

Citizens Energy in the Western Balkans

Progress Report for Serbia, Bosnia and Herzegovina and Montenegro

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The opinions, conclusions and recommendations presented in this Report represent the views of the authors solely and do not necessarily reflect the views of RESET – Centre for Sustainable Energy Transition and ECF – European Climate Foundation.

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INTRODUCTION

The progress report in the field of citizens' energy development is the result of research conducted by RESET – Center for Sustainable Energy Transition, a think tank from Sarajevo, in Serbia, Bosnia and Herzegovina (BiH) and Montenegro as part of a project that is a continuation of the initiative "Citizens Energy for the Western Balkans" financially supported by the European Climate Foundation (ECF).

In low- and middle-income countries that are not members of the EU (and this group includes all Western Balkan countries), the energy transition and decarbonization of the electricity sector cannot be successfully, efficiently, effectively, and fairly implemented exclusively by „copying“ the policies, measures and tools applied in the EU for at least two reasons. First, Western Balkan countries lack the economic and financial power and mechanisms of EU countries. The second is that the structure of final electricity consumption in the EU differs from that in the Western Balkan countries, which should significantly influence the choice of support strategies, policies, and measures, but unfortunately it does not. Namely, in the structure of final electricity consumption in the EU, only 29% is accounted for by household consumption, while the largest share is held by the economy. In the Western Balkan countries, the situation is completely reversed, as the structure of final consumption is dominated by households (BiH 49%, Serbia 47%, Montenegro 54%, North Macedonia 54% and Kosovo* 60%). With this in mind, in the Western Balkan countries, the development of citizens' energy should be the first priority of energy policies and decarbonization of energy consumption, ensuring security of supply and increasing the level of energy security and independence. A previous study, also carried out with the support of the ECF, unfortunately showed that this is not the case¹.

This report aims to review the progress in the development of citizens' energy in the past year through a pre-defined methodology and basic KPIs and thus create a basis for action in removing bottlenecks for accelerated citizens' energy development and enable other researchers and organizations to measure progress in this domain of energy transition of the Western Balkan countries.

¹ See more: https://www.reset.ba/images/2025/8_avgust/Dokument_o_politikama_No_regret.pdf

1. A BRIEF OVERVIEW OF THE CURRENT STATE OF ENERGY TRANSITION AND DECARBONIZATION OF ELECTRICITY CONSUMPTION IN SELECTED WESTERN BALKAN COUNTRIES

With the adoption of the Declaration on the Green Agenda for the Western Balkans² in 2020, the countries of the Western Balkans committed to carry out the energy transition and ensure carbon neutrality by 2050, i.e., to fully switch from the use of fossil fuels to renewable energy sources in accordance with the best EU policies and practices. In this context, the decarbonization of the electricity sector should have been the priority in order to provide electricity from renewable sources and thus push out coal, as one of the largest polluters and CO₂ emitters, out of use. The production of electricity from coal should have been replaced by production from renewable sources, primarily by using new, economically viable technologies such as wind and solar power plants, biofuel power plants and the like, while increasing the level of energy efficiency.

The pace, policies, methods and measures of the transition are left to the will of the signatory countries, with the limitation to act in accordance with the EU framework. Given that all countries in the region are candidates for accession to the EU³, it is necessary to ensure the compatibility of the system and adopt EU legislation in this segment due to the accession process.

Unfortunately, the countries of the Western Balkans did not really "flash" in the previous period, as evidenced by numerous studies and reports⁴ stating that the lag in the energy transition between the EU and the countries of the region is increasing, that the process is "stuck" or left exclusively to the action of market forces, and that it is essentially not managed adequately and sustainably. As an illustration of the above findings, it is enough to look at the following two graphs showing the share of individual energy sources in the total electricity production in 2020 and 2025 in the EU and selected countries in the region⁵:

² <https://www.rcc.int/docs/546/sofia-declaration-on-the-green-agenda-for-the-western-balkans-rn>

³ The exception is Kosovo*.

⁴ See more :

Energy transition in the Western Balkans , JRC Report, 2026

<https://publications.jrc.ec.europa.eu/repository/handle/JRC146627>

Chaotic and Fake Decarbonization of Electricity Sectors in the Western Balkans, RESET, 2023

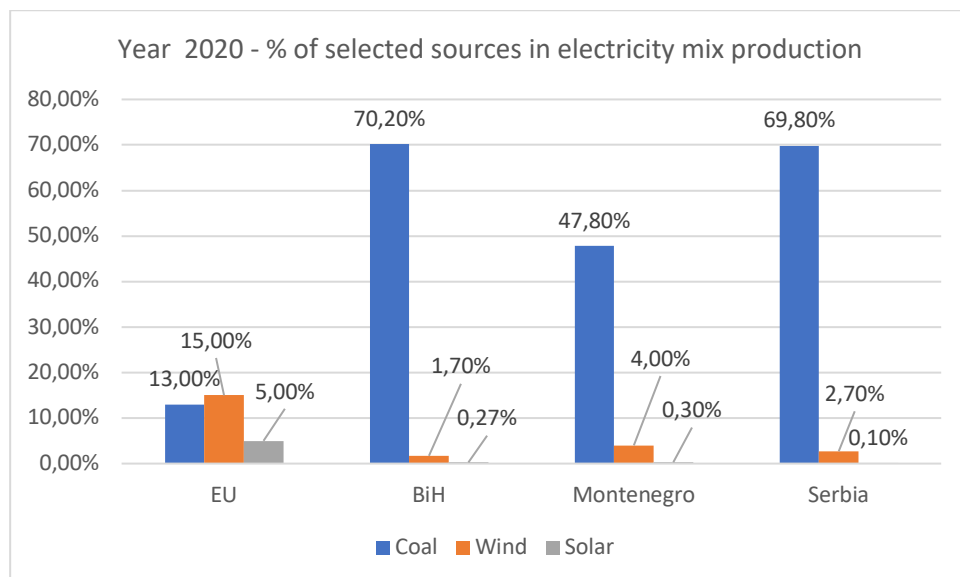
https://www.reset.ba/images/2023/11_novembar/Lazna%20i%20haoticna%20dekarbonizacija%20EES%20RES ET%20-%20web.pdf

No regret strategy for a fast and sustainable energy transition strategy in the Western Balkans, RESET, 2025

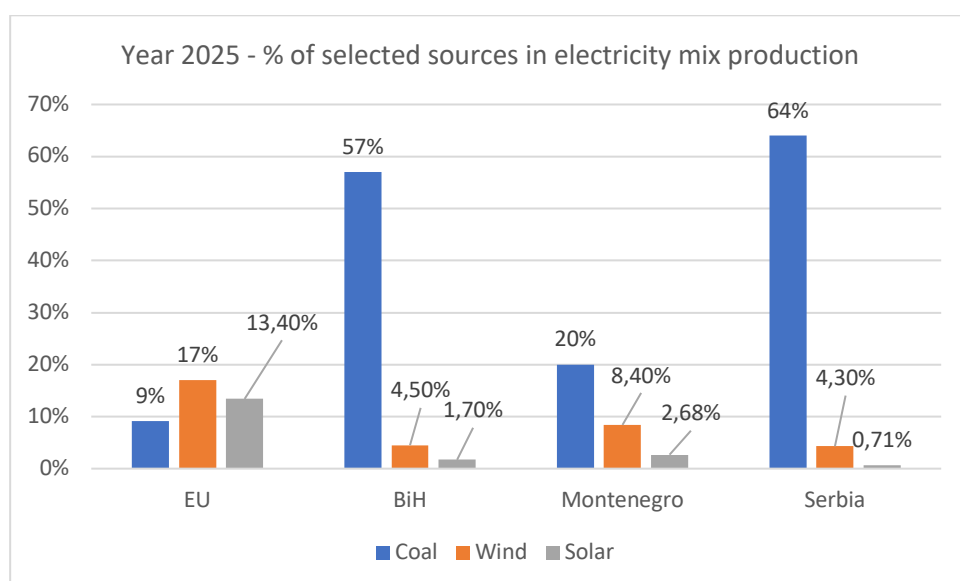
https://www.reset.ba/images/2025/8_avgust/Dokument_o_politikama_No_regret.pdf

⁵ Data source: EuroStat and Energy Agency reports

Graph 1



Graph 2



From the first graph, it is evident that in 2020, the lag in the region's countries' energy transition behind the EU was very large, which was the main reason for including these countries in the Green Agenda. Five years later, the situation has not changed significantly. For the sake of truth, the share of coal in all three countries in the region has decreased, but unfortunately not because of the successful implementation of transition policies, but primarily due to the lack of coal (in Serbia and BiH), technical problems due to the obsolescence of power plants (in all three countries), and due to serious reconstruction interventions in thermal power plants (in Montenegro). At the same time, the development of renewable energy sources is left mainly to market forces and investors who, in the given conditions of global political, economic and energy turmoil, obviously cannot respond to

transitional challenges and needs. Neither the announcement nor the implementation of the CBAM⁶, which was supposed to, among other things, encourage decarbonization in EU exporting countries, was a sufficient signal for the Western Balkan countries to seriously reconsider their current transition policies. Hence, it seems that the Western Balkan countries, without radical changes in approach, energy policies, and focus on transition, will continue to lag behind the EU and the world as a whole, which can have a disastrous impact on the environment, economic, and social development.

