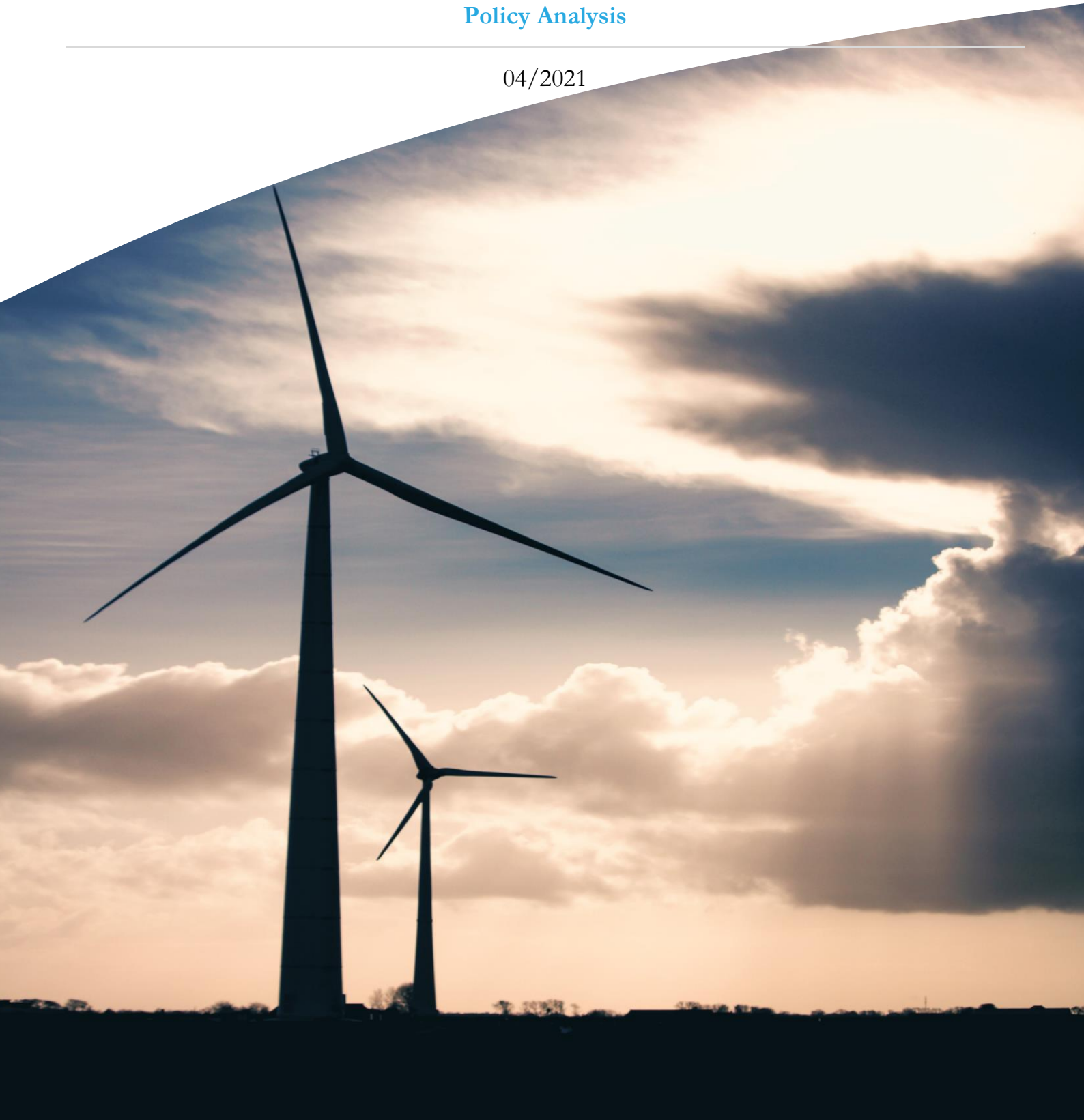

The Recovery is Green – Renewable Energy Challenges and Opportunities

Policy Analysis

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The Recovery is Green – Renewable Energy Challenges and Opportunities

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1. Introduction

In the light of the crisis triggered by the Coronavirus disease (COVID-19) pandemic, voices from all areas of society indicate that this moment of economic recovery should be used as an opportunity to accelerate the transition to a new socio-economic paradigm that is climate-neutral, resilient, sustainable, and inclusive. This is known world-wide as the Green Recovery. Kosovo's institutions should lead the way towards the Green Recovery as well, starting with large investments in the renewable energy sector through its revised/expanded Economic Recovery package.

