POLICY BRIEF

NAVIGATING SOLAR INVESTMENT CHALLENGES IN KOSOVO

balkan green foundation

Author
Diona Grezda

Balkan Green Foundation
February 2024 Prishtina, Kosovo

POLICY BRIEF

Navigating Solar Investment Challenges in Kosovo

ACRONYMS

AUK - American University of Kosovo

CAN - Climate Action Network

EnCT - Energy Community Treaty/ Energy Community

EU - European Union

EU/MS - European Union Member States

ERO - Energy Regulatory Office

FIT/s - Feed-in-Tariff/s

IEA - International Energy Agency

KEDS - Kosovo Electricity and Distribution Services

KOST - Kosovo Transmission System Operator Company

kW - Kilowatt

KWh - Kilowatt- hour

MESPI - Ministry of Environment, Spatial Planning and Infrastructure

MW - Megawatt

PV/PVs - Photovoltaic/s

QEQ - Center for Energy and Sustainability

RES - Renewables/ Renewable energy sources

SECAP - Sustainable Climate and Energy Action Plan

UBT - University of Business and Technology

UP - University of Pristina

WB/WB6 - Western Balkans/ Western Balkans Six

TABLE OF CONTENTS

EXECUTIVE SUMMARY

As a potential European Union (EU) candidate and an Energy Community (EnCT) Contracting Party, Kosovo is embracing the climate and energy priorities of the union, aligning itself with the ultimate climate-neutral ambition by 2050. On the path to climate neutrality, Kosovo has specific milestones that it is expected to reach, among which is 32% renewable energy by 2030. However, the heavy reliance on coal 77.69%, is making the country's path to phasing in renewables (RES) and particularly Solar Photovoltaics (PVs) challenging on multiple fronts.

Despite being geographically well suited for developing solar energy, Kosovo is facing legal, administrative, and financial barriers such as prolonged authorization procedures, solar PV installed capacity limitation, lack of RES skills and capacities, protracted legalization process, lack of public awareness, and modest support schemes, that are exacerbating the load of solar investments in the country. Nevertheless, there is a growing interest in solar technology as citizens and businesses are becoming more and more aware of their financial and environmental benefits. In March 2023, the Kosovo Parliament adopted the Energy Strategy as an important document to guide the country's energy transition in the next seven years. Along the five main priorities lies the ambitious aim to dynamically increase the renewable energy sources, mainly wind and solar supported by renewable auctions, public investment, and active participation of prosumers in this process.

However, Kosovo needs to intensify its work on different courses to make the most of its solar potential. Solar PVs offer a cost-effective and sustainable source of energy that has been largely pursued in the EU and beyond in recent years. Despite the high initial investment cost, it is considered one of the cheapest sources of energy available due to the long lifespan of solar panels, low maintenance cost, but also the cut in energy bills, and the reduction of emissions it contributes to. So, while increasing the share of renewables is a legal requirement to harmonize the national legislation with the EU's Energy Acquis, Kosovo citizens, and institutions should rather view it as an imperative for their well-being and environmental protection.

In this direction, this policy brief aims to shed light on the challenges that customers in Kosovo encounter when trying to invest in solar energy. The methodology used for this analysis combines desk research (official state documents and publications, EU documents, and reports, research reports, statistical databases, news articles, etc.) and interviews with diverse stakeholders (solar companies, the municipality of Pristina, the Energy Regulatory Office, energy experts, etc.). By bringing these two methods together, the report maps the current state of solar energy in Kosovo while focusing on challenges and opportunities.

INTRODUCTION

The European Union (EU) is set on a transformative journey of becoming the first climate-neutral continent by 2050, within the framework of the European Green Deal. [1] On the road to climate neutrality, EU Member States (EU/MS) have pledged to cut net greenhouse gas emissions by at least 55% compared to 1999 levels by 2030. [2] The Green Deal includes initiatives covering the climate, the environment, energy, transport, industry, agriculture, and sustainable finance – all of which are strongly intertwined and contribute to the ultimate climate goal. [3]

While the EU's dedication to the green agenda has been evident for a while, the morning of 24 February 2022 incited a sense of urgency and a reinforced commitment. The elevated energy prices and the pressing energy security concerns called for more intense efforts from the EU and its Member States to end the energy dependency on Russia and embrace green energy solutions. In May 2022, the EU launched the REPowerEU initiative, with solar energy as the cornerstone, to help the Member States save energy, produce clean energy, and diversify their energy supplies. [4] Now, the EU is determined to increase the current target of 'at least 32%' of renewable energy sources in the overall energy mix to at least 40% by 2030, which implies doubling the RES share in just a decade.[5]

The Western Balkans (Albania, Bosnia and Hercegovina, Kosovo, Montenegro, North Macedonia and Serbia) as candidate and potential EU candidate countries but also Contracting Parties of the Energy Community Treaty (EnCT) have also embraced the new policy priorities of the union and have agreed to Sofia Declaration on the

1 Delivering the European Green Deal. 14 July 2021. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en.

2 Ibid

3 European Council. European Green Deal. https://www.consilium.europa.eu/en/policies/green-deal/#:~:text=European%20climate%20law&text=By%20adopting%20it%2C%20the%20EU,carried%20out%20by%20the%20Commission Accessed 19 Sep. 2023

4 REPowerEU: Affordable, Secure and Sustainable Energy for Europe. 18 May 2022. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/repowereu-affordable-secure-and-sustainable-energy-europe_en

5 Commission Presents Renewable Energy Directive Revision. https://commission.europa.eu/news/commission-presents-renewable-energy-directive-revision-2021-07-14_en Accessed 11 Oct. 2023.