The countries of the Western Balkans are also significantly lagging in the transposition of EU policies, which is best seen from the latest Energy Community Implementation Performance Report⁷:

Bosnia and Herzegovina

	Strategy documents and progress assessment		Missing documents
Policies and Strategies	Framework Energy Strategy of Bosnia and Herzegovina until 2035 ⁸	✓	Bosnia and Herzegovina's Energy and Climate Plan NECP ⁹
Energy Community - 2025 Performance Score			
Total score for Bosnia and Herzegovina	26%		
Markets and Integration	26%		
Decarbonizing the energy sector	27% Implementation- 31% Energy efficiency – 45%		
Ensuring energy security	9%		
Improving the environment	31%		
The effectiveness of the government	51%		

⁶ CBAM (Carbon Border Adjustment Mechanism) = Carbon Border Adjustment Mechanism

⁷ 2025 Implementation Performance Report: <https://www.energy-community.org/contracting-parties/performance.html>

⁸ https://www.mvteo.gov.ba/data/Home/Dokumenti/Energetika/Okvirna_energetska_strategija_Bosne_i_Hercegovine_do_2035_HR_FINALNA.PDF

⁹ [Nacrt NECP BiH loc.pdf](#)

Montenegro

	Strategy documents and progress assessment		Missing documents
Policies and Strategies	Montenegro's Energy Development Strategy until 2030 ¹⁰ Montenegro's National Energy and Climate Plan ¹¹	✓	
Energy Community - 2025 Performance Score			
Total score for Montenegro	53%		
Markets and Integration	58%		
Decarbonizing the energy sector	52% Implementation - 55% Energy efficiency – 78%		
Ensuring energy security	30%		
Improving the environment	60%		
The effectiveness of the government	78%		

Serbia

	Strategy documents and progress assessment		Missing documents
Policies and Strategies	Energy Development Strategy of the Republic of Serbia until 2040 with projections until 2050; Integrated National Energy and Climate Plan of the Republic of Serbia for the period until 2030 with a vision until 2050. ¹²	✓	
Energy Community - 2025 Performance Score			
Total score for Serbia	63%		
Markets and Integration	58%		
Decarbonizing the energy sector	83% Implementation - 80% Energy efficiency – 86%		
Ensuring energy security	35%		
Improving the environment	58%		
The effectiveness of the government	82%		

¹⁰ [Montenegro's Energy Development Strategy until 2030](#)

¹¹ [Montenegro's National Energy and Climate Plan](#)

¹² Ministry of Mining and Energy : [Сектор за електроенергетику](#)

From the above tables, it is obvious that no country has fulfilled even 2/3 of the previously assumed obligations, while the most critical situation is in BiH.

When it comes to the development of citizens' energy, as a segment of the energy transition that can bring the countries of the Western Balkans the fastest, most economically viable, and sustainable progress in the energy transition, the gap is even greater.

Citizens' energy concepts have been developed and implemented in EU countries since the 1990s (Germany), and citizens energy experienced its full momentum in the 20's in this century (e.g. in Romania and Hungary in 2018, in Croatia in 2021). Although electricity production at the point of consumption, most often using solar on rooftops, is by far the most socially and economically cost-effective option for decarbonizing domestic electricity consumption and contributes the most to the country's security of supply and energy independence, this concept and policies have not been given priority in the energy strategies and policies of the Western Balkan countries. So, the first prosumers appeared only in 2022 (Serbia and Montenegro) and in 2024 in Bosnia and Herzegovina, while currently there is no operational renewable energy community (REC) or citizen energy community (CEC) in these countries.

Therefore, the development and monitoring of progress in the development of various forms of citizens energy is extremely important for the countries of the Western Balkans, because in a situation where investors are reducing interest and redirecting projects to other regions due to the global energy crisis, legal uncertainty, and the implementation of CBAM, citizens energy can be the most important lever for accelerating the energy transition and decarbonization of the electricity sector in the countries of the region.

2. RESEARCH METHODOLOGY AND KEY PARAMETERS

For this Report, a basic methodology for monitoring the development of citizens' energy was developed, which proposes key parameters for measuring the progress of citizens energy development in selected countries of the Western Balkans, which could be used for comparative analysis both within the region and with other countries, thus creating conditions for the best solutions, models and practices, after critical evaluation in relation to the specific situation and specific characteristics of the country, to be successfully translated into sustainable implementation.

The development of the methodology was based on the fact that the success of the development of a sustainable energy transition in the case of citizens' energy depends crucially on three segments:

- The Legal and Regulatory Framework and Its Implementation
- Technical Infrastructures - Status and Readiness of the Distribution Network
- Economic conditions and incentives.

2.1. Legal and Regulatory Framework for Implementation

The legal and regulatory framework for the implementation of citizens' energy essentially represents a bounded space in which citizens' energy initiatives can be freely developed and successfully implemented. It consists of legislation, bylaws, rulebooks, and procedures that define the direction, actors, speed, effort, and costs that need to be undertaken in order to successfully and sustainably implement one of the citizens' energy initiatives. It is specific to the Western Balkan countries, as members of the Energy Community, that their legal and regulatory framework should be aligned with the relevant EU legal and regulatory framework that defines citizens' energy, i.e., with the RED II¹³ and RED III¹⁴ directives that are in force in the EU and that should be transposed and implemented into relevant domestic legislation and translated into regulations that enable efficient and effective implementation in the field.

Therefore, it is necessary first to assess how much the existing legal and regulatory framework in a country is harmonized with the aforementioned directives and how this harmonization has been implemented in the practice of each individual country, by individual forms and categories of citizens' energy, and what has resulted from it on the ground. The evaluation was carried out in such a way that three assessments were defined:

¹³ RED II = Renewable Energy Directive II <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32018L2001>

¹⁴ RED III = Renewable Energy Directive III <https://eur-lex.europa.eu/eli/dir/2023/2413/oj/eng>

„Completely, partially, and it has not been implemented“ with a note on what the main identified problem is in practice.

In this way, it is possible to easily define gaps and future directions and urgent actions within the framework of the further development of the legal and regulatory framework for citizens' energy.

2.2. Technical Infrastructure - Status and Development of the Distribution Network

Certain forms of citizens' energy (e.g., prosumer or energy community) can exist and function successfully only if the local distribution network can safely integrate them. This means that the distribution network is no longer just a passive infrastructure that "brings energy to the customer", but a platform that must manage two-way electricity flows, variable generation and new types of users. In the case of, for example, rooftop solar systems and energy communities, this change occurs precisely at the low-voltage (LV) level, where data availability is often the weakest and connection rules are mostly based on simplified estimates.

Therefore, in citizens' energy development studies, the role of DSOs cannot be assessed only through the number of new connections.¹⁵ It is necessary to measure both the institutional and technical readiness of the DSO: whether it has data, measurement points, digital tools, clear procedures and planning methodologies to distinguish between real grid constraints and "administratively assumed" constraints. Otherwise, regulatory progress remains on paper, and citizens, schools, municipalities and micro/small enterprises wait longer than necessary or receive less capacity than the grid can realistically accommodate. In other words, the distribution network, even with an ideal legislative and regulatory framework, can be a major obstacle to the successful development of citizens' energy in a country.

At this stage of development, the most important function of DSO is not only to "connect" new users – distributed energy resources (DER) – but to estimate in a reliable and transparent way, for example, how many solar prosumers and energy communities a certain part of the grid can accommodate. In practice, the largest number of limitations occur at the level of 20(10)/0.4 kV secondary substations and the associated LV feeders. If the DSO does not have measurements of actual loads by time intervals, the capacity estimation is often based on conservative assumptions. *This can cause two bad consequences: either requests are rejected even though the grid could accept a new connection, or connections are approved without sufficient insight and problems with overvoltage, overload, or power quality arise later.*

That is why the approval of grid connection is already a question of data quality, and not just a question of network calculations. If the DSO has 15-minute load profiles at consumers' metering points and from secondary substations, it can much more accurately determine the actual degree of network utilization, seasonal peak power values and the time when local

¹⁵ DSO = Distribution System Operator

generation can cause higher voltage (e.g. during maximum local generation at minimum local load). Such an approach enables the transition from static and "paper" connection approval to a data-driven approach that makes better use of the existing network capacity and at the same time reduces regulatory risk for DSOs.

Network development planning must follow the same logic. Instead of planning investments solely on the basis of historical consumption and general projections, DSOs should use a combination of a connection request register, geospatial network data, 15-minute loads and information on available flexibility. In other words, the quality of future investments depends on whether the DSO knows where the network is really limited, where there is "hidden" capacity, and where it is more cost-effective to apply flexibility or targeted automation than classic network reinforcement.

The digitalization of DSOs in this context is crucial and does not only mean the acquisition of new ICT equipment. It means that DSOs can systematically collect, validate, connect, and use data from meters, substations, GIS databases, work management systems, and connection records. Four layers of digitalization are particularly important for the development of citizens' energy.

The first layer is the coverage of end users with smart meters or at least remote reading systems (AMRs). Without this, it is difficult to talk about 15-minute profiles, measurement of consumed and delivered energy, and monitoring the behavior of prosumers.

The second layer is the measurement and monitoring of secondary substations 20(10)/0.4 kV. It is at this level that the DSO gets a picture of the situation "in LV grids" – how much load there is in the substation area and individual feeders, where peaks appear, and what capacity of the network exists for additional solar connections.