This paper aims to provide an overview of the challenges and opportunities for the promotion and investments in the renewable sector as well as the set of policies available to policymakers concerning the inclusion of renewables in the revised/expanded recovery package. Then to evaluate their respective advantage and disadvantage to establish the need for government intervention to promote renewables and include it in the expanded recovery package. In one hand, this paper will focus on how renewable sector has been present or absent in the design of Covid-19 stimulus packages around the world. In the other hand, it emphasizes the significance of including the renewables in the Kosovo economic recovery plan and the suggestions how can this be done. Hence, the main research question of the paper is: How can Kosovo institutions include renewable energy in the framework of the recovery package and why this sector is particularly important to receive support? Consequently, in order to spur its long-term economic recovery and foster regional energy integration, the Government of Kosovo (GoK) needs to support a green recovery and the implementation of reforms required to move forward on the EU path. All of this should lead to sustained economic growth and job creation. This expanded/revised Green recovery Plan is all the more necessary as COVID-19 is having massive disrupting effects on the economies of the Western Balkans and the World. This is of utmost importance because of the challenges Kosovo faces from weak competitiveness, high unemployment and structural weaknesses.

The importance of green financing in the recovery packages was urgently highlighted by the United Nations Secretary-General¹, Antonio Guterres in a speech on December 2, 2020. Guterres underlined that the funds needed for a recovery from the COVID-19 pandemic must be spent wisely:

“We have a chance to not simply reset the world economy but to transform it. A sustainable economy driven by renewable energies will create new jobs, cleaner infrastructure and a resilient future. An inclusive world will help ensure that people can enjoy better health and the full respect of their human rights, and live with dignity on a healthy planet. COVID recovery and our planet’s repair must be the two sides of the same coin.”

Surveyed populations², around the world indicate strong preferences for recovery policies that also address climate change: support ranging from 57% to 81%, with a world average of 65%.

¹ International Institute for Sustainable Development (2020), UN Secretary-General calls for Green Recovery to Save the Planet, available at <https://sustainable-recovery.iisd.net/news/un-secretary-general-calls-for-green-recovery-to-save-the-planet/> (accessed in December, 2020)

² IPSOS (2020), How does the world view climate change and covid-19? Earth day Report, April 2020, available at: <https://www.ipsos.com/en/two-thirds-citizens-around-world-agree-climate-change-serious-crisis-coronavirus> (accessed in January, 2021)

A growing number of European Union (EU) Member States stressed that the Green New Deal³, should be central to a resilient recovery after COVID-19. By putting clean energy transitions at the heart of recovery, governments can help to bring about the structural changes needed to ensure that economic recovery is not associated with an unsustainable rebound in CO₂ emissions and local air pollution. Recovery plans need to be aligned with long-term national and global objectives on energy resilience and sustainable development, and it is essential that they focus on clean energy transitions if those are to be met.

Renewable energy is the inevitable choice for sustainable economic growth, for the harmonious coexistence of humans and the environment as well as for sustainable development. Kosovo government approved the plan for the implementation of the Economic Recovery Program⁴, which amounts to €365 million support measures. Understandably, most of the measures focus on healthcare and financial support for businesses and enhancing social schemes for vulnerable citizens. Thus, the current plan itself has not specifically targeted investments in the renewable sector.

However, under the article 15 of the Law No. 07/L-016⁵, on economic recovery-Covid-19, it is stated that the Government of Kosovo shall subsidize the tariff of Renewable Energy Sources (RES) for all consumers for five months for the period 01 January 2021 till 31 May 2021. Therefore, in the revised/expanded economic recovery package, it is of utmost importance that it contains measures to support investments and policies to facilitate the use of renewable energy sources especially (Solar PV) by the residential and business sector. Globally, the renewables energy's resilience is driven by the electricity sector in sharp contrast to all other fuels, renewables used for generating electricity will grow by almost 7% in 2020. Global energy demand is estimated to fall by around 6% in 2020 relative to 2019. Electricity from renewables could be the only energy source to grow in 2020, thanks to new capacity additions and priority dispatch.⁶ Costs of renewable energy have witnessed dramatic declines, while new environmental issues like resource efficiency and the transition to a circular economy have risen on the policy agenda. These developments offer new impetus and opportunities for greening the recovery in the wake of the COVID-19 crisis.

Despite looming economic uncertainties, investor appetite for renewables remains strong. From January to October 2020, auctioned renewable capacity was 15% higher than for the same period last year, a new record. In October 2020, shares of solar companies worldwide had more than doubled in value from December 2019.⁷ There is evidence, albeit imprecise, of the effectiveness of these programs: Government policies aimed at stimulating the adoption of solar PV systems in the country are one of the main determinants of the sector's likelihood of success.