Green Agenda for the Western Balkans in November 2020. [6] The six signatory countries have, in this regard, dedicated to 'increase the share of renewable energy sources and provide the necessary investment conditions, in line with the EU and Energy Community acquis and target'.[7]

The Western Balkan region (including Albania, North Macedonia, Kosovo, Montenegro, Bosnia and Hercegovina, and Serbia) is a geographic area suited for developing green energy. Yet, these countries' energy mix is highly dominated by coal (except Albania). This dependency causes high air pollution and consequently leads to health and climate concerns. In 2020, coal accounted for over 60% of the Western Balkan countries' (WB6) gross generated electricity.[8] Although the countries have received large financial support for the green transition,[9] their efforts remain low. According to Climate Action Network (CAN) Europe, the lack of clear timetables and clarity on specific pathways in the Action Plan for the Green Agenda for the Western Balkans has led to limited implementation.[10]

Taking a closer look at Kosovo, the country generates around 77.69% of its electricity from coal.[11] This heavy reliance on coal, underscores the necessity for decarbonization as well as investment in RES technology.

As a result, increasing the share of renewables in Kosovo's energy mix is not only a legal requirement to harmonize the national legislation with the EU's Energy Acquis but also an imperative for the well-being of the people.

---

6 Council, Regional Cooperation. Regional Cooperation Council | Sofia Declaration on the Green Agenda for the Western Balkans. https://www.rcc.int/docs/546/sofia-declaration-on-the-green-agenda-for-the-western-balkans-rn Accessed 15 Aug. 2023.

7 Ibid

8 Regional Programme - The OECD and South East Europe. https://t4.oecd.org/south-east-europe/programme/ Accessed 19 Sep. 2023.

9 Western Balkans Investment Framework. Clean Energy. https://www.wbif.eu/sectors/energy Accessed 15 Aug. 2023.

10 CAN Europe. https://caneurope.org/ Accessed 10 Aug. 2023.

11 Energy Regulatory Office. Annual Report 2022. Accessed 20 Nov 2023. Also see OECD. Multi-Dimensional Review of the Western Balkans: From Analysis to Action. OECD, 2022. DOI.org (Crossref), https://doi.org/10.1787/8824c5db-en

Each year, the amount of air pollution emitted from WB6 coal power plants contributes to around 3,900 premature deaths, 8,500 cases of bronchitis in children, and other chronic illnesses, which add up to lost productivity and health costs of up to EUR 11.5 billion.[12]

In attempts to incentivize RES capacity development, especially in the electricity sector, Kosovo applied support schemes such as the feed-in tariff (FITs) for a few years.[13] FITs were offered on a first-come-first-served basis, but have become less relevant as the EU countries have begun to move towards more market-driven renewables promotion mechanisms.[14] In 2020, Kosovo came close to meeting the 25% target with a 24,40% share of renewables. However, the sectorial target for heating and cooling was overreached due to the use of biomass sources, while contributions of renewable energy to electricity and transport were still very low.[15] By the end of 2021, Kosovo registered a total of 249.2 MW of renewable electricity generation, 101 MW of small hydropower, 137 MW of wind, 10 MW of solar, and 1.2 MW of biomass.[16]

In March 2023, the Kosovo Parliament adopted the Energy Strategy 2022-2031, committing to fully decarbonizing the energy sector.[17] The strategy represents a pivotal step in Kosovo's energy transition and is focused on five strategic objectives: Improving system resilience; Decarbonization and promoting renewable energy; Increasing energy efficiency; Strengthening regional cooperation and market functioning; and Protecting and empowering consumers. [18]

---

12 "Health and Environment Alliance | Chronic Coal Pollution." Health and Environment Alliance. 18 Jan. 2023. https://www.env-health.org/chronic-coal-pollution/

13 DTGlobal. Assessment of PV Generators in Kosovo. January 2021. https://dt-global.com/projects/kess/ Accessed 15 Aug. 2023.

14 Lo, Chris. "Renewable Energy: Are Feed-in Tariffs Going out of Style?" Power Technology. 18 Jan. 2017. https://www.power-technology.com/features/featurerenewable-energy-are-feed-in-tariffs-going-out-of-style-5718419/

15 Energy Community. Kosovo* Annual Implementation Report. 1 November 2022. https://www.energy-community.org/dam/jcr:dbe6d342-ea7d-4677-9a9b-e18f22a1cfad/IR2022_Kosovo.pdf Accessed 18 Oct. 2023.

16 European Commission. Kosovo* 2022 Report. https://neighbourhood-enlargement.ec.europa.eu/system/files/2022-10/Kosovo%20Report%202022.pdf Accessed 3 Oct. 2023.