The third layer is the existence of an advanced metering infrastructure (AMI), including data concentrators, communication, a Meter Data Management (MDM) system, and data access rules. It is important to emphasize that AMI is not the same as remote reading itself. AMI enables two-way communication, structured work with data, and the integration of this data into the operational and planning processes of the DSO.

The fourth layer is the actual use of data. A DSO may have partially developed equipment, but if the 15-minute data is not used when approving the connection, making a hosting capacity assessment (based on Hosting Capacity Analysis), identifying critical sites and planning investments, then digitalization does not have a full regulatory or developmental effect.

From all of the above, it is obvious that this is a complex issue that requires in-depth analyses and specialist knowledge. Therefore, for the purpose of analyzing public policies in the domain of technical readiness of the system for the development of citizens' energy, three parameters have been selected:

1. The percentage of the share of digital (smart or advanced) meters in the total number of installed meters – the higher the percentage and the higher the degree of digitalization, as well as the possibility of using databases for managing production and consumption data at the distribution level, faster is development of citizens energy. According to this parameter, it is possible to make temporal and mutual comparisons.
2. Percentage of losses on the distribution network - because the losses are largely the result of the achieved level of development and quality of operation of the DSO as a result of technical improvements, improved metering and active network management. The lower the losses on the distribution network, the better the situation, and it is possible to make temporal and mutual comparisons on this basis.
3. Publicly available interactive (hosting capacity) maps of distribution network capacities – in all countries, the legal obligation of DSOs is to transparently publish and constantly update data on free capacities on the distribution network so that all interested parties know whether the distribution network at the location where they plan to connect one of the citizens' energy facilities has free capacities for connection to prevent additional costs and delays in advance, i.e. wasting time in implementation. If a DSO has publicly available data on network (hosting) capacity that are constantly updated, it can be assumed that it is far more technically prepared in all the above layers of digitalization than a DSO that does not have this, where the detail and number of information that can be obtained speaks of the degree of its technical readiness¹⁶.

¹⁶ As an example of good practice of what the publicly available interactive map of distribution network capacity looks like, see the map of the DSO of Hrvatska Elektroprivreda for primary transformer stations 110/x kV: <https://kapaciteti.hep.hr>

2.3. Economic conditions and incentives.

The third segment important for the assessment of the development of citizens' energy is economic conditions, a system of incentives intended for the development of citizens' energy and financial models that ensure fairness, i.e., the representation of vulnerable categories of citizens in local energy initiatives.

Namely, from an economic point of view, local actors will be involved in the development of citizens' energy in three cases:

- Provided that their energy costs have risen so much that they are forced to take action and look for solutions;
- Provided that a high-quality and effective system of incentives is available;
- Provided that financial models that enable citizens in extreme energy poverty to actively participate are developed, because this solves part of their economic problems in the long run, but also reduces the constant need to allocate public money to help the vulnerable households.

Of course, each of these cases can act on the motivation of local actors individually¹⁷ or in any combination, so from the point of view of public policies for the development of citizens' energy, it is important that the incentive system and support models are adequately developed.

Therefore, for the analysis of public policies in this domain, three parameters have been selected:

- a) The price of electricity for households¹⁸ – the higher the price of electricity, the higher the motivation of citizens to participate in initiatives and models of civic energy.
- b) Development and coverage of the incentive system¹⁹ – the more actors and instruments the incentive system includes, the faster the development of citizens' energy can be expected.
- c) Models of participation and incentives for extremely poor citizens – the existence of such models is a prerequisite for the energy transition, and thus citizens' energy, to be just and for the benefits of the transition to be evenly distributed to all layers of society.

¹⁷ An interesting case is the behavior of the businesses in the Federation of BiH (FBiH), which, after the increase in the price of electricity and the transition from public to market supply, aggressively and massively turned to putting solar panels on the roofs of their facilities, although they could not obtain approval for connection to the grid nor did they have any support to do so. It is estimated that in the last few years, over 500 MW of solar panels have been installed on the roofs of industrial and commercial facilities in the FBiH, which operates exclusively in the mode of „self-consumption“, without the possibility of injecting excess energy into the grid.

¹⁸ The inclusion of prices for the economy in the methodology was not done because the prices of electricity for the economy in the observed countries of the region are market and higher than prices for households, so they are not an obstacle or demotivating, on the contrary.

¹⁹ A very useful parameter would be the total funds spent annually for these purposes and their comparison with other countries. Unfortunately, data and reports on this are not transparent or publicly available.

3. RESULTS OF THE CITIZENS' ENERGY PROGRESS REVIEW BY COUNTRY

3.1 Serbia

a) Assessment of the legal and regulatory framework for implementation

The results of the research on the state and progress of the legal and regulatory framework for citizens' energy are given in the following table:

Description	Rating	Changes in the last year	Note
RED II	Partially implemented		See under REC and CEC
RED III	Not implemented		
Prosumers/Consumers-Producers	Fully implemented	Negative	For installations over 10.8 kW, additional documentation has been required.
Prosumers acting together	Fully implemented	Negative	For installations over 10.8 kW, additional documentation has been required
Renewable Energy Communities - REC	Not implemented		There is a legal basis, but there is a lack of a bylaw ²⁰
Citizen Energy Communities-CEC	Not implemented		There is a legal basis. A bylaw is missing ²¹
Active customers	Fully implemented	Positive	Amended Regulation on Conditions of Supply and Supply of Electricity ²²
Micro-plants - balcony solar systems	Not implemented Present in the field		It's not regulated; there's no legal basis ²³

²⁰ The Decree on the Conditions of Supply and Supply of Electricity should define the conditions for the establishment and operation of REC and CEC.

²¹ The Decree on the Conditions of Supply and Supply of Electricity should define the conditions for the establishment and operation of REC and CEC.

²² See more: <https://www.srbija.gov.rs/prikaz/974719>

²³ Micro-plants - balcony solar systems are not explicitly prohibited, because they belong to such low power plants, up to 800 W, which are connected to the end customer's socket according to the *plug and play* system and do not have a feedback effect on the grid. Regulation is necessary for recording and planning the operation of the distribution network.

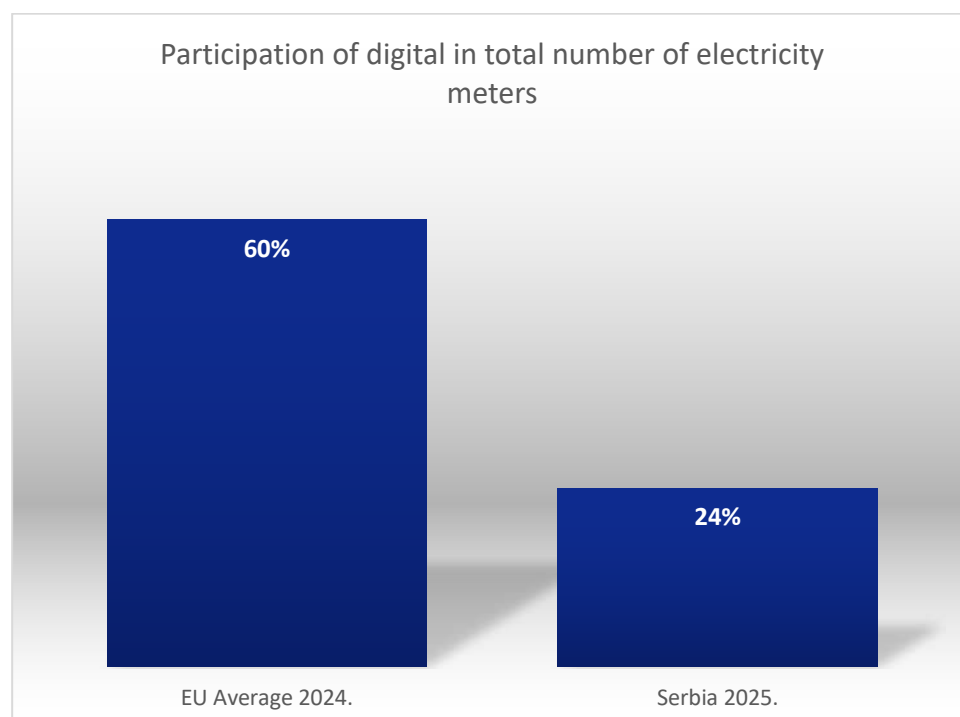
From the above, it is obvious that decision makers in Serbia, under the pressure of large foreign companies operating in the country, have enabled the acquisition of the status of an active customer/buyer, while at the same time they have continued to hinder the development of citizens' energy communities. All in all, it can be stated that Serbia has recently made extremely small steps in improving the legal and regulatory framework and that it is still not ready to give citizens' energy its place in its energy policies.

b) Assessment of technical infrastructure – state and development of the distribution network

The Level of Digitalization

As the first parameter for the assessment of technical infrastructure for the development of citizens' energy in Serbia, we will use comparative data on the percentage of share of digital (smart) metering devices²⁴:

Graph 3



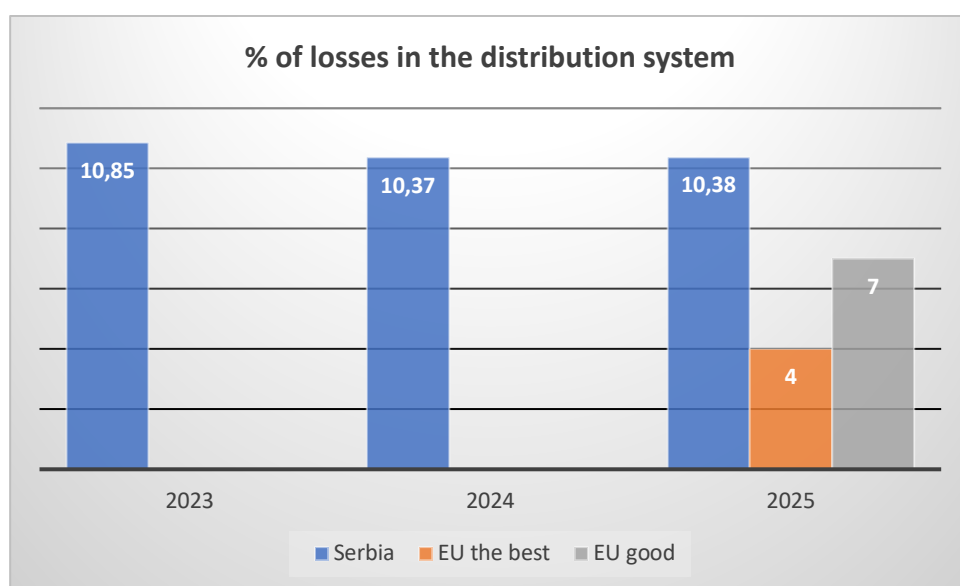
²⁴ For comparison, the EU average was taken, but it should be taken into account that, for example, in Slovenia the percentage of the share of digital meters reached 97%, while in e.g. Hungary it is below 15%. See more: <https://www.acer.europa.eu/monitoring/MMR>

It is evident that Serbia is significantly lagging in the development and digitalization of the distribution network, although this is one of its priorities. Therefore, it is necessary to invest additional efforts and resources so that the digitalization of metering points does not become the main obstacle to the further development of citizens' energy and the use of all the benefits that the management of surplus production and consumption brings.

Losses in the distribution network.

Losses on the distribution network represent a significant parameter of the condition and readiness of the distribution system operator. Although losses can occur for technical and other reasons,²⁵ they essentially boil down to technical losses and the equipment and organization of the distribution system operator, and are therefore a very important parameter for assessing the situation. The following graph shows the trends of losses on the distribution network in Serbia in the last three years, as well as a comparison with the best and good EU countries and distribution system operators:

Graph 4



The data shows that the percentage of losses in the distribution system is stagnating and that the modernization of work, digitalization of the system, and better management are a prerequisite for their reduction.

Publicly available interactive map of distribution network capacity

Given the previously presented situation and the degree of digitalization of the distribution network, it is clear that the distribution system operator in Serbia is not able to fulfill its legal obligation and provide public and interactive insight into the state of distribution network

²⁵ E.g. theft of electricity or unauthorized connection of consumers

capacity. Therefore, it is necessary to start working on this at the basic level (i.e., an overview of the available capacities of primary transformer stations 110/x kV) or to make a map only for one part of the system where the conditions for this have been met.

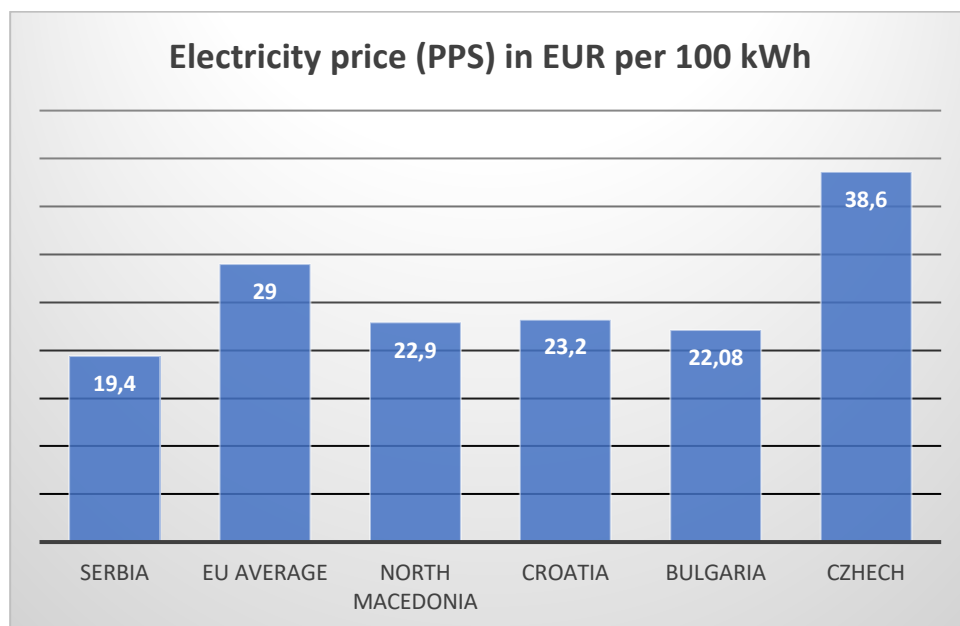
From all of the above, it is clear that the technical infrastructure for the development of citizens' energy in Serbia is a key "bottleneck" for accelerated development.

c) Assessment of economic conditions and incentives

Electricity price for households

The price of electricity with the associated costs can be a serious motivating or demotivating factor for the development of citizens' energy. Although the price of electricity for households has changed four times in the last three years, it is still far below the average of EU countries. The following chart provides a comparative overview of electricity prices for households in selected countries expressed according to purchasing power parity (Power Purchase Standard - PPS) for the second half of 2025²⁶:

Graph 5



As can be seen, the price of electricity for households in Serbia is 33% lower than the EU average and 15% lower than the price in neighboring countries. Although the price itself is not a determining indicator for the development of citizens' energy²⁷, it still provides a partial

²⁶ <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20260505-1>

²⁷ See, for example, the case of Hungary, where the price of electricity for households measured by PPS (15.1 EUR/100 kWh) is lower than the price in Serbia, and where good public policies and a system of support for citizens energy resulted in over 300,000 prosumers at the end of 2025.

answer to the question of why the development of citizens' energy is slower than in other countries.

Evaluation of the Citizens Energy Development Support System

The state and assessment of the system of support for the development of civic energy in Serbia are given in the following table:

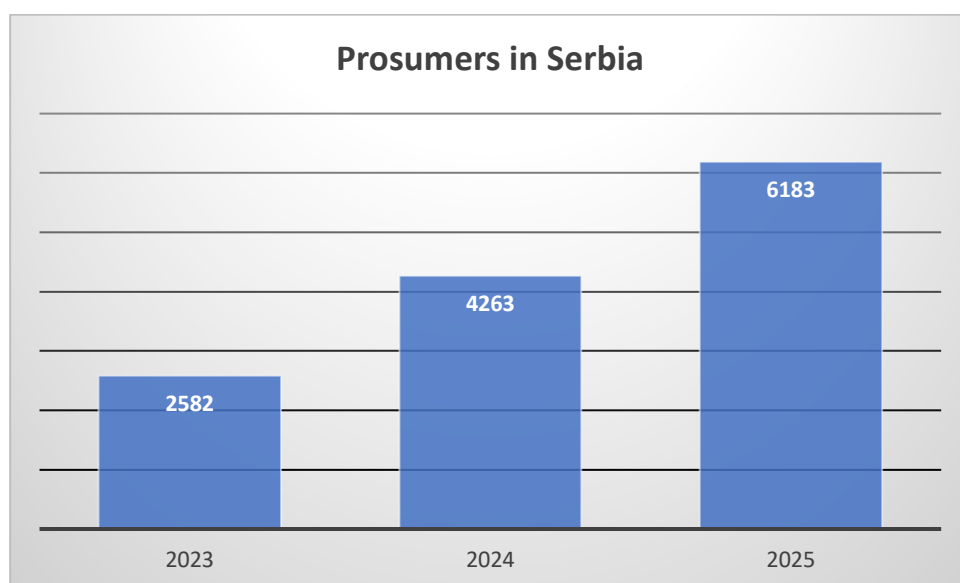
Description	Rating	Changes in the last year	Note
Prosumers/consumers-producers	Fully implemented Net metering Net billing	Negative	From January 1st, 2027, net metering will be abolished for new prosumers. The existing incentive system allows for a subsidy of up to 50% of the cost of solar installation. No subsidies for batteries.
Prosumers acting together	Partially implemented Net metering		No subsidies
Renewable energy communities – REC	Not implemented		
Citizens energy communities - CEC	Not implemented		
Active buyers	Not implemented		
Micro-plants - balcony solar systems	Not implemented		

Incentives for the Extremely Poor Households

When it comes to energy poverty, Serbia has a developed legal and by-law basis in which the categories of energy poverty and energy vulnerable customers are defined, and there is also active support through subsidizing energy costs. In addition to the above, households of lower social status are entitled to a 90% subsidy for the installation of solar. Unfortunately, specific models have not been developed for socially vulnerable households, which are not able to provide even the remaining 10% of their own participation.

From all of the above, and based on the data on the number of registered prosumers, it can be concluded that the existing regulatory and technical framework, in the current economic conditions, along with the current system of incentives, has resulted in a slow development of citizens' energy in Serbia. The following graph shows the total number of prosumers in Serbia in the last three years:

Graph 6



The data shows that fewer than 2,000 new prosumers were added annually, which is far from the pace that would be satisfactory for a country of this size and development²⁸.