³ Euractiv (2020), Ten EU Countries calling for Green Recovery, available at <https://www.euractiv.com/section/energy-environment/news/france-germany-join-group-of-10-eu-countries-calling-for-green-recovery/> (accessed in January, 2021)

⁴ Government of Kosovo (2020), Economic Recovery Program, available at: <https://kryeministri-ks.net/en/the-government-approves-the-plan-for-the-implementation-of-the-economic-recovery/> (accessed in January, 2021)

⁵ Official Gazette of the Republic of Kosovo (2020), Law No. 07/L-016 on economic recovery-Covid-19, available at <https://gzk.rks-gov.net/ActDetail.aspx?ActID=35478> (accessed in December 2020)

⁶ IEA (2020), Global Energy Review 2020, available at <https://www.iea.org/reports/global-energy-review-2020> (accessed in December 2020)

⁷ IEA (2020), Renewables 2020 - Analysis and forecast to 2025, available at <https://webstore.iea.org/download/direct/4234> (accessed in January 2021)

According to International Energy Agency-IEA⁸, an assessment of the immediate effects of the pandemic on the energy system shows expected falls in 2020 of 5% in global energy demand, 7% in energy-related CO₂ emissions, and 18% in energy investment. Consequently, a forward-looking Green recovery package that aligns with our national energy and climate plan, renewable target greenhouse gas (GHG) emissions goals would deliver long-term economic, employment, and environmental benefits for Kosovo.

Here we shine a light on the opportunities and challenges for these investments to support a green recovery by inventorying and classifying the latest information on European and regional governments' fiscal stimulus plans. On this basis, a systematic analysis has been conducted on the investment policies for renewables. Thus, this paper evaluates why it is important the inclusion of renewables in the recovery package and which type of renewables to include in the new economic recovery package. The paper starts with the challenges and opportunities for RES investments into green stimulus measures and their inclusion into the green recovery package. Then, the following section provides the data description and analysis of opportunities and solutions. Finally, the paper offers conclusions and recommendations that should form the basis of the successful inclusion of RES investment and fiscal policies within the revised/expanded economic green recovery package.

2. Methodology

The main method of research has been secondary, in other words, literature review. Thus, research methodology is deductive: data collection, analyses, and review of findings, assessing outcomes, and stating recommendations. As a result, analysis in this paper includes data obtained through online sources, such as, International Energy Agency (IEA), International Renewable Energy Agency (IRENA), Energy Community Treaty (EnCT) reports, review of announced recovery and stimulus policies from Organization for Economic Co-operation and Development (OECD), World Bank (WB) reports, Kosovo governmental documents, various studies on RES in Kosovo, COVID 19 green stimulus reports, and so forth.

In the first analysis, we examine the existing literature of the Covid-19 stimulus packages by different EU countries to highlight their risk and inadequacy in responding to the renewables and climate change urgency. To search for relevant academic literature we searched online for the various combinations of the following keywords: *COVID-19, economic recovery, green stimulus measures, OECD green recovery plans, financial measures, renewables and Covid-91*, etc., limiting to the fields of renewables, green recovery, and the time period from 2019 to 2020 to focus mostly on developments around the EU countries. In total, over 50 documents including articles, reports, and media releases are identified from both internet sources and hard-copy sources regarding green recovery plans.

⁸ IEA (2020), World Energy Outlook Report, available at <https://www.iea.org/reports/world-energy-outlook-2020> (accessed in January 2021)

The findings, analyses and recommendations are based on the best practices of OECD countries in drafting, designing COVID-19 economic recovery packages. Moreover, the OECD green budgeting framework⁹ was used as analytical framework. Next, given the document analysis, of the OECD's Green Budgeting Framework tool, which can provide governments an appropriate budgetary response to the Covid-19 pandemic, while simultaneously moving to a low-carbon economy to thwart the destructive consequences of climate change. Further, the document reviews explored; the current inclusions of renewables in the recovery approaches around the world, measures, and potential outcomes of various green stimulus programs; the policy options used for the promotion of renewables; and the factors influencing the renewables policy processes.

Next, we further scrutinized the early experience and lessons from global economic crises 2008 and green recovery package in developing and transition countries supported by International Monetary Fund (IMF), World Bank, etc. Finally, an in-depth analysis of the green recovery plans challenges and opportunities in regard to RES have been explored to get a better picture. The paper ends with conclusions and recommendations.

3. Analysis of the problem and challenges

The Covid-19 crisis poses challenges to the timely implementation of previously announced government plans. Challenges such as land acquisition, grid unavailability, supply chain bottlenecks, and lack of project financing due to the COVID-19 outbreak is making it difficult to achieve any previously set targets in the energy sector globally.¹⁰ The current crisis presents governments with challenges in ensuring that the recovery and stimulus measures enhance, and do not adversely affect, environmental sustainability and well-being.

