Georgia	The electricity distribution and supply activities in Georgia are yet to be unbundled. There is no requirement for signing a contract. All the details of the relationship between the customer and the DSO are provided in the Electricity (Capacity) Supply and Consumption Rules approved by GNERC and both parties have to act in accordance of the Rules	-
Greece	Contract for connection	Contract of energy netting

	DSO	Supplier
Kosovo*	Contract for connection	Prosumer Agreement – A template agreement, developed and approved by ERO, which is signed by a supplier and a Prosumer and which specifies, among others, the terms and conditions of electricity off-take by the supplier and electricity consumption by the prosumer and their rights and obligations
Moldova	No contract required	The consumer that produce energy, first of all needs to have a contract of supply with a supplier. Also, if is necessary to sell the energy that is produced, the parties need to sign a contract for the net metering.
Montenegro	Contract for connection	Supply contract
North Macedonia	Connection contract	Supply contract (with additional provisions for prosumer-supplier relations)
Serbia⁴⁰	Contract on access to the system	Supply contract/purchase agreement
Ukraine	Contract for distribution services	Supply contract; contract for purchase electricity at feed-in-tariff

With the exception of Armenia, Georgia and Moldova, in all other analysed markets prosumers have to have separate connection contracts with the DSO as well as supply contracts. In Armenia, a self-generator has to sign an electricity supply and compensation contract with the DSO. In Georgia, because the electricity distribution and supply activities are yet to be unbundled, there is no requirement for signing separate contracts and all details of the relationship between the customer and the DSO are provided in the Electricity (Capacity) Supply and Consumption Rules approved by GNERC. In Moldova, there is no need to sign a connection contract with the DSO but consumers that produce energy need to have a contract of supply with a supplier and sign a contract for net metering. In Kosovo*, a prosumer agreement needs to be signed - this is a template agreement, developed and approved by ERO, which is signed by a supplier and a prosumer and which specifies, among others, the terms and conditions of electricity off-take by the supplier and electricity consumption by the prosumer, their rights and obligations.

⁴⁰ In Serbia a contract on access to the system and a supply contract/purchase agreement are signed by all customer. Prosumers are not defined in the law.

15. General requirements for metering

Table 14: Metering requirements

General requirements for metering	
Albania	Not defined
Armenia	According to the temporary trading rules of electricity wholesale market: renewable energy based self-generators that implement electricity cross flow shall install bi-directional multi tariff electronic meters. Issue related to purchase and operation of that meters are regulated by the rules of electric power supply and use and by other legal acts of the regulator.
Bosnia and Herzegovina	RERS: general requirements for metering are prescribed in the Chapter VII Technical requirements for the metering point of the rulebook on the connection requirements of the plants to the electric distribution network. FERK – N/A
Georgia	The Electricity (Capacity) Supply and Consumption Rules provide that in case of net metering, bi-directional meters shall be installed by the distribution licensee.
Kosovo*	The Metering Code provides that in case of net metering, bi-directional meters shall be installed by the distribution licensee.
Moldova	There are no specific requirements regarding the meters, it is stated that the prosumer should have a meter capable to count both, consumed and injected electricity.
Montenegro	General requirements for bi-directional meters for small generators are the same as for all generators and are depending from case to case. Types are defined in Rules for metering in distribution system.
North Macedonia	The Rulebook for RES determines that generated electricity delivered to the distribution system should be metered by meters that fulfill conditions prescribed in the distribution grid code and are owned by the distribution system operator. For the prosumers are uses bidirectional meters.
Serbia	General requirements for meters for all generators are defined by the DSO when the generator is connected to the system. Characteristics are defined in the distribution network code.
Ukraine	All self- generating facilities must have bi-directional meters or two separate meters (for injections and consumption). As of December 2019, this requirement is for households with capacity of up to 50 kV and for non-households of up to 150 kV.