The total number of prosumers at the end of September 2026 reached 8,996. The pace of new connections has slightly increased compared to the previous period, most likely as a result of the planned abolition of net metering for all categories of prosumers and the transition to net billing. The structure of prosumers is dominated by households (6,850), followed by businesses and institutions (2,139), while only 7 residential communities (prosumers operating jointly) have been registered in the previous period. Serbia currently does not have a single active buyer, renewable energy community, or citizens energy community..

²⁸ The pace of connecting new prosumers in e.g. Croatia is about 9,000, and in Hungary over 20,000 per year.

3.2 Bosnia and Herzegovina

a) Assessment of the legal and regulatory framework for implementation

The results of the research on the state and progress of the legal and regulatory framework for citizens' energy²⁹ in BiH are given in the following table:

Description	Rating	Changes in the last year	Note
RED II	Partially implemented		In Republic of Srpska and District Brčko, there is no legal definition CEC, in DB there is no active buyer and in DB there are no by-laws (11 of the 12 provided for by law)
RED III	Not implemented		
Prosumers/ producers- consumers	Fully implemented in Federation of BiH (FBiH) Fully implemented in Republic of Srpska (RS) Partially implemented in District Brčko (DB)	Positive	Simplified procedures have been adopted in the FBiH. There is a lack of by-laws in the DB.
Prosumers acting together	Fully implemented in FBiH and RS Partially implemented in DB	Positive	Simplified procedures have been adopted in the FBiH. There is a lack of by-laws in the DB.,
REC	Fully implemented in FBiH and RS Partially implemented in DB	Positive	The FBiH Rules for Communities. There is a lack of by-laws in the DB.,
CEC	Fully implemented in FBiH Not implemented in RS and DB		There is no legal basis in the RS and DB.
Active buyers	Fully implemented in FBiH and RS Not implemented in DB	Positive	It is made possible by amended law. There is no legal basis for DB.
Micro-plants – balcony solar installations	Not implemented Present in the field		It's not legal, there's no legal basis.

From the above, it is evident that the legal and regulatory framework for all forms of citizens' energy has not yet been established in BiH, while in those segments that have been implemented, there are significant differences in the conditions and treatment of certain forms of citizens' energy and the possibility of exercising certain rights that should be the same

²⁹ Bosnia and Herzegovina is specific in that energy policies, legal and regulatory framework and implementation take place at the level of the Entities (Federation of BiH and Republic of Srpska) and the District Brčko and that this is their exclusive competence.

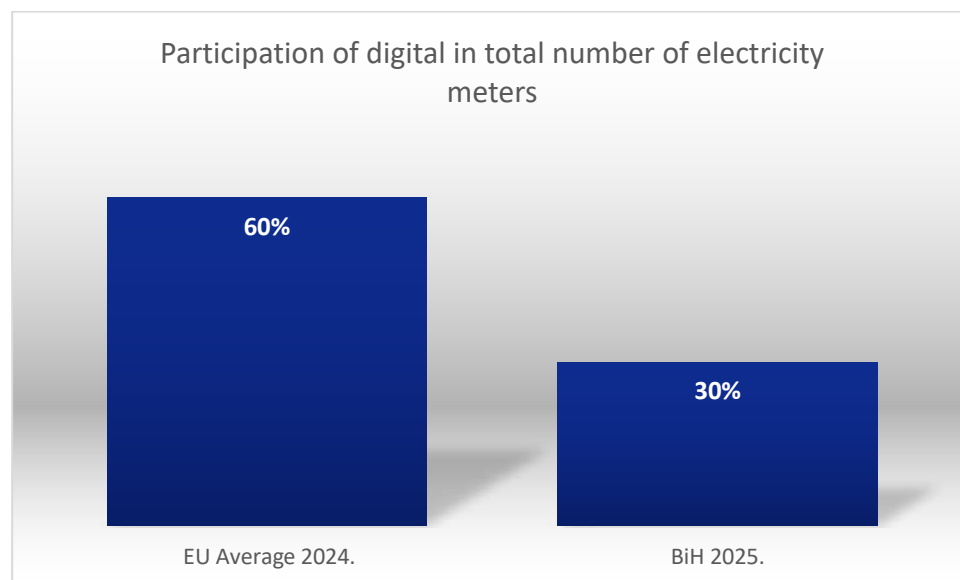
for everyone on the territory of one state. Substantial progress has been made in the FBiH, which has fully implemented the legal and regulatory framework for all forms of citizens' energy in the last year.

b) Assessment of technical infrastructure – state and development of the distribution network

Digitalization of the distribution network

Unlike Serbia and Montenegro, which have one, the distribution network in BiH is managed by many distribution system operators, which are part of four state-owned electricity companies. When it comes to the introduction of digital meters, the situation in BiH is somewhat better than in Serbia, but still far from the EU average:

Graph 7

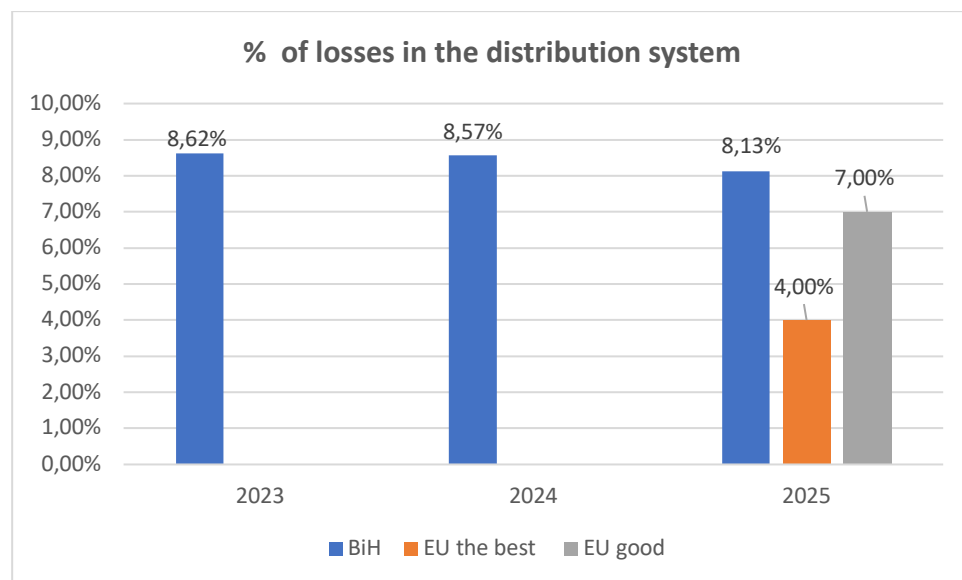


Given the state and low level of investments and their implementation, as well as complex and demanding "simplified" procedures for connecting citizens' energy facilities, the distribution network will represent a serious limitation for the accelerated development of citizens' energy. To all this should be added the fact that there are four distribution system operators operating in BiH and that the simplification of connection procedures is different for each of them.

Losses in the distribution network.

When it comes to losses in the distribution network, the situation is somewhat more favorable than in Serbia.

Graph 8



The data shows that the DSOs in BiH are making constant efforts to reduce losses, but that there is still a lot of room for further improvement.

Publicly available interactive map of distribution network capacity

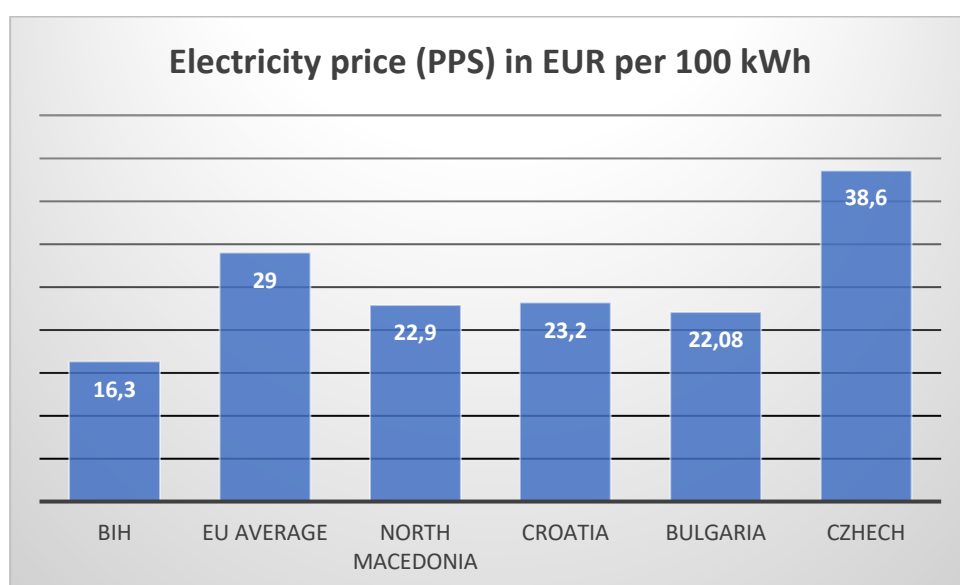
Given the presented situation, data on available capacities of the distribution network are not publicly available in BiH either, which significantly affects the possibility of faster development of citizens' energy.

c) Assessment of economic conditions and incentives

Electricity price for households

As in the case of Serbia, electricity prices for households are lower than market prices. It is also characteristic of BiH that the price varies depending on which territory you live in³⁰. Households in BiH pay significantly less for electricity than households in Serbia, and a comparison of electricity costs for households using PPS is given in the following chart:

Graph 9



BiH has one of the lowest electricity prices for households in Europe, which puts public suppliers in a situation where it is increasingly difficult to operate positively by supplying energy to households below the cost price. This situation is unsustainable in the long run, and electricity price increases for households are inevitable.