The green recovery poses a particular challenge for developing countries, including Kosovo rich in non-renewable resources, notably fossil fuels and minerals.¹¹ However, to achieve such objectives, countries rich in non-renewable resources will need to develop targeted policies in areas including fiscal and tax policy, financial, energy, and mining sector regulation, and low-carbon technology, while keeping a strong focus on equity aspects of the transition.¹² Thus, the governments' budget decisions are key to delivering economic recovery the transition to a greener economy also requires new skills, both for newly emerging jobs and for existing jobs that are evolving. Without a suitably trained workforce, the transition will be impossible.

Skills gaps and shortages related to the low-carbon transition are particularly pronounced in developing countries such as Kosovo and are already recognized as a major bottleneck in the renewable energy sector.

⁹ OECD (2020), OECD Green Budgeting Framework: Highlights, available at <http://www.oecd.org/environment/green-budgeting/OECD-Green-Budgeting-Framework-Highlights.pdf> (accessed in January 2021)

¹⁰ Madurai Elavarasan, R. (2020), COVID-19: Impact analysis and recommendations for power sector operation. *Applied energy*, 279, 115739, available at <https://doi.org/10.1016/j.apenergy.2020.115739> (accessed in January 2021)

¹¹ OECD (2020), *Green Infrastructure in the Decade for Delivery: Assessing Institutional Investment*, Green Finance and Investment, OECD Publishing, Paris, available at <https://doi.org/10.1787/f51f9256-en>. (accessed in January 2021)

¹² Ibid.

Unemployment (29%) in Kosovo is another problem as well as high rates of emigration.¹³ This indicates a loss of human capital, lowering the home economies' development potential (brain drain). Emigration of young people and lack of skilled labor in the renewable sector is another problem for the sector too.

Another reasons for the lack of solar PV adoption in Kosovo appear to be related to lack of market knowledge, market systems, awareness of financial incentives and credit options, and government involvement in the proper stimulation of the sector.¹⁴ Other challenge could be the drop in oil pricing we are currently experiencing which will create a difficult competitive arena for renewable energy, and this will be more difficult with all the policy efforts geared toward pandemic recovery plans. Therefore, the Government of Kosovo (GoK) failing to allocate proper funding to RES in the revised/expanded recovery economic package to implement green measures will only stagnate Kosovo's process into the EU.

Consequently, the following are the assumptions:

- 1. The pandemic has hit the investment sector in general and the renewable investments too; and*
- 2. Kosovo Government has not specifically targeted investments in renewables in the current Economic Recovery package.*

The pandemic has hit the overall investment sector and the government in the current Economic recovery package has not targeted specifically the renewables. The question remains, how can this be achieved? To recognize further the underlying reason and answer the above questions, it is important to know that currently it is difficult to prove quantitatively the decrease of investments in renewables in Kosovo during the pandemic. As pandemic hit Kosovo's economy in the same way as most WB countries and considering the OECD report of COVID crisis on Western Balkan countries¹⁵, where is reported that the trade and import as well as renewables investments are in decline which could be the case for Kosovo too.

GoK when drafting the budget for its Economic Recovery Plan, emphasized the health, social and economic challenges rather than the renewables as an urgency .As elsewhere, the stimulus packages as a quick response to a pandemic naturally will priorities economic and social objectives. Therefore, in order to address the economic and social situation created as a result of pandemics in the current Law on economic recovery-Covid-19 most of the measures focus on healthcare and financial support for businesses and enhancing social schemes for vulnerable citizens. In the one hand, the purpose of the draft law on economic recovery is to supplement and amend some laws, in order to recover the economy after the negative effects caused by the COVID-19 pandemic. In the other hand, it is noticeable the lack of green measures and the minor importance that the GoK set on renewables with only one small measure in subsidizing the tariff of RES for all consumers for five months. Our emphasis is that to ensure that the GoK does not degrade its renewable targets and its climate progress, which need to be formally integrated in the policy setting and budgetary processes as a high priority.

¹³ The World Bank (2019), Western Balkans Labor Market Trends 2019, available at <http://documents1.worldbank.org/curated/en/351461552915471917/pdf/135370-Western-Balkans-Labor-Market-Trends-2019.pdf> (accessed in January 2021)

¹⁴ INDEP (2020), A Case for VAT Reduction on Solar PV and distributed generation, available at https://indep.info/wp-content/uploads/2020/11/GIZ_EE_Papper-on-VAT_English.pdf (accessed in January 2021)

¹⁵ OECD (2020), COVID-19-Crisis-Response-Western-Balkans, available at <https://www.oecd.org/south-east-europe/COVID-19-Crisis-Response-Western-Balkans.pdf> (accessed in January 2021)

4. Kosovo's commitments towards renewable energy

From an institutional perspective, the main bodies responsible for RES in the energy sector are the Ministry of Economy and Environment, Ministry of Finance, Energy Regulatory Office (ERO), and Kosovo Transmission and Market Operator (KOSTT). Kosovo is a contracting party to the Energy Community Treaty (EnCT) and as such should approximate and implement the *acquis* of the European Union (EU) listed in Article 10 of the Treaty¹⁶, establishing the Energy Community.