17 Government of the Republic of Kosovo. Energy Strategy of the Republic of Kosovo 2022-2031. https://me.rks-gov.net/energjia/ Accessed 3 Oct. 2023.

18 Republic of Kosovo. Draft version of the National Energy and Climate Plan 2025-2030.

Concerning renewable energy, the strategy envisages a dynamic increase in renewable energy sources, mainly in wind and photovoltaic technologies supported by renewable auctions, public investment, and active participation of prosumers in this process.[19]

Kosovo has around 240 days of sunlight a year,[20] which translates to vast potential in the solar energy domain. In addition, the EU Commission considers Solar Photovoltaics (PVs) to be one of the cheapest sources of electricity available, while also adding that "Panel by panel, the infinite energy of the sun will help reduce our dependence on fossil fuels across all sectors of our economy, from residential heating to industrial processes".[21] This source of energy provides a cost-effective and enduring solution because the energy generated from the sun is inexhaustible, it reduces emissions and cuts electricity bills, but also due to the long lifespan of solar panels and their low maintenance cost.[22] In this direction, greater utilization of RES - especially solar PVs- will be beneficial for Kosovo in three instances:

- To support the overall economic development,
- To increase the security of the energy supply, and
- To protect the environment.[23]

This policy brief focuses on solar energy as one of the renewable energy sources that have been largely pursued in Europe and beyond in the past few years. By identifying the current challenges in Kosovo, the report aims to serve as a baseline for creating a more enabling environment for solar investments, from simplifying the administrative procedures to offering support for such investments through various means.

---

19 Government of the Republic of Kosovo. Energy Strategy of the Republic of Kosovo 2022-2031. https://me.rks-gov.net/energjia/ Accessed 3 Oct. 2023.

20 Kosovo Businesses Reaping the Benefits of Green Energy with the Help of the EU | EEAS. https://www.eeas.europa.eu/delegations/kosovo/kosovo-businesses-reaping-benefits-green-energy-help-eu_en?s=321 Accessed 14 Sept. 2023.

21 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Commiteee of the Regions EU Solar Energy Strategy. 2022. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A221%3AFIN&qid=1653034500503

22 "Benefits of Residential Solar Electricity." Energy.Gov. https://www.energy.gov/energysaver/benefits-residential-solar-electricity Accessed 20 Dec. 2023.

23 DTGlobal. Assessment of PV Generators in Kosovo. January 2021. https://dt-global.com/projects/kess/ Accessed 15 Aug. 2023.

MAPPING THE SOLAR INVESTMENT CHALLENGES IN KOSOVO

Becoming a prosumer[24] in Kosovo necessitates a connection to the distribution or transmission network and a procedure involving three institutions: the relevant municipality, the Energy Regulatory Office (ERO), and the Kosovo Electricity and Distribution Services (KEDS), and submission of around 15 different documents.[25]

While the process might seem common at first glance, it is a great burden to Kosovar businesses going through these procedures along with their clients on a day-to-day basis. Solar companies in Kosovo argue that such procedures which take between 1-3 months, discourage customers (households or businesses) from investing in solar PV installations, especially when coupled with other challenges such as the solar PV installed capacity limitation that prolog the payback period.[26] The Municipality Development Plans, the protracted legalization process, and the lack of RES skills and capacities are additional factors exacerbating the load of solar development in Kosovo. Yet, despite the impediments, the interest in solar investments is growing[27] and consumers are becoming increasingly aware of their financial and environmental benefits. However, to relish such benefits and meet its EU and EnCT obligations, Kosovo needs to intensify its efforts in creating a more favorable environment -legally, administratively, and financially- for solar energy investments. Some of the main issues that deserve attention in this regard are the following:

24 The active energy consumers are oftentimes called prosumers because they both consume and produce electricity. For more see Electricity. https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2016)593518 Accessed 4 Dec. 2023.

25 Ibid.

26 BGF interviews with solar companies in Kosovo, Aug. 2023.

27 Ibid.

LENGTHY AND COMPLEX PROCEDURE

Despite the Energy Community's recommendation to "simplify and streamline the permitting procedures to enable faster deployment of renewables", one of the main persisting challenges to solar investments in Kosovo is the lengthy authorization procedure, from preliminary to final authorization.[28]

In short, to obtain the status of Prosumers, the registered energy customers are required to submit their application to the ERO in written form, in hard copy, or electronic, containing the following documents:

- Annual energy consumption (issued by KESCO);
- Evaluation of annual kWh production of the self-generator (solar company/seller);
- Connection agreement with the system operator (KEDS); and
- Municipality consent.[29]

Once authorized by ERO, the registered energy customers apply at KEDS to receive the status of prosumers where they are expected to submit the following:

- Energy consent request;
- Client's authorization for the installer/ project developer
- The license of the projecting company (energy profile) and the diploma of the engineer (project developer);
- Electrical project (the requested capacity as a prosumer (kW), type of RES, annual energy output evaluation of generator (kWh), annual evaluation of the net excess energy injected into the grid).[30]