³⁰ Depending on which entity you live in, the tariff system for households is different, and the price of kWh consumed and the distribution network fee is different, and the District Brčko has its own price and tariff policy for households.

Evaluation of the Citizens Energy Development Support System

The state and assessment of the system of support for the development of citizens' energy in Bosnia and Herzegovina are given in the following table:

Description	Rating	Changes in the last year	Note
Prosumers/producers-consumers	Fully implemented Net metering Net billing		The existing incentive system allows for a subsidy of up to 50% of the cost of solar installation. No subsidies for batteries.
Prosumers acting together	Partially implemented Net metering Net billing		There are no subsidies at the entity level. Subsidies are given by individual municipalities up to 50%.
Renewable energy communities – REC	Partly implemented	Adopted Rulebook on REC	In the FBiH, RECs have the right to purchase surplus energy at a preferential price ³¹ , while in the RS they are entitled to a premium for their own consumption. DB has no incentives.
Citizens energy communities - CEC	Not implemented		In the FBiH, where it is possible to establish an CEC, there are no incentives for this form of citizens energy
Active buyers	Not implemented		In the FBiH, where it is possible to obtain the status of an active buyer, there are no incentives
Micro-plants - balcony solar systems	Not implemented		

Incentives for the Extremely Poor Households

When it comes to energy poverty, BiH has a developed legal basis, but unfortunately not sublaws for supporting energy poverty and energy-vulnerable customers.

In the FBiH, the Operator for Renewable Energy Sources and Efficient Cogeneration (OIEIEK)³² has developed a special financing model for citizens in extreme energy poverty, and a public call is underway. OIEIEK, from the funds collected from the fee for renewable energy sources,

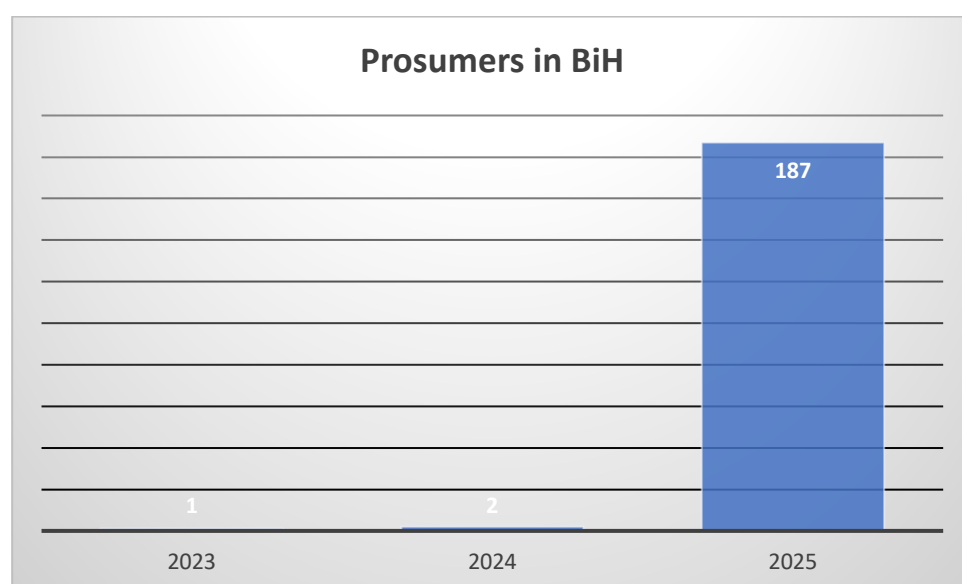
³¹ In the FBiH, we have a paradoxical situation where the production of surplus energy is encouraged, and not consumption for own needs and energy exchange within the REC.

³² See more: <https://www.oieiek.ba>

which is paid by each electricity buyer, finances 100% of the installation and all other activities related to the installation of solar panels on the roofs of poor households, whereby the cantons in the FBiH apply to the public call on behalf of households. This is the first developed model of incentives intended for the poorest households in the Western Balkans region. At the first call, it is expected that about 100 households in this category will permanently provide electricity from their own production.

From all of the above and based on the data on the number of registered prosumers (see the following graph), it can be concluded that the existing regulatory framework is not fully developed, that the technical framework is a bottleneck for development, and that it will need to be significantly improved. In the existing economic conditions and with the current system of incentives, which needs refinement and additional impetus, it can be further concluded that BiH is still at the back of the region when it comes to the development of citizens' energy.

Graph 10



The data on Graph 10 shows that citizens' energy in BiH was realistically allowed to develop only in 2025, because by then the basic regulatory framework had not been fully established. At the end of September 2026, the total number of registered prosumers reached the figure of 472. The fact that there are over 1,000 more applications submitted for obtaining the status is encouraging. In addition to the above, it is also positive that the first active customers/buyers in the FBiH were registered this year and that as many as 9 renewable energy communities are in the process of acquiring status with the relevant competent authorities. In these conditions, the expected pace of development of prosumers in BiH is at the level of about 2,000 per year, which can be assessed as an insufficient pace of development in relation to the environment, and it will be necessary to intensify all activities to improve the regulatory, technical and financial framework for encouraging citizens' energy.

3.3 Montenegro

a) Assessment of the legal and regulatory framework for implementation

The results of the research on the state and progress of the legal and regulatory framework for citizens' energy in Montenegro are given in the following table:

Description	Rating	Changes in the last year	Note
RED II	Partially implemented	Positive	
RED III	Partially implemented		Defined mapping of special zones for the development of RES, Reduction of network fees for REC and prosumers acting together
Prosumers/ producers-consumers	Partially implemented		Missing bylaws ³³
Prosumers acting together	Fully implemented	Positive	,
REC	Fully implemented	Positive	By-law adopted,
CEC	Fully implemented		By-law adopted
Active buyers	Fully implemented	Positive	
Micro-plants – balcony solar installations	Not implemented Present in the field		It's not legal, there's no legal basis

In the last year, Montenegro has made the biggest step forward in the region when it comes to the legal and regulatory framework for the development of citizens' energy, enabling all forms of citizens' energy to be implemented in practice. In doing so, it should be taken into account that prosumer installations are implemented according to a specific model³⁴ where the Electric Power Company of Montenegro (EPCG), through its solar development company, performs free installation of solar panels on roofs and where the excess energy that the prosumer does not consume, EPCG takes and covers the installation costs from it. After a period of approximately ten years, households become the owners of solar panels on their roofs, and EPCG purchases excess energy, so here we can talk about a prosumer that is in the net billing system.

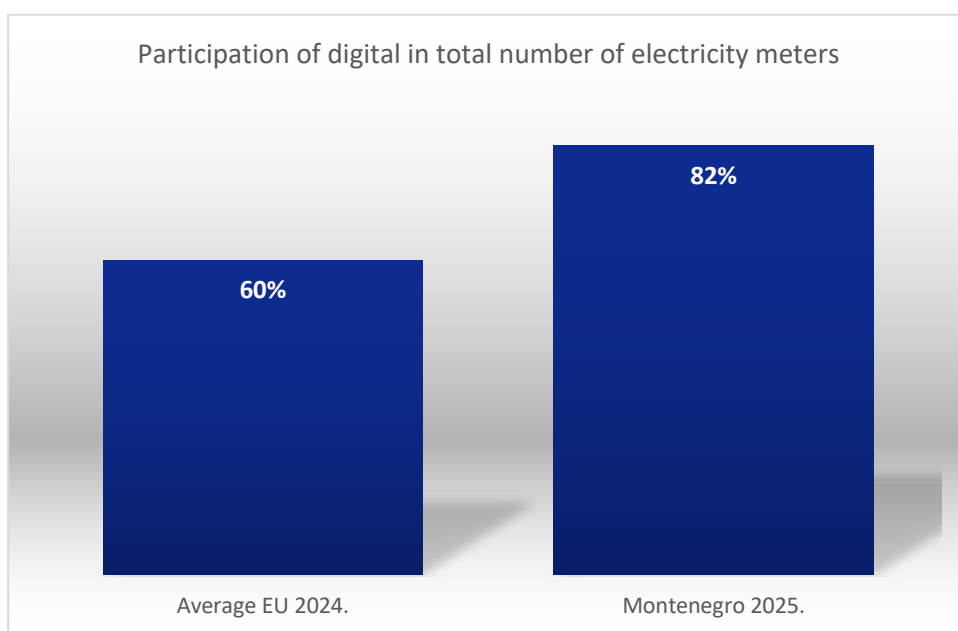
³³ There is a lack (prescribed by the competent ministry) of a by-law that regulates in more detail the mode of production, storage and sale of electricity produced in the customer's facilities and producers, the mode of joint engagement of customers-producers in the production, storage and sale of electricity, as well as the mode in which system operators implement procedures and determination of fees for connection and operation of customer-producer facilities.