As a full member of the EnCT since 2006, Kosovo has committed itself to implement the rules of the EU energy market, the so-called energy *acquis*, in its energy policy and legal framework. Since the EU is striving for more renewables and less carbon-intensive economies in its energy policy, Kosovo cannot ignore this trend but must follow to respect its treaty obligations and avoid being sanctioned by the treaty's other members. Given the commitment of the Republic of Kosovo to approximate its legislation in the energy sector with that of the EU and to implement it effectively respectively Article 114 on Energy and Article 115 on Environment as well as article 116 on Climate Change in the framework of the Stabilization and Association Agreement (SAA), between the EU and Kosovo which entered into force in April 2016. Article 114 provides for the implementation of the EU *acquis* on energy efficiency, renewable energy sources, and environmental impact from the energy sector, thus promoting *renewable energy* and energy efficiency.

Regarding the requirements from other EU accession mechanisms such as the European Commission (EC) Kosovo 2020 Report¹⁷, (Energy point 6.22., Page 96) has provided a brief description of the situation in this area. Kosovo needs to harmonize its energy legislation with EU directives and regulation, a key challenge lies in modernizing the regional energy sector while pursuing other critical socio-economic and environmental objectives. Moreover, the National Renewable Energy Action Plan (NREAP) for the period 2011-2020 was adopted in 2013. The NREAP mandatory target up to 2020 is a 25% share of renewable energy sources (RES) in the overall final energy consumption set, while the government had also set a voluntary target of 29.47% of gross final energy consumption to be achieved by 2020.

Whereas, in the framework of the document European Reform Agenda (ERA)¹⁸, the Kosovo government launched the second phase of ERA 2 in October 2020 which continues to serve as a useful tool for guiding the implementation of EU-related reforms in the context of the SAA. This document highlights the renewable sector in point 2.2. Work towards meeting energy efficiency and renewable energy targets. Also in the National Program for the implementation of the SAA in the narrative part, regarding the field of renewable energy sources, the need for a competitive process for RES is emphasized.

¹⁶ Energy Community Treaty (2006), Article 10 of the Treaty establishing the Energy Community, available at <https://www.energy-community.org/legal/treaty.html> (accessed in December 2020)

¹⁷ European Commission (2020), Report on Kosovo 2020, available at: https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/kosovo_report_2020.pdf (accessed in December 2020)

¹⁸ Government of Kosovo (2020), Second phase of the European Reform Agenda (ERA2), available at [https://www.mci-ks.net/repository/docs/3_ERA%20%20Priorities%20Final%20\[adopted%20by%20Govt\].pdf](https://www.mci-ks.net/repository/docs/3_ERA%20%20Priorities%20Final%20[adopted%20by%20Govt].pdf) (accessed in January 2021)

Further, challenges arising from the meeting of Kosovo and EU under the Subcommittee of the SAA 'Infrastructure' 2020, in the framework of renewable energy sources are as follows: Changing the existing rules for providing support to renewable energy producers to introduce a competitive process, to comply with state aid legislation and to improve support schemes for renewable energy projects by introducing competitive bids to support renewable sources and to change the necessary legislation. Additionally, the timing of the economic recovery from Covid-19 coincides with a pivotal moment in to the process of setting the new targets for the regions for 2030 and how the recovery phase can be a good preparatory instrument for the new decade of alignment and target implementation. This means that for Kosovo the current “once in a generation” opportunity is to jumpstart its economy using methods that address the climate crisis and meet the new RES targets for the year 2030. Therefore, instead of using the stimulus packages to support ‘business as usual’– locking in obsolete economic models and investment in soon-to-be stranded assets, GoK should invest in a **green recovery** and be ready for the decarbonization of its economy and achievement of RES targets. The design of the green stimulus package will not only influence 2020 emission levels, but will influence emissions and meet RES targets for the decades to come.

However, Kosovo followed general guidelines from ECT, the EU directives, EC Progress Report¹⁹, its national strategic documents and foreign best practices to develop a comprehensive pathway to achieve its RES targets. Kosovo with its strong determination to further pursue and accelerate the efforts towards the EU accession process by signing the Sofia Declaration²⁰, on the Green Agenda for the Western Balkans, endorsed the Leaders’ Declaration on the Green Agenda that aligns with EU Green Deal. Therefore, Kosovo expresses a commitment to implement actions in the following first pillar I. Climate, energy, mobility as follows: Increase the share of RES and provide the necessary investment conditions, in line with the EU and Energy Community *acquis* and target. As a result, Kosovo has committed to a number of actions like introducing carbon pricing instruments and market-based renewables support schemes, as well as phasing out coal subsidies which needs to be emphasized when drafting the revision/expanded green recovery.