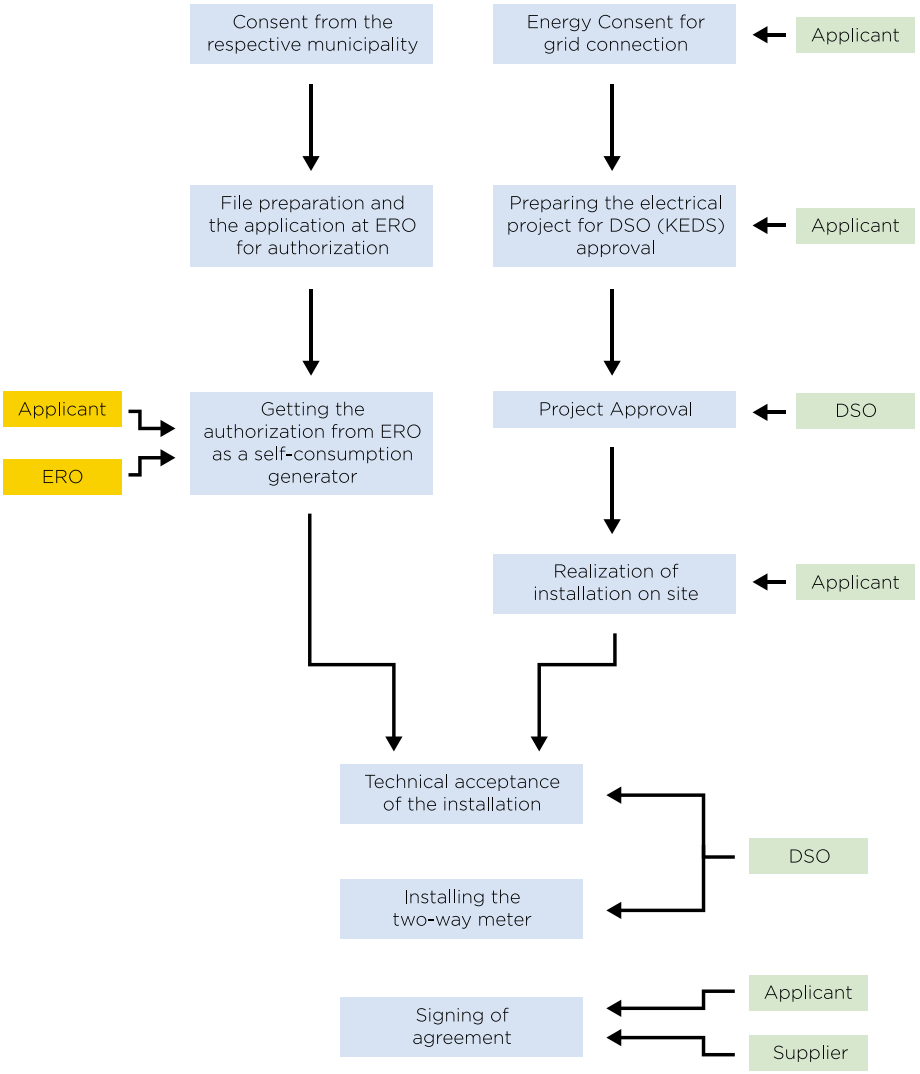
---

28 Energy Community. Kosovo* Annual Implementation Report, 1 November 2022. https://www.energy-community.org/dam/jcr:dbe6d342-ea7d-4677-9a9b-e18f22a1cfad/IR2022_Kosovo.pdf Accessed 18 Oct. 2023.

29 Energy Regulatory Office. Rule NO. 03/2022 On Authorization procedure for construction of energy projects. 16 November 2022.

30 Prosumer. http://www.keds-energy.com/eng/services/prosumer/. Accessed 6 Nov. 2023.

PROCESS FLOW OF THE APPLICATION TO BECOME A PROSUMER



Souce: KEDS

The procedure might seem simple from this point of view, however, in reality, it takes 1-3 months and involves the respective municipality, the ERO, and the system operator (KEDS), each of which has its requirements and documents. Besides, for some of the following documents to be issued, back-and-forth interactions between the institutions and the customer are necessary.[31] In addition, customers cannot submit their documents electronically at the municipality or KEDS, but they can do it at ERO.

As for municipalities' share in this process, having placed their consent as a prerequisite for authorizing solar PV equipment installation, ERO has entangled the procedures according to the solar companies and experts in Kosovo.[32] This is attributed to the lack of information and consensus between ERO and the Ministry of Environment, Spatial Planning and Infrastructure (MESPI) on the exact document that would qualify as "the municipality consent". For ERO representatives, a document issued by the construction engineers confirming that the solar PV equipment does not breach the building codes and safety standards is enough to get authorization, whereas the unification of documents falls within the responsibility of the MESPI.[33] On the other hand, from the municipalities' point of view, by not specifying what kind of municipality consent it requires, ERO has created ambiguity in the application process.[34] Currently, each municipality interprets this requirement on its own and sets up its list of required documents, making matters worse for customers, who end up submitting the same documents to the three institutions.[35]

Solar companies have tried to lighten the customers' load by assisting them throughout the application process, however, this alone does not incentivize them to invest in solar PVs and a simplification of procedures is necessary.[36]