Regarding the metering systems requirements, all **prosumers should have bi-directional meter installed** in their premises in Armenia, Bosnia and Herzegovina-Republika Srpska, Georgia, Kosovo*, Montenegro, North Macedonia and Ukraine, while in Albanian there are no defined requirements for meter installation. In Ukraine, except bi-directional meters, prosumers may also have two separate meters installed. In Serbia, the DSO defines general requirements for meters when the generator is connected to the system; characteristics are defined in the distribution network code. In Moldova, there are no specific requirements regarding the meters but prosumer should have a meter which is capable to count both consumed and injected electricity.

16. Number of PV systems for self-consumption in operation

The table and the figure below show the total number of generators for self- consumption installed and in operation in analysed markets. Submitted information reveals that there is an increase in generation capacity for self- consumption/prosumers on yearly bases in each country. Ukraine has the highest number of generating facilities for self- consumption in operation. In 2017 there were 3010 generators in operation and in 2018- 4469 which is an increase of 148 %⁴¹.

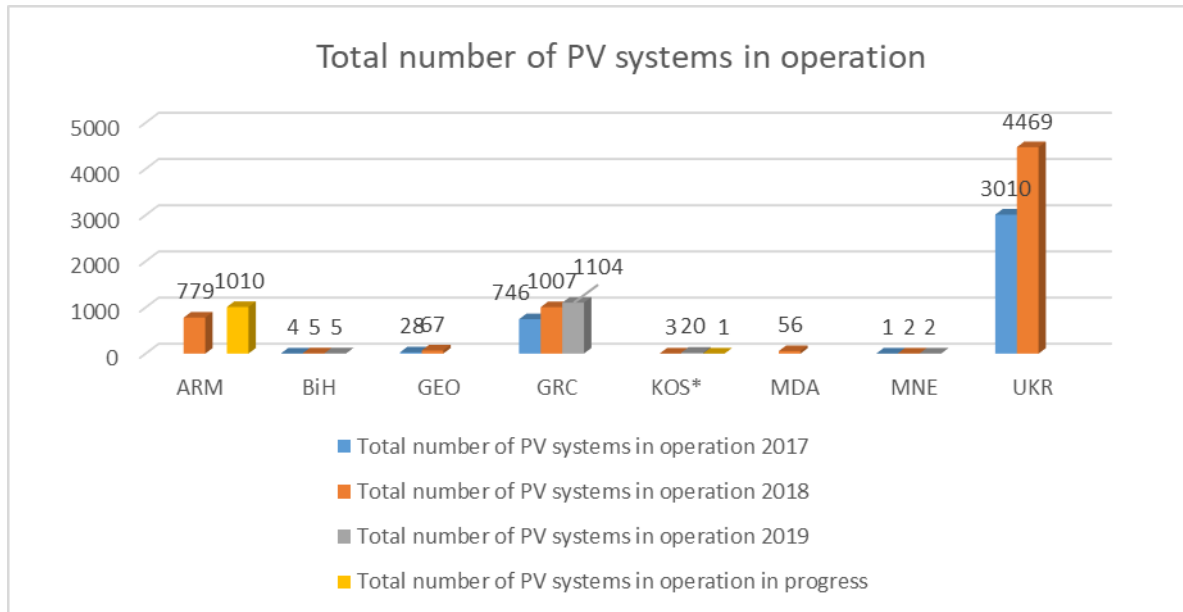
Table 15: Number of self-consumption generators⁴²

Year	ARM	BIH	GEO	GRC	KOS*	MDA	MNE	UKR
2017		4	28	746			1	3010
2018	779	5	67	1007	3	56	2	4469
2019		5	NA	1104	20		2	
Total	779	14	95	2,857	23	56	5	7479
In process⁴³	110		NA		1			

⁴¹ It is worth noting that in Serbia, although there are no PV systems registered as prosumers, a significant number of PV generating systems is already connected to the distribution system, and they may become prosumers. At the end of 2018, there were 100 such PV systems, with total installed capacity of 4.2 MW.

⁴²Empty fields indicate that no new generators were in operation.

⁴³ In the phase of application or in the process of construction.