In addition, the revised/expanded green recovery should aim to be in harmonization with the nation’s legislation which already endorsed EU's climate and energy policy agreements, an act which would facilitate Kosovo's future journey as a state with the potential candidate status. Committing towards meeting the climate and renewable objectives by 2030 in line with EU's ambitions, as the other six Western Balkans countries, would make Kosovo a serious candidate country.

¹⁹European Commission (2020), Report on Kosovo 2020, available at: https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/kosovo_report_2020.pdf (accessed in December 2020)

²⁰ Western Balkans Sofia Summit (2020), Declaration on the Green Agenda for the Western Balkan, available at <https://www.rcc.int/docs/546/sofia-declaration-on-the-green-agenda-for-the-western-balkans-rn> ((accessed in January 2021)

5. Renewable Energy Investments and COVID-19

The world is currently facing a once-in-a-lifetime challenge, with COVID-19 causing both social and economic harm across communities, countries, and continents. On 11 March 2020, the World Health Organization (WHO) declared the coronavirus pandemic²¹: the Sars-Cov-2 virus (COVID-19) is a threat to the population's health. The fallout from the Covid-19 pandemic means that there is an urgent need for significant levels of investment in the energy sector to sustain and boost employment, boost economic growth, and improve future sustainability and resilience. Renewable energy solutions provide clean, reliable, easy to mobilize and cost-effective energy for essential services, including healthcare, water and food supply. This makes them crucial in the immediate response to COVID-19. As an econometric study²², concluded that government spending on renewable technologies or energy efficiency create five more jobs per million dollar invested than spending on fossil fuels.

Investment decisions made now will impact the ways in which energy is produced and consumed for decades, and they therefore, need to be aligned with long-term national and global objectives. Furthermore, renewable energy must play a key role in economic recovery, ensuring sustainability and energy security, creating jobs and strengthening resilience to protect people's health and welfare.²³ National budgets play a key role in the transition. Greater use of green budgeting tools will help to redirect public investment, consumption and taxation to green priorities and away from harmful subsidies.

Therefore, the governments around the globe are responding to the coronavirus disease (COVID-19) related economic crisis with unprecedented economic recovery packages.²⁴ The international context for green recovery is also shifting. China's pledge to reach "carbon neutrality" before 2060 could cut global warming this century by 0.25°C and raise the country's Gross Domestic Product (GDP). Besides China, the EU, South Korea has also pledged for carbon neutrality by 2050 and has communicated an overarching package with a deliberate focus on green recovery.

In the same time, a number of countries in the EU are implementing or considering measures to accelerate clean energy transitions. European policymakers have signaled their intent to skew stimulus packages toward green initiatives, such as a greater push for electric vehicles, renewables, and hydrogen. To encourage reallocation²⁵, some recovery packages contained support for innovation (France), training (Australia, France), and green growth (France, Germany, Italy, Japan, Korea, United Kingdom) or expanded digital infrastructure (Germany, Korea, Japan). Germany's package also included broad-based stimulus, such as a six-month cut in the value-added tax (VAT).

²¹ Cucinotta D, Vanelli M. (2020), WHO Declares COVID-19 a Pandemic. *Acta Biomed.*

²² Garrett-Peltier, H., (2020), Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model, *Economic Modelling* 61(C), 439–47.

²³ IRENA (2020), Coalition COVID-19 Response, available at https://www.irena.org/-/media/Files/IRENA/Coalition-for-Action/Publication/IRENA_Coalition_COVID-19_response.pdf (accessed in January 2021)

²⁴ The International Monetary Fund (2020), Policy Responses to COVID-19 - Policy Tracker, available at www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19 (accessed in January 2021)

²⁵ The International Monetary Fund (2020), Fiscal Monitor: Policies for the Recovery. Washington, October.

Further, the Italian draft Recovery Plan²⁶, which is still to be approved by the Council of Ministers, will allocate €196 billion to six areas, including €74.3 billion to the green revolution and ecologic transition. For each area, there will be a manager and a cabinet of experts on the various sectors. At the end of 2019, the European Commission adopted a green growth strategy as part of the European Green Deal (EGD).²⁷ Further, under point 2.1.2. Supplying clean, affordable, and secure energy, meaning that a power sector must be developed that is based largely on renewable sources, complemented by the rapid phasing out of coal and decarbonizing gas. The clean energy transition should involve and benefit consumers. Renewable energy sources will have an essential role. The smart integration of renewables, energy efficiency and other sustainable solutions across sectors will help to achieve decarbonization at the lowest possible cost. The rapid decrease in the cost of renewables, combined with improved design of support policies, has already reduced the impact on households' energy bills of renewables deployment.²⁸ Further, the EC's proposal for a new €750 billion²⁹, recovery instrument aims to support member states to accelerate clean energy transitions.