---

31 BGF interviews with solar companies and energy experts in Kosovo, Aug. 2023.

32 BGF interviews with solar companies and energy experts in Kosovo, Aug. 2023.

33 BGF interview with Energy Regulatory Office Representatives, 24 Aug. 2023.

34 BGF interview with officials at Municipality of Pristina, Directorate of Urbanism, 29 Aug. 2023.

35 Ibid.

36 BGF interviews with solar companies in Kosovo, Aug. 2023.

SOLAR PV INSTALLED CAPACITY LIMITATION

On 18 August 2023, the Energy Regulatory Office adopted the new Rule on Prosumers of Renewable Sources doubling the solar capacity limit for regulated prosumers from 100 kW to 200 kW.[37] According to the new rule, households connected to low voltage grid (0.4 kW) cannot install more than 7kW capacity of solar photovoltaics.[38] Non-household customers on the other hand can install up to 200 kW capacity depending on whether they are connected to a low-voltage (0.4 kW) grid- 100 kW ceiling or medium-voltage (6kW, 10kW, 20kW and 35kW) distribution network and the transmission system -200 kW ceiling.[39] In addition, the installed capacity for each customer is decided on a case-by-case basis depending on their consumed energy and the Electro-energetic Consent.[40]

While the increase of the solar PV installed capacity limitation marks a crucial step in the evolution of solar energy utilization in Kosovo, it is still insufficient, especially for industrial and large commercial customers. Such limitations lead to a slow return on investment – a factor that makes investments in solar technologies less attractive.[41] On the other hand, most of the Energy Community Contracting Parties, have limited the installed generation capacity of the renewable self-consumer to the connection capacity of the final customer, justifying it with the need to maintain the stability and reliability of the electricity system.[42]

From a regional perspective, Albania and Montenegro are leading in this aspect: Albania has increased the solar PV installed capacity limit to 500 kW,[43] thus creating more favorable conditions for solar energy projects, while Montenegro has removed the capacity limit to give rise to solar installations in its territory.[44]

---

37 Energy Regulatory Office. Rule No. 03/202 on Prosumers of Renewable Sources. 18 Aug. 2023. Article 5.

38 Ibid, Article 5.

39 Ibid, Article 5.

40 Ibid, Article 5.

41 BGF interviews with solar companies in Kosovo, Aug. 2023

.

42 Energy Community Secretariat. CBAM - Readiness Tracker 2023. June 2023.

43 Ibid.

44 Ibid.

Installation capacity limit (kW)

	HOUSEHOLD	LEGAL ENTITIES
Albania	500 kW	
Bosnia and Herzegovina	10,8 kW	50 kW
Kosovo	200 kW	
Montenegro	no limit	
North Macedonia	6 kW	40 kW
Serbia	10,8 kW	150 kW

Source: Energy Community Secretariat, 2023

LEGALIZATION

A construction permit is among the main documents required to receive authorization for installing a photovoltaic system in Kosovo.[45] Consequently, unless the building is legalized, the PV solar panels cannot be set up. On the other hand, according to the Minister of Environment, Spatial Planning and Infrastructure Liburn Aliu, around 75% of the buildings in Kosovo are without construction permits.[46] On top of that, the legalization process is proceeding slowly, thus hampering many developments in Kosovo, including solar investments.[47]

45 DTGlobal. Assessment of PV Generators in Kosovo. January 2021. https://dt-global.com/projects/kess/ Accessed 15 Aug. 2023.

46 Aliu i Bindur Se 75% e Ndërtimeve Në Kosovë Janë Pa Leje | Ministri i Mjedisit, Planifikimit Hapësinor Dhe Infrastrukturës Liburn Aliu Në Seancën e Kuvendit...EkonomiaOnline. Facebook. www.facebook.com, https://www.facebook.com/EkonomiaOnline/videos/aliu-i-bindur-se-75-e-nd%C3%ABrtimeve-n%C3%AB-kosov%C3%AB-jan%C3%AB-pa-leje/4058719957685768/ Accessed 6 Nov. 2023./

47 BGF interviews with a solar company and energy experts in Kosovo, Aug. 2023.

On 5 September 2023, MESPI made the first step in overcoming the legalization barrier for prosumers by amending the Administrative Instruction MESP No. 08/2013 on construction works for which a construction permit is not required.[48] Through this amendment, the installation of PV solar panels on the roof (for electricity generation for self-consumption) for households with an installed capacity of up to 7 kW can be done without a construction permit.[49]

However, the legalization remains a stumbling block to other categories of consumers, with an installed capacity of more than 7 kW, for which Kosovo needs to work further to find a viable solution. This is an important aspect especially recalling the fact that Kosovo is expected to harmonize with the EU's Energy Acquis and increase its share of renewables by 2030- a target reinforced especially after the recent energy crisis. In addition, the country is expected to "simplify and streamline the permitting procedures" in terms of renewable energy solutions.