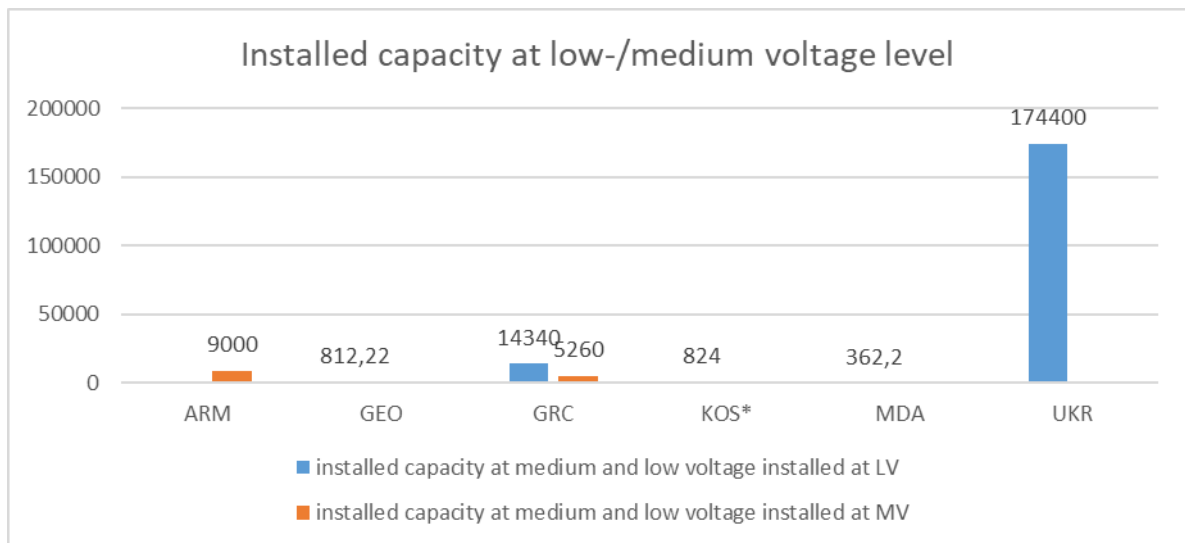
17. Total prosumer capacities installed

Table 16: Total prosumer capacities installed

	Installed capacity at low voltage	Installed capacity at medium voltage
Armenia		There is no separate classification on the basis of voltage. Overall voltage constitutes 9,000 kW. After the connection of the next 110 prosumers there will be an increase about 3,000 kW.
Georgia	812.22 kW as 1st of April, 2019	
Greece	14,340 kW	5,260 kW
Kosovo*	824 kW	
Moldova	362.2 kW	
Ukraine	174,400 kW – low and medium voltage	

The following graph shows information on installed and operating production capacities so far realized in the analyzed market. Ukraine has the highest installed capacity of **174,400 kW**, while Kosovo* has the lowest capacity of **270.08 kW**. In total, until 2019 in all analyzed markets there is and over capacity of 184.84 MW installed. Some NRAs, despite a number of generators for self-

consumption being connected to the system and in operation, have not been able to report on production capacity due to absence of relevant data.



18. Publicly accessible information on procedures for becoming a prosumer

The assessment of this chapter analysis the user-friendliness of existing prosumer requirements and, more specifically, to which extent information on the procedures for becoming a prosumer are accessible. The following table provides detailed information on this question.