³⁴ [Пријави се - Солар градња](#); EPCG Solar gradnja has a permanently open public call for citizens: *Apply via the website www.solari.epcg.com*

b) Assessment of technical infrastructure – state and development of the distribution network

When it comes to the digitalization of metering points for distribution system users, Montenegro is in the lead in relation to the region, as well as in relation to the largest number of EU countries.

Graph 11

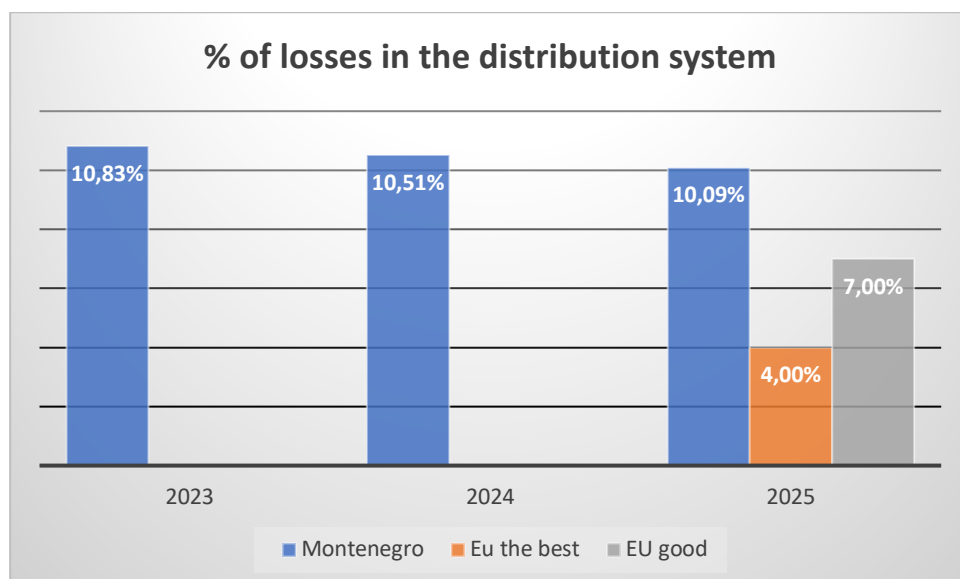


Given the high degree of digitalization of metering on the part of the system user, in the coming period, the DSO³⁵ will digitize its own network and develop a system for managing data and information obtained through the digitalization of the distribution network and managing energy flows.

³⁵ CEDIS <https://cedis.me>

Losses in the distribution network.

Graph 12



Losses on the distribution network are still high, but there is a noticeable tendency to reduce them, which, along with the growth in the number of prosumers and a greater degree of digitalization, should lead to their significant reduction in the coming period.³⁶

Publicly available interactive map of distribution network capacity

Unfortunately, the Montenegro DSO, CEDIS, has not yet developed its own technical and organizational capacities to be able to offer this type of information to the public.

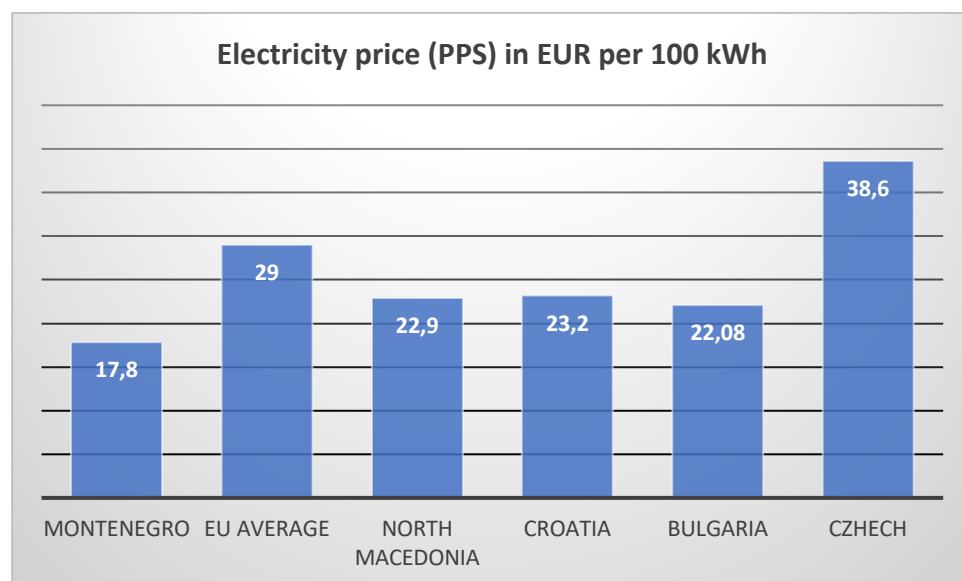
³⁶ In support of the above statement, see: <https://cedis.me/najnovije-vijesti/cedis-obara-rekorde-gubici-na-elektrodistributivnoj-mrezi-u-septembru-svedeni-na-682/>

c) Assessment of economic conditions and incentives

Electricity price for households

As in the case of other countries in the region, the price of electricity for households in Montenegro is below the market price. A comparative overview of prices in relation to some EU countries and the region is given in the following chart:

Graph 13



As a function of the country's expected accession to the EU and in accordance with the commitments made, it is realistic that electricity prices for households in Montenegro will have to rise in the coming year³⁷.

³⁷ Montenegro has taken over the obligation to increase prices for households by the end of 2027 with the Reform Agenda

Evaluation of the Citizen Energy Development Support System

The state and assessment of the system of support for the development of citizens' energy in Montenegro are given in the following overview:

Description	Rating	Changes in the last year	Note
Prosumers/producers-consumers	Fully implemented Net metering Net billing		A specific model of support that is implemented through EPCG through free installation and repayment of the system with surplus energy. Subsidies of up to 60% of investment in solar exclusively for local governments and their institutions. No subsidies for batteries.
Prosumers acting together	Partially implemented Net metering Net billing		No subsidies
Renewable energy communities – REC	Partly implemented		REC have the right to sell at guaranteed prices. No subsidies
Citizens energy communities - CEC	Not implemented		No subsidies
Active buyers	Not implemented		
Micro-plants - balcony solar systems	Partly implemented		Through EPCG it is possible to install and repay from savings for the next 5 years. No subsidies.

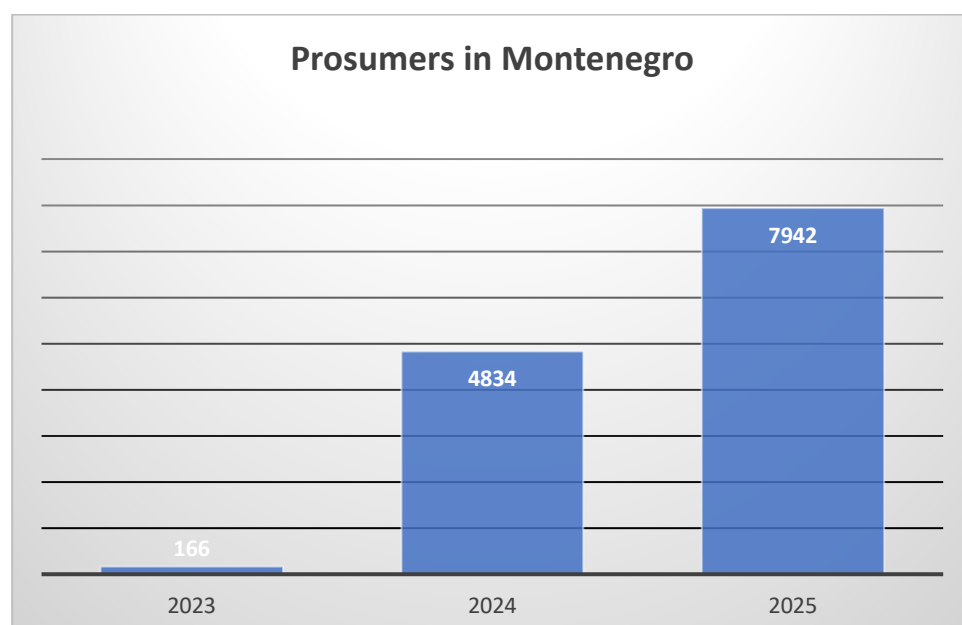
Incentives for the Extremely Poor Households

When it comes to energy poverty, Montenegro has a developed legal and bylaw basis in which the categories of energy poverty and energy vulnerable customers are defined, and active support is also present through subsidizing energy costs. In addition to the above, households of lower social status can, like others, apply for the solar installation program implemented by EPCG. Unfortunately, Montenegro does not have a developed model of subsidizing households in extreme poverty.