EXTENDED ADOPTION TIMEFRAME OF THE MUNICIPALITY DEVELOPMENT PLAN

The Municipality Development Plan is a strategic document that foresees the development of the municipality for the upcoming 8 years. Such a document plays a crucial role in the process of solar investments, especially in recent years where the interest for solar investment has grown. However, considering that the Municipal Development Plans are adopted once in 8 years, all potential investors must wait for the actual municipality development plan to expire to be able to continue with the investment procedures.[50] According to Telegrafi, in 2023, at least 20 companies have applied at KOSTT to provide them with technical solutions for connecting solar plants to the grid.[51]

So, this periodic adoption of a municipality development plan, represents a barrier to different forms of municipal investment,

48 Udhëzim Administrativ MMPHI No.15/2023 për ndryshimin dhe plotësimin e udhëzimit administrativ MMPH No. 08/2013 për ndërtimet për të cilat nuk kërkohet leje ndërtimore. https://gzk.rks-gov.net/ActDetail.aspx?ActID=80969. Accessed 11 Oct. 2023.

49 Ibid.

50 "Shteti po bllokon qindra miliona euro investime në energji solare." Telegrafi, 3 Aug. 2023, https://telegrafi.com/shteti-po-bllokon-qindra-miliona-euro-investime-ne-energji-solare/

51 Ibid/

including solar equipment.

EXTENDED PAYBACK PERIOD AND LOW ELECTRICITY PRICES

Household and non-household consumers who are connected to a low-voltage (0.4 kW) or medium-voltage grid (6kW, 10kW, 20kW and 35kW) are discouraged from investing in solar PVs due to the slow return on investment they experience as a result of current administrative, technical and legislative burdens as well as the low electricity prices in Kosovo. However, the reality is quickly transforming -especially after the recent energy crisis- and fossil fuels are getting more expensive while renewables continue to get cheaper each year.[52] In addition, in 2021, IRENA reported that two-thirds of newly installed renewable power in G20 countries had lower costs than the cheapest fossil fuel-fired option – and they're only set to get more affordable.[53]

According to a solar company in Kosovo, the current average cost for solar PVs per kW stands at 400-450 EUR.[54] By increasing the installed capacity limit or streamlining the procedures, the country can shorten the payback period, ergo positively affecting the solar energy development in Kosovo.[55] However, there are other initiatives that the government could embrace such as providing supporting schemes, or even just raising awareness of the long-term benefits of solar technology.

MODEST SUPPORT SCHEMES

Kosovo introduced Feed-in Tariffs in 2016 as a means to support the development of clean energy, which was offered on a "first-come first-served" basis.[56] Through such a mechanism, the renewable energy producers are given a guaranteed above-market price for the electricity they feed into the grid.

---

52 "Is Renewable Energy Cheaper Than Fossil Fuels? | Eco Experts." The Eco Experts, https://www.theecoexperts.co.uk/blog/is-renewable-energy-cheaper-than-fossil-fuels Accessed 15 Dec. 2023.

53 Ibid.

54 BGF correspodence with a solar company in Kosovo, 15 Dec. 2023.

55 Ibid.

56 INDEP. Feed-in tariffs and importance for investments in Kosovo. 2014.

This mechanism was proposed by the World Bank in 2011 considering that Kosovo was a small market and RES technologies were not competitive at that time.[57] However, the producers couldn't relish the benefits of this measure for a long time as in December 2020 ERO decided to abolish the feed-in tariff regime, leaving no pricing mechanism in place for new projects.[58]

Recently, the renewable energy sectors in Energy Community Contracting Parties have witnessed a transition from administratively set feed-in tariffs to market-based support schemes.[59] The transition to market-based renewables support in Europe is a goal of the European Commission prompted by the high consumer electricity prices, coupled with the potential misbalance of FIT-facilitated renewable energy supply and the actual needs of national and cross-border grids.[60]

In this direction, the introduction of auctions is emerging as a pivotal element in the Western Balkans's renewable energy legislation.[61] In Kosovo's case, the initial round of offers in the solar auction has been delayed three times thus far, shifting from its original date of 15 August 2023 (to 3 September, 16 October 2023) to 31 January 2024.[62] The Ministry of Economy declared that the solar auction deadline was postponed upon the request of interested companies to complete the appropriate documentation for participation in the auction.[63] INDEP on the other hand criticized the delays adding that they could

57 Energy, Kosovo. "Ekspertë Të Sektorit Të Energjsië Diskutojnë Skemat Mbështetëse Për Projekte Të Energjisë, Kritikojnë Paqartësinë Rreth 'Kosova e Re.'" Kosovo.Energy, 2 July 2021, https://kosovo.energy/eksperte-te-sektorit-te-energjsie-diskutojne-skemat-mbeshtetese-per-projekte-te-energjise-kritikojne-paqartesine-rreth-kosova-e-re/

58 DTGlobal. Assessment of PV Generators in Kosovo. January 2021. https://dt-global.com/projects/kess/ Accessed 15 Aug. 2023.