Table 17: Information

	information on the procedure for becoming a prosumer publicly accessible	information on different financial advantages publicly accessible to consumers
Albania	YES	Not defined
Bosnia and Herzegovina	RERS At the website of the Regulatory Commission, there are regulations related to the renewable energy sources (laws and secondary legislation). Federation BiH – N/A	RERS In the Law on renewable energy sources in the Chapter VI, point 3, Other incentive measures and informing
Georgia	Full information is easily accessible for the general public through the website of GNERC	Full information is easily accessible for the general public through the website of GNERC
Greece	According to the Ministerial Decision 15084/382-05.03.2019	
Kosovo*	Information is easily accessible for the general public through the website of ERO where all rules are published	Information's are easily accessible for the general public through the website of ERO where all rules are published
Moldova	Not defined	The information is available on the ANRE website, or an interested party can ask for a meeting with ANRE consultants- that can help the petitioner in giving all the necessary information.
Montenegro		In Energy Law article 96 it is prescribed: <ul style="list-style-type: none"> Should the quantity of generated electricity be higher than overtaken, the supplier shall determine, bill and pay the difference in quantity of electricity to the customer-producer per price equal to price of electricity delivered to that customer - producer in the accounting period, excluding payment of network services and charges, according to the law. Should the generated quantity of electricity be lower compared to the overtaken one, the supplier shall determine and calculate the difference of electricity quantities, while the customer - producer shall pay the difference per price of the supplier for the respective voltage level, which encompass payment for electricity, network services and charges according to this law. Costs of balancing caused by customer - producer shall be borne by the supplier.

	information on the procedure for becoming a prosumer publicly accessible	information on different financial advantages publicly accessible to consumers
North Macedonia	Information is easily accessible for the general public through the website of Ministry of economy where Rulebook on energy sources is published.	Information is easily accessible for the general public through the website of Ministry of economy where also the Rulebook on energy sources is published.
Ukraine	All procedures are published on Regulator's web site and in leaflets which disseminated in the Regulator office, in some government buildings and in DSO's customer centers.	All financial advantages (feed-in-tariff) are published on Regulator's web site and in leaflets which disseminated in the Regulator office, in some government buildings and in DSO's customer centers.

The majority of NRAs reported that information on the procedure for becoming a prosumer and information on different financial advantages are publicly accessible to consumers through the NRA website or Ministries' websites. In Ukraine beside the information is publicly accessible and there are also leaflets, which are disseminated in the Regulator office, in some government buildings and in DSOs' customer centers.

19. Prosumers rights and protection

In most analyzed markets, prosumers may file a complaint to the DSO and supplier as any other customer and both operators have legal obligations to handle complaints. In all cases, the procedure for filing complaints is regulated by primary and secondary legislation. Prosumers may complain to the DSO on a connection offer if they do not agree with the solution given by the operator and to the supplier as regards to supply agreement-off take electricity.

In all cases, the regulators have the power to issue binding decisions for operators (DSOs and suppliers), but only in Kosovo*, Georgia, Ukraine and Moldova the regulator may penalize the DSO and supplier and non-compliance with NRA decisions will result in financial penalties (and possibly – revocation of the license, in case of repeated offence).

Table 18: Prosumer rights and protection

	Can consumers (prosumers) file a complaint against DSO or Supplier if they do not agree with the offer (connection offer-DSO, supply agreement-off take electricity, etc.)	Are DSOs and suppliers obliged to handle the complaints	Can prosumer file a complaint against DSO or supplier to the Regulator as any other consumer?
Albania	Not defined	Not defined	YES
Armenia	YES	YES	YES
Bosnia and Herzegovina	YES	YES	YES
Georgia	YES	YES	YES

	Can consumers (prosumers) file a complaint against DSO or Supplier if they do not agree with the offer (connection offer-DSO, supply agreement-off take electricity, etc.)	Are DSOs and suppliers obliged to handle the complaints	Can prosumer file a complaint against DSO or supplier to the Regulator as any other consumer?
Greece	YES	YES	YES
Kosovo*	YES	YES	YES
Moldova	YES	YES	YES
Montenegro	YES	YES	YES
North Macedonia	YES	YES	YES
Serbia	YES	YES	YES
Ukraine	YES	YES	YES

III. CONCLUSIONS AND RECOMMENDATIONS

The main conclusions from the presented assessment are the following:

1. In most of the analyzed markets a **definition of self-consumption generators and prosumer** exist in primary or secondary legislation, even though in some cases flagging under a different term. In general it is defined as an electricity customer who is at same time and at the same site the owner of a facility generating energy from renewable sources (RES), connected to the grid and having the right to self-consume the generated electricity as well as to deliver excess electricity to the supplier/grid. In several cases, residential and small commercial prosumers are defined in relation to the size or the power capacity of the installation.
2. In most of the analyzed markets, the **prosumer activity is regulated** by general legislation or different procedures. A special regulatory framework for prosumers exists only in Greece and North Macedonia. In all other analyzed markets, there is no separate legal procedure that deals exclusively with prosumers but issues that have to do with or are related to prosumers are regulated by other rules.
3. In all analysed markets, the **criteria for classification of RES generating facilities** with support measures exist in both primary and secondary legislation. Setting criteria for categorization of RES generating facilities are primarily based on the law on renewable energy sources or by energy laws.
4. In the majority of the CPs, namely Albania, Bosnia and Herzegovina (Federation BiH), Georgia, Kosovo*, Montenegro and Ukraine a **definition of micro generators or small generators** is in place either in primary or secondary legislation. Within the definitions for micro generators as well as small generators the potential capacity of these generators is also defined, whereby the capacity limits vary ranging from the lowest level in Bosnia and Herzegovina (Federation BiH; 2-23 kW), to a limit of 100 kW applicable in both Kosovo* and Georgia to comparably higher levels in Greece (1MW), Ukraine (1-1000 kW; for hydro only) and Albania (2-3 kW) and the highest level of 10 MW in Montenegro.
5. Most of the analyzed markets have defined the **lowest as well the highest level of installation capacities for self-production and consumption generators** in primary and secondary legislation. The country with the highest allowed capacity limit for self-consumption is Albania- 500 kW for both domestic and commercial customers. The data provided shows that for household consumers the allowed capacity varies from 4 kW in North Macedonia to 200 kWh in Moldova. For small commercial customers the allowed capacity varies from 20 kW in North Macedonia to 200 in Moldova. In Armenia, by 2022, the capacity threshold will be increased, i.e. self-producers can reach a total capacity of electricity consumption of its installed equipment, but not more than 500 kW.
6. In all analyzed markets except Kosovo*, a **determination of the generating capacity of the generators for self- consumption**, for both household and small commercial customers, bases on capacities contracted with the DSO. The installed capacity of the prosumers should not exceed the DSO permitted capacity. The capacity limitations are

regulated by primary laws on renewable energy sources, secondary rules as well as by network codes.

7. In most CPs, namely Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia, Moldova and Ukraine, **prosumers are connected to the low voltage level**. In some cases, namely in Albania, Georgia and Ukraine, prosumers are allowed to be connected also to medium voltage, while in Armenia prosumers may be connected to high voltage because the DSO's network responsibility is up to 110 kV. Also in Ukraine there is no legal or technical restriction regarding the connection of prosumers to the high voltage level.
8. **Application procedures** for a status change from a regular customer to a prosumer differ among the analyzed markets.
 - a) Only in Bosnia and Herzegovina and Kosovo*, customers have to apply to the NRA. In the other analyzed countries, there is no need for application to NRA, but customers have to apply directly to the DSO.
 - b) In all analysed markets **prosumers are exempted from any fee**.
 - c) NRAs of Albania, Kosovo*, Montenegro, Moldova, North Macedonia and Ukraine have no role in **planning and construction of micro generators**. The NRA of Georgia regulates the terms for connection of a MPP to the distribution network, whereas in Armenia only small hydro generators shall have the electricity (power) generation license for construction period, issued by the NRA.
9. In all analyzed markets, except Ukraine, **micro and small generator are exempted from licensing** requirements. Also in all markets all generators that have a total approved power of less than 1 MW are not subject to licensing.
10. All Contracting Parties, except Albania and Serbia, have introduced two self-consumption schemes for small-scale renewable energy technologies, namely **net metering and net billing**. Net Metering is introduced in Armenia, Bosnia and Herzegovina, Georgia, Kosovo* and Moldova while in Montenegro and North Macedonia net billing is introduced whereas in Ukraine all customers with RES generating facilities are paid feed-in-tariffs for net electricity they injected into the network. In Georgia both support schemes are combined for cases where a prosumer's balance is positive at the end of the year, the price for settlement is the average weighted price of purchased electricity, as foreseen in the tariff of the relevant distribution licensee, set by GNERC.
11. Only the NRAs of Bosnia and Herzegovina and Kosovo* are obliged to keep a **register of prosumers and installed capacities**, while in the other analysed markets registers on prosumers should be kept by the DSO. In Albania, there is no rule on registers. In Georgia, the NRA receives related information via the quarterly and annual reports of the distribution licensees.
12. In all analyzed markets, the lists of **documents needed for applying** for connection of prosumers to the DSOs are defined.