The government should bear in mind the structural benefits of increasingly competitive renewables, such as economic development and job creation, while also reducing emissions and fostering technology innovation. Further, the EU will invest in Western Balkans through an Economic and Investment Plan³⁰, for the Western Balkans whereas the support for the energy sector will be reinforced specifically under pillar V. Investing in clean energy as well as increasing use of RES should be supported, in line with the region's potential and climate change adaptation plans. This has to be a good opportunity for Kosovo by allocating the funds in the renewable market expansion.

5.1. How did the pandemic affect the investments?

The COVID-19 pandemic is far more than a health crisis and effects will continue to be felt in Kosovo long after the initial curtailment response. Further, the pandemic has evolved from a major public health crisis to become also a major economic and jobs crisis, the full extent of which is still unfolding. The Covid-19 pandemic is having a major impact on energy systems around the world, curbing investments and threatening to slow the expansion of key clean energy technologies.³¹ At the same time in the Western Balkans the COVID-19 pandemic has plunged countries into deep recession.³²

²⁶ Euractiv (2020), Italy's recovery plan draft revealed, available at https://www.euractiv.com/section/politics/short_news/italys-recovery-plan-draft-revealed/ (accessed in January 2021)

²⁷ European Commission (2019), The European Green Deal, available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52019DC0640> (accessed in January 2021)

²⁸ IRENA (2019), Renewable Power generation costs, available at https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Jun/IRENA_Power_Generation_Costs_2019.pdf (accessed in January 2021)

²⁹ European Commission (2020), Europe's moment: Repair and prepare for the next generation, available at https://ec.europa.eu/commission/presscorner/detail/en/ip_20_940 (accessed in January 2021)

³⁰ European Commission (2020), Communication on WB Economic and Investment Plan, available at https://ec.europa.eu/neighbourhoodenlargement/sites/near/files/communication_on_wb_economic_and_investment_plan_october_2020_en.pdf (accessed in January 2021)

³¹ IEA (2020), The impact of the Covid 19 crisis on clean energy progress, available at <https://www.iea.org/articles/the-impact-of-the-covid-19-crisis-on-clean-energy-progress> (accessed in January 2021)

³² The World Bank (2020), Western Balkans Regular Economic Report No.18 An Uncertain Recovery, available at <https://openknowledge.worldbank.org/bitstream/handle/10986/34644/153774.pdf> (accessed in January 2021)

The demand of electricity has been reduced significantly due to the recent COVID-19 pandemic. This devastating situation creates new challenges in the technical and financial activities of the power sector and hence most of the utilities around the world initiated a disaster management plan to tackle this ongoing challenges/threats.³³ However, the renewable sector is showing greater resilience in the wake of the Covid-19 pandemic than anticipated.³⁴ This resilience demonstrates growing appetite among investors for assets aligned with international climate objectives, rising demand for clean energy among consumers. As shown in the Figure 1 below, world economic stimulus and energy investments liquidity support includes *loans, guarantees, and quasi-fiscal operations*. General spending reflects measures aimed at non-health sectors of the economy and which include supporting individuals, households, and businesses, as well as forgone and deferred revenue. In Kosovo, as world-wide the pandemic is exerting unprecedented pressure on economic activity and the livelihoods of people. Despite the easing of containment measures in June 2020, the economy continues to decline, as the shock of the pandemic continues to stifle diaspora-driven service exports, investment, and private consumption.

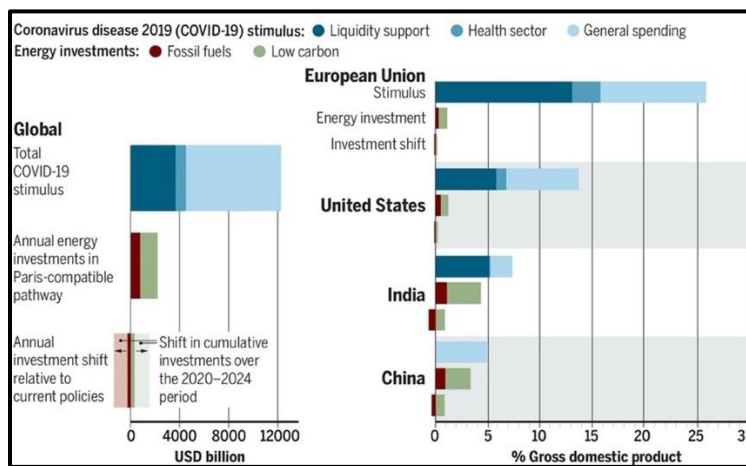


Figure 1. Global economic stimulus and energy investments in COVID-19 pandemics
Source: M. Andrejevic et al. (2020).