59 Energy Community Secretariat. CBAM - Readiness Tracker 2023. June 2023.

60 Lo, Chris. "Renewable Energy: Are Feed-in Tariffs Going out of Style?" Power Technology. 18 Jan. 2017. https://www.power-technology.com/features/featurerenewable-energy-are-feed-in-tariffs-going-out-of-style-5718419/

61 Ibid.

62 Energy, Kosovo. "Shtyhet Sërish Afati Për Ankandin Solar, Reagojnë Nga INDEP." Kosovo.Energy, 18 Oct. 2023, https://kosovo.energy/shtyhet-serish-afati-per-ankandin-solar-reagojne-nga-indep/

63 Krasniqi-Veseli, Luljeta. "'Sinjale të këqija' për investitorët në energji të ripërtërishme." Radio Evropa e Lirë, 10 Nov. 2023. www.evropaelire.org, https://www.evropaelire.org/a/energia-e-riperterishme-investitoret-kosove-/32679636.html.

jeopardize the implementation dynamics of the Energy Strategy and will weaken the importance of this initiative.[64] If this trend of delays is to continue, it will affect the overall implementation of the measure as well as its purpose.

LACK OF EDUCATION AND TRAINING OPPORTUNITIES

In terms of renewable energy, or specifically solar energy education and capacity building the situation does not stand better. As of January 2021 data, only the Faculty of Mechanical Engineering of the University of Pristina (UP) and the University of Business and Technology (UBT) offer study programs in RES in Kosovo.[65] The American University (AUK) and Faculty of Electrical and Computer Engineering of UP provide just RES modules whereas the Center for Energy and Sustainability (QEQ)[66] offers certified program courses in RES including solar energy.

In addition to the limited programs in RES that universities offer, there is a lack of internships, exchange programs, or training (for students and academic staff) that could fill in the gaps by enhancing practical skills in the field. In this regard, solar companies complain about the lack of skilled labor, especially technicians.[67] When it comes to high schools, not much attention is paid to renewable energy and its potential, which is showcased by the lack of up-to-date curricula in the field of energy.[68] Moreover there is a lack of dedicated spaces for students to develop practical skills in RES equipment inside educational institutions. Another challenging aspect in the energy-related education sector and the energy job market are gender inequalities and gaps.[69] All these aspects contribute to an overall lack of skilled labor in the field of renewable energy.

64 Energy, Kosovo. "Shtyhet Sërish Afati Për Ankandin Solar, Reagojnë Nga INDEP." Kosovo.Energy, 18 Oct. 2023, https://kosovo.energy/shtyhet-serish-afati-per-ankandin-solar-reagojne-nga-indep/

65 DTGlobal. Assessment of PV Generators in Kosovo. January 2021. https://dt-global.com/projects/kess/ Accessed 15 Aug. 2023.

66 The Center for Energy and Sustainability at the University of Pristina was established in October 2017 with the support of USAID and Arizona State University. This center provides certified programs in "renewable energy and sustainability," and it connects faculty members from across academic disciplines at the University of Pristina and with academics from universities throughout the world.

67 BGF interview with a solar company in Kosovo, 16 Aug. 2023.

68 DTGlobal. Assessment of PV Generators in Kosovo. January 2021. https://dt-global.com/projects/kess/ Accessed 15 Aug. 2023.

69 Ibid.

LACK OF PUBLIC AWARENESS

At the level of the general public, there is a lack of awareness in terms of the environmental consequences of fossil fuels and the benefits of renewable energy solutions. Focusing on solar photovoltaics, citizens in Kosovo are not well informed about their costs and return on investment. So, there is a necessity to inform them, for instance, that Solar energy has become the cheapest source of electricity in history, according to the International Energy Agency (IEA).[70] This is attributed to many factors among which the fact that they contribute to a cut in energy bills as well as in reducing the emissions. In addition, few know of the energy independence, and security of supply offered as well as the overall impact that solar energy has on the environment.

So, there is an urgent need to inform the general public of the benefits of investing in renewable energy, particularly in solar PV.

70 Fiestas, Pierina. "How Did Solar Become the 'Cheapest Energy Source in History'?" WTS Energy, 17 Apr. 2023, https://www.wtsenergy.com/solar-cheapest-energy-source-in-history-factor/

RECOMMENDATIONS AND CONCLUSIONS

Kosovo has a high potential for solar energy development with around 240 days of sunlight annually. However, the decision to invest in solar energy should solely rely on the geographical factors but also the financial and environmental aspects: solar energy is considered one of the most cost-effective sources of energy nowadays and has an important role in mitigating the effects of climate change.

So, by acknowledging the immediate necessity for alternative sources of energy as well as the impact of solar energy development on its energy security, economic development, and environmental protection, Kosovo must commit to greater utilization of this source of energy.

However, to truly relish the benefits of solar energy and to increase investments, the country needs to:

SIMPLIFY AND STREAMLINE THE PERMITTING PROCEDURES

ERO should work on simplifying the permitting procedures for PV solar installations. This can be achieved by eliminating some redundant constraints, reducing the volume of required documents, shortening the authorization procedure duration, and enhancing the efficiency of the institutions involved. By creating and operationalizing a one-stop shop for submitting all necessary documents, Kosovo ensures a smooth process of authorization as it eases the burden of customers and institutions. The creation of a one-stop shop further implies reducing both the authorization period and the volume of documents.

UNIFY THE DOCUMENTS AND UPGRADE THE EXISTING DEVELOPMENT PLANS

MESPI should work on consolidating the necessary documents for obtaining municipal consent for PV solar installations. The unification of documents should involve the support of ERO, wherein both

parties reach a consensus on a standardized document to be issued by all municipalities. This document, which will be issued under the name "Municipal Consent" will ensure that the installation adheres to building codes and safety standards.