13. In all analysed markets for existing customers, to the extent not exceeded the total capacity of electricity consumption of installed equipments, there will be no **charges**, except for administrative costs for issuing the connection permit. However when dealing with new consumers, the connection costs to the distribution network will be calculated based on the connection charging methodology or distribution grid codes.
14. With the exception of Armenia, Georgia and Moldova, in all other analysed markets prosumers should have a **separate connection contract with the DSO and a supply contract** with a supplier. In Armenia, the autonomous generator signs an electricity supply and compensation contract with the DSO, while in Georgia there is no requirement for signing a separate contract because the electricity distribution and supply activities are yet to be unbundled and all details of the relationship between the customer and the DSO are provided in the Electricity (Capacity) Supply and Consumption Rules approved by GNERC. In Moldova, there is no need to sign a connection contract with the DSO, but consumers that produce energy need to have a contract with a supplier and sign a contract for net metering.
15. In Armenia, Bosnia and Herzegovina, Georgia, Kosovo*, Montenegro, North Macedonia and Ukraine, all prosumers are required to have bi-directional **meters** installed in their premises. In Albania, there are no defined requirements for meter installation. In Ukraine, except bi-directional meters, prosumers may also have two separate meters installed. In Serbia, the DSO defines general requirements for meters; characteristics are defined in the distribution network code. In Moldova, there are no specific requirements regarding the meters but prosumers should have a meter which is capable to count both consumed and injected electricity.
16. In all analyzed markets, **information on the procedure for becoming a prosumer** and information's on different financial advantages are publicly accessible to consumers via the NRA's or Ministry's websites. In Ukraine, except that the information is publicly accessible, there are also leaflets which are available at the NRA's office, in some Government buildings and in DSO customer centers.
17. In all analyzed markets prosumers may file a **complaint** to the DSO and supplier as any other customer and both operators have legal obligations to handle complains. The procedure for filing complaints is regulated by primary and secondary legislation in all cases.
18. In all CPs the **regulators have the power to issue binding decisions** for DSOs and suppliers, but only in Kosovo*, Georgia, Ukraine and Moldova the regulator may penalize DSOs and suppliers and non-compliance with NRA decisions will result in financial penalties and potentially revocation of the license, in case of repeated offence.

The main recommendations' from the presented assessment are the following:

- In some Contracting Parties there is a lack of legislation in relation to self-consumption. It is recommended that all CPs establish comprehensive and harmonized legislation to promote self-consumption and provide a definition of residential and commercial prosumers.

- With regard to self-consumption schemes there is no uniform approach within the Contracting Parties. Most Contracting Parties have introduced net metering as a regulatory support scheme. Taking into the consideration the recommendations set by the Policy Guideline issued by Energy Community Secretariat on grid connection of prosumers and Directive 2018/2001 on the promotion of the use of energy from renewable sources Contracting Parties should gradually harmonize the legal framework and introduce net billing as financial incentive for prosumers and gradually also remove capacity cap for prosumers.
- ECRB recommends that information on different financial advantages and the possibility of transitioning from a regular customer to an active prosumer should continuously be publically available, understandable and simple as possible for all customers.