Based on all of the above, it can be concluded that Montenegro has a satisfactory environment for the accelerated development of citizens' energy and that, with additional efforts to develop technical conditions for faster acceptance of citizens' energy installations and with a

better system of incentives, it can achieve excellent results, given the already impressive growth in the number of registered prosumers shown in the following graph:

Graph 14

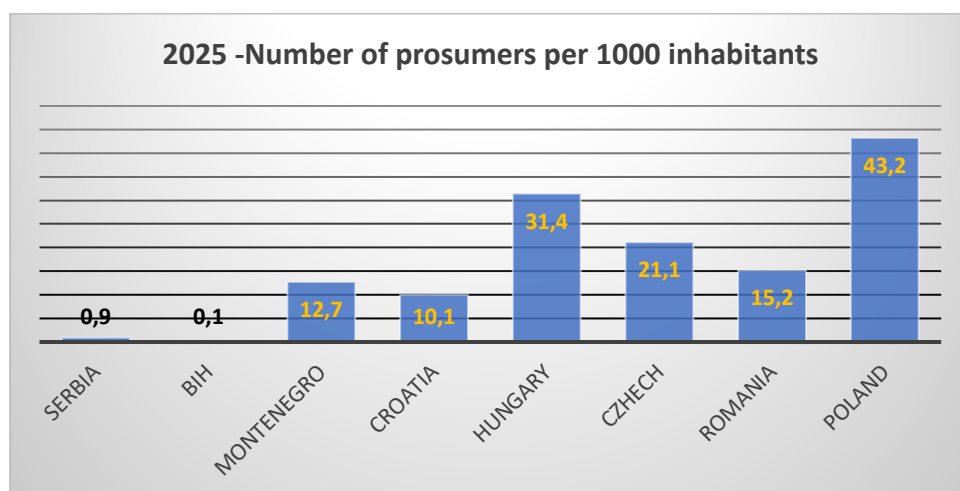


Annually, under the existing conditions, Montenegro connects on average over 4,000 new prosumers per year, which is the highest in the region. Growth is limited due to a specific scheme, i.e., the financial and other capacities of EPCG, an underdeveloped system of support and subsidies for other users, i.e., those that do not participate in the EPCG program, and limitations arising from the available capacities of the distribution system and the DSO. There are no REC, CEC, or active customers in Montenegro yet, so it is necessary to implement additional activities in this domain as well; implement pilot projects and establish a stimulating system of support for their development.

4. CONCLUSION

Based on the conducted research, it can be concluded that the countries of the region included in the research are significantly lagging behind the EU countries in the development of citizens' energy according to almost all the investigated parameters. This is best seen from the following graph showing the number of prosumers per 1,000 inhabitants in the countries included in the research compared to the corresponding EU countries³⁸.

Graph 15



The most difficult situation is in Bosnia and Herzegovina and Serbia, while Montenegro is relatively successful in developing citizens' energy according to a specific model, with all the limitations that the model brings.

In the observed countries of the region, the legislative and regulatory framework for the development of citizens' energy has not yet been completed, while the level of technical readiness of the distribution system and DSOs represents a serious potential bottleneck for development. By adopting the Growth Plan for the Western Balkans and the Reform Agenda, all three countries have committed to increase electricity prices for households by the end of 2027 and make them a market category, which will significantly affect the standard of living and thus increase the demand of the population for solutions involving citizens energy models.

The development of a model of support for citizens' energy actors, especially citizens in extreme energy poverty, is in its infancy, while renewable energy communities and citizen energy communities, as models in which local communities, micro-enterprises, and citizens in energy poverty can participate, do not yet have an effective legal and regulatory framework or have not been implemented in practice.

³⁸ For the comparison, EU countries that still use coal and where state-owned electricity companies play a significant role were selected.

One of the main obstacles to the development of citizens' energy is the lack of information and education, as well as the lack of transparency and incompleteness of reporting on the state of citizens' energy. *The data and information that are collected are mostly not publicly available; they are incomplete and not up-to-date, and often do not correspond to the situation on the ground*³⁹.

Given that the development of the methodology for monitoring citizens' energy and related indicators took into account that data and information must be available to everyone and from public sources, so that everyone can use it for their research, the number of indicators is small and insufficient for deeper analyses of problems and bottlenecks, but indicative enough to be used for the purpose of evaluating progress, and public policies in the field of citizens' energy development.

³⁹ Serbia is the only one that has a fully transparent and publicly available register of civil energy entities. In the other two countries, the required data can be obtained either from the annual reports of the competent authorities and bodies or only on request.

5. RECOMMENDATIONS FOR DOMESTIC AND FOREIGN DECISION MAKERS

For the countries of the Western Balkans, where household electricity consumption dominates and where the lowest distribution level (0.4 kV) consumes the most electricity, generation at the point of consumption through the development of various forms of citizens energy represents the most effective, cost-efficient and fastest way to decarbonize domestic consumption, which enables sustainability, equity, and increases energy security and independence of countries.

In order for the energy transition to be sustainable, it is necessary to simultaneously transform all the stakeholders involved in it.

Public policy makers (domestic and foreign) should put citizens, local communities, institutions, and micro/small/medium-sized enterprises at the focus and priority of their energy policies, and through the accelerated development of citizens' energy, direct the process from the bottom up, and not from the top down as before, because the top-down approach obviously did not give the expected result⁴⁰ and caused a serious delay in the energy transition of these countries.

Domestic decision makers should prioritize and finalize the legal and regulatory framework for the development of citizens' energy, and review, supplement and amend bylaws, and simplify and adapt procedures to enable fast, cheap and sustainable functioning of citizens' energy actors.

As part of the regular revision of the National Energy and Climate Plans, it is necessary to give greater importance to citizens' energy, increase the targets and adapt the system of measures to achieve the targets.

Subsidizing market-oriented producers of electricity through mandatory feed-in and guaranteed prices should be urgently abandoned, and the funds collected from fees for renewable energy sources should be fully redirected to subsidizing citizens' energy entities and households in extreme energy poverty.⁴¹

Financial resources from grants and international loans intended for the energy transition should be redirected from financing the construction of market-oriented capacities for electricity production to faster development of distribution network capacities and their digitalization, transformation of DSOs into entities that manage energy flows, and to support and subsidize the development of citizens' energy, the use of batteries, heat pumps, electric vehicle chargers, and increasing energy efficiency.

⁴⁰ The focus exclusively on market electricity production and market investors has led to network congestion at the distribution level, a lack of money to subsidize citizens and the economy, and the growth of corruption and environmental devastation, while at the same time their contribution to the decarbonization of domestic consumption has been insufficient.

⁴¹ The model developed by OIEIEK in BiH can be the starting point for these activities.

In the current conditions of geopolitical changes, energy uncertainty, rising fossil fuel prices and high dependence on energy imports (primarily oil and gas), the production of electricity at the point of consumption, through various forms of citizens' energy, and the electrification of heating and transport systems at the local level, is certainly the only development strategy that can ensure the security and long-term sustainability of the energy systems of the Western Balkan countries.

OVERVIEW OF DATA SOURCES AND INFORMATION FOR THE CALCULATION OF INDICATORS

1. Legal and regulatory framework
 - Laws – websites of competent ministries - Srbija (<https://www.mre.gov.rs>), Crna Gora (<https://www.gov.me/meir>), BiH – Republika Srpska (<https://vladars.rs/sr-SP-Cyrl/Vlada/Ministarstva/mper/Pages/default.aspx>), Federacija BiH (<https://fmeri.gov.ba/ministarstvo/>)
 - Regulations and procedures – depending on legal solutions or websites of the above-mentioned ministries or websites of regulatory agencies – Srbija (AERS <https://www.aers.rs>), Crna Gora (REGAGEN <https://regagen.co.me>), BiH – Republika Srpska (RERS <https://reers.ba>), Federacija BiH (FERK <https://www.ferk.ba/hr/>)
2. Technical infrastructure
 - Digitalization – DSO websites (reports and plans) – Srbija (Elektro distribucija Srbije <https://elektrodistribucija.rs>), Crna Gora (CEDIS <https://cedis.me>), BiH – Republika Srpska (5 elektrodistribucija = ELEKTROKRAJINA <https://www.elektrokrajina.com>, ELEKTRODOBOJ <https://www.elektrodoboj.net>, ELEKTRO BIJELJINA <https://elektrobijeljina.com>, ELEKTRO PALE <https://www.edbpale.com>, ELEKTRO HERCEGOVINA <https://www.elektrohercegovina.com>) Federacija BiH (EPBIH <https://www.epbih.ba>, EP HZHB <https://ephzhb.ba>)
 - Distribution Network Losses – Annual Reports of Regulatory Agencies – Serbia (AERS <https://www.aers.rs>), Crna Gora (REGAGEN <https://regagen.co.me>), BiH – Republika Srpska (RERS <https://reers.ba>), Federacija BiH (FERK <https://www.ferk.ba/hr/>)
Total for BiH (DERK <https://www.derk.ba>)
 - Publicly Available Interactive Distribution Network Capacity Map – DSO Websites
3. Economic Conditions and Incentive System
 - Electricity price for households by PPS – periodically published by EUROSTAT <https://ec.europa.eu/eurostat/web/products-eurostat-news/w/ddn-20260505-1>
 - Citizens Energy Development Support System – defined by laws and programs can be found at – Serbia Ministry of Energy - (<https://www.mre.gov.rs>), Crna Gora (EKO FOND <https://www.eko-fond.co.me>), BiH- Republika Srpska (EKO FOND <https://www.ekofondrs.org>), Federacija BiH (FOND ZA ZAŠTITU OKOLIŠA <https://fzofbih.org.ba>)
 - Models of Incentives for the Extremely Poor – Srbija Ministarstvo energetike - (<https://www.mre.gov.rs>), Crna Gora – nema, BiH OIEIEK (<https://www.oieiek.ba>)
4. Number of prosumers
 - Srbija - website Elektro distribucija Srbije (<https://elektrodistribucija.rs>), Crna Gora – reports (CEDIS <https://cedis.me>) i (REGAGEN <https://regagen.co.me>), BiH – Republic of Srpska – Ministry of Energy on request, Federation of BiH FMERI on request

September 2026.