In addition, to adequately address the increased interest of potential investors for solar PVs and other renewables, municipalities should develop a solution to avoid the current extended adoption period of development plans. In this regard, Municipalities in cooperation with the respective Ministry could agree to extend the scope of the current Municipality Energy Efficiency Action Plan, which according to Law on Energy Efficiency No. 06/L-079 is prepared by municipalities for 3 years.[71] Moreover, such plans would be quite similar to the Sustainable Climate and Energy Action Plan (SECAP) which is a key document for Municipalities to join the Covenant of Mayors- a European co-operation movement involving local and regional authorities- where currently, only two municipalities (Gjilan and Podujevo) are members of. [72]

REMOVE THE CONSTRUCTION PERMIT BURDEN

75% of buildings in Kosovo are without a construction permit, yet they are connected to electricity, water, and waste disposal services. In terms of safety standards and building codes, ERO representatives only require a document issued by the construction engineers confirming solar PV equipment's adherence to these standards. Besides, MESPI has already removed the construction permit burden for households with an installed capacity of up to 7 kW PV solar panels. Considering all these aspects, MESPI should model after its 5th of September decision and remove the construction permit barrier for all construction works beyond households with an installed capacity of up to 7 Kw PV solar panels.

OFFER MARKET-BASED SUPPORT SCHEMES

Kosovo must avoid further delays in the auction process which will only jeopardize the effectiveness of the mechanism. In parallel, the country should offer other market-based support schemes to support investments in renewable energy.

---

71 Republic of Kosovo, Law on Energy Efficiency No. 06/L-079.

72 Ibid.

CREATE A ROADMAP FOR SOLAR INVESTMENT AREAS

The relevant state institutions with the support of international actors are creating a roadmap for solar investment areas in the territory of Kosovo. While the process is underway, it is of utmost importance to intensify the work in finalizing and operationalizing this roadmap considering the periodic adoption of Municipality Development Plans and the fact that it is hindering potential solar investments from domestic or foreign investors in the country By identifying all areas within the territory that are suitable for solar investments, Kosovo will offer potential investors a map of areas where solar energy can be developed so they could plan their investments accordingly.

DIVERSIFY ITS ENERGY SOURCES

Kosovo should focus on diversifying its energy sources beyond solar energy to increase energy security and resilience. In addition, by investing in an expanded range of energy technologies, Kosovo will more rapidly secure its energy dependence and sustainability through increased availability of energy sources (solar, hydro, wind, biomass).

INVEST IN BATTERY STORAGE

Investing in battery storage is a costly but inevitable solution for Kosovo, if it is aiming to increase its share of renewables - especially in wind and solar energy- and to meet the 2050 decarbonization targets. Besides, investment in storage capacities would contribute to the security of supply.

According to a cost analysis completed in 2018 in the region, a large-scale project combining wind and solar power with battery storage could be achieved at a lower cost than new lignite-fired generation.[73]

ENHANCE RES EDUCATION AND CAPACITY BUILDING

Recognizing the importance of renewable technologies in countries' energy transition path, Kosovo should focus on enhancing the education and training opportunities in this area.

---

73 For more, see Institute for Energy Economics and Financial Analysis, Beyond Coal: Investing in Kosovo's Energy Future, October 2020.

This can be done by increasing the number of programs in state and private universities designed to offer education in renewable sources of energy, with special emphasis on solar energy, providing career orientation in RES and their relevance nowadays, offering training for practical skills in RES technologies and equipment, re-designing high school curricula to include RES education, strengthening the Center for Energy and Sustainability, providing training for teachers and professors, offering internship, exchange and mentorship programs for students, creating dedicated spaces inside the educational institutions for RES practical skill demonstration, etc. In this regard, developing specific training programs for students based on agreements between respective companies and the UP can result in substantial improvement of the practical skills of future graduates in engineering fields.[74] The already-existing industrial bords within the technical faculties of the University of Pristina could also be leveraged to provide contacts and develop the syllabus of these training programs.[75]

In addition, the government and university should work together to design and organize job training for professionals and installers who have a certain work experience in the field. A good example is set by the Center for Energy and Sustainability which since 2020 has successfully provided certification of Energy Auditors.[76]

Lastly, emphasis should also be placed on bridging the gender gaps in energy-related education opportunities as well as the job market to ensure inclusiveness and equality.

RAISE AWARENESS OF THE BENEFITS OF SOLAR ENERGY

Awareness raising is crucial to give rise to solar development in the country. The awareness raising should occur at the social level through civil society organizations, state institutions, international partners and donors, businesses, and academia. By cultivating awareness among citizens of the benefits of solar technologies, including energy efficiency, lowering energy bills, energy independence, increasing the security of supply, protecting the environment, etc., we could increase their interest in embracing such innovative solutions.

74 BGF interview with a professor/energy expert, University of Pristina, December 2023.

75 Ibid.

76 Ibid.

Balkan Green Foundation
February 2024 Prishtina, Kosovo