- **Annex**

Article 21 of (EU) Directive 2018/2001 on the promotion of the use of energy from renewable sources

Renewables self-consumers

1. Member States shall ensure that consumers are entitled to become renewables self-consumers, subject to this Article.

2. Member States shall ensure that renewables self-consumers, individually or through aggregators, are entitled:

(a) to generate renewable energy, including for their own consumption, store and sell their excess production of renewable electricity, including through renewables power purchase agreements, electricity suppliers and peer-to- peer trading arrangements, without being subject:

(i) in relation to the electricity that they consume from or feed into the grid, to discriminatory or disproportionate procedures and charges, and to network charges that are not cost-reflective;

(ii) in relation to their self-generated electricity from renewable sources remaining within their premises, to discriminatory or disproportionate procedures, and to any charges or fees;

(b) to install and operate electricity storage systems combined with installations generating renewable electricity for self- consumption without liability for any double charge, including network charges, for stored electricity remaining within their premises;

(c) to maintain their rights and obligations as final consumers;

(d) to receive remuneration, including, where applicable, through support schemes, for the self-generated renewable electricity that they feed into the grid, which reflects the market value of that electricity and which may take into account its long-term value to the grid, the environment and society.

3. Member States may apply non-discriminatory and proportionate charges and fees to renewables self-consumers, in relation to their self-generated renewable electricity remaining within their premises in one or more of the following cases:

(a) if the self-generated renewable electricity is effectively supported via support schemes, only to the extent that the economic viability of the project and the incentive effect of such support are not undermined;

(b) from 1 December 2026, if the overall share of self-consumption installations exceeds 8 % of the total installed electricity capacity of a Member State, and if it is demonstrated, by means of a cost-benefit analysis performed by the national regulatory authority of that Member State, which is conducted by way of an open, transparent and participatory process, that the provision laid down in point (a)(ii) of paragraph 2 either results in a significant disproportionate burden on the long-term financial sustainability of the electric system, or creates an incentive exceeding what is objectively needed to achieve cost-effective deployment of renewable energy, and that such burden or incentive cannot be minimised by taking other reasonable actions; or

(c) if the self-generated renewable electricity is produced in installations with a total installed electrical capacity of more than 30 kW.

4. Member States shall ensure that renewables self-consumers located in the same building, including multi-apartment blocks, are entitled to engage jointly in activities referred to in paragraph 2 and that they are permitted to arrange sharing of renewable energy that is produced on their site or sites between themselves, without prejudice to the network charges and other relevant charges, fees, levies and taxes applicable to each renewables self-consumer. Member States may differentiate between individual renewables self-consumers and jointly acting renewables self-consumers. Any such differentiation shall be proportionate and duly justified.

5. The renewables self-consumer's installation may be owned by a third party or managed by a third party for installation, operation, including metering and maintenance, provided that the third party remains subject to the renewables self-consumer's instructions. The third party itself shall not be considered to be a renewables self-consumer.

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6. Member States shall put in place an enabling framework to promote and facilitate the development of renewables self-consumption based on an assessment of the existing unjustified barriers to, and of the potential of, renewables self-consumption in their territories and energy networks. That enabling framework shall, inter alia:

- (a) address accessibility of renewables self-consumption to all final customers, including those in low-income or vulnerable households;
- (b) address unjustified barriers to the financing of projects in the market and measures to facilitate access to finance;
- (c) address other unjustified regulatory barriers to renewables self-consumption, including for tenants;
- (d) address incentives to building owners to create opportunities for renewables self-consumption, including for tenants;
- (e) grant renewables self-consumers, for self-generated renewable electricity that they feed into the grid, non-discriminatory access to relevant existing support schemes as well as to all electricity market segments;
- (f) ensure that renewables self-consumers contribute in an adequate and balanced way to the overall cost sharing of the system when electricity is fed into the grid.

Member States shall include a summary of the policies and measures under the enabling framework and an assessment of their implementation respectively in their integrated national energy and climate plans and progress reports pursuant to Regulation (EU) 2018/1999.

7. This Article shall apply without prejudice to Articles 107 and 108 TFEU.