As Kosovo’s economy is expected to contract by 8.8 percent in 2020.³⁵ However, the increase in diaspora remittances and base metal exports, a relaxation of international travel restrictions, and the government’s countercyclical fiscal policy response, is expected to prevent a deeper contraction. This all leads to an opportunity for a more environmentally friendly, sustainable and resilient future. To do this, we need to invest in green jobs, not bail out polluting industries, end fossil fuel subsidies and take climate risks into account in the revised/expanded economic recovery plan.

³³ Rajvikram Madurai Elavarasan et al., (2020), COVID-19: Impact analysis and recommendations for power sector operation, Applied Energy, Volume 279.

³⁴ Energy monitor (2020), Renewable energy investments flows vindicate EU climate policy, available at <https://energymonitor.ai/finance/sustainable-finance/renewable-energy-investment-flows-vindicate-eu-climate-policy> (accessed in January 2021)

³⁵ The World Bank (2020), Recession Deepens as COVID-19 Pandemic Threatens Jobs and Poverty Reduction in Kosovo, available at <https://www.worldbank.org/en/news/press-release/2020/10/22/recession-deepens-as-covid-19-pandemic-threatens-jobs-and-poverty-reduction-in-kosovo> (accessed in January 2021)

5.2. The impact of COVID-19 in Kosovo's efforts to achieve renewable targets; the urgency of action and the socio-political environment

Global investment in new renewables capacity is expected to fall by 10% in 2020.³⁶ While the impact analysis of COVID-19 pandemics as mentioned above emphasize that world-wide the renewables sector fortunately is not hit as other sector. The decline in economic activity of COVID-19 in developing countries like Kosovo has been reflected in almost all sectors. This situation results in the closure of businesses, the loss of jobs, and the eventual failure of various sectors. However, the decline in economic activity in Kosovo has not been accompanied by any research that assesses the level of investments in renewables sector and potential improvement of the environment. According to the latest EnCT report³⁷, despite the Covid-19 pandemics the implementation in the renewable energy sector of Kosovo is moderately advanced. The full impact of the COVID-19 crisis on renewables in Kosovo is yet to become clear since there are no date available momentarily. As a result, Kosovo should ensure that green recovery programs will prioritize investments that support renewable energy sector. Thus, the revised/expanded green recovery plan should prioritize, among other things, investments in green energy and economic facilitation for small scale producers from Solar PV who reduce greenhouse gas emissions and meet the RES targets

The transition to RES could be encouraged, not only in Kosovo but also in the region, by cultivating relationships in the energy market so that the energy mix is diversified and the grid responds better to the problems presented by one energy source than another.³⁸ Given that stimulus is expected to be spent over the course of a few fiscal years only and governments have traditionally played a minor role in energy investment globally, the potential for the current tranche of public funding to support a green recovery over the next years is thus enormous. Prior to COVID 19 in 2019, Kosovo's GDP grew by an estimated 4%, driven primarily by domestic consumption and service exports. However, due to the impact of COVID-19, the latest WB report for Western Balkans countries shows that Kosovo's real GDP is estimated to contract by (-8.8) in 2020, as could be seen in Table 1 below.

Table 1. Real GDP growth in Kosovo for the years 2017-2022

Kosovo	2017	2018	2019	2020	2021forecast	2022 forecast
Real GDP growth (percent)	4.2	3.8	4.2	-8.8	3.7	4.9

Source: World Bank³⁹ estimates and projections.

³⁶ IRENA International Energy Agency (2020), The Impact of the COVID-19 Crisis on Clean Energy Progress, available at <https://www.iea.org/articles/the-impact-of-the-covid-19-crisis-on-clean-energy-progress> (accessed January 2021).

³⁷ Energy Community Treaty (2020), Annual Implementation Report-Kosovo, available at <https://energy-community.org/implementation/Kosovo.html> (accessed in January 2021)

³⁸ Noah Kittner *et al* (2016), An analytic framework to assess future electricity options in Kosovo *Environ. Res. Lett.* 11 104013

³⁹ The World Bank (2020), Western Balkans Regular Economic Report No.18 An Uncertain Recovery, available at <https://openknowledge.worldbank.org/bitstream/handle/10986/34644/153774.pdf> (accessed in January 2021)

Concerning the achievement of Kosovo's RES target of 25% share from renewables with the 24, 9% share of energy from RES, in gross final energy consumption in 2018, Kosovo is on the right path to reach its 25% target in 2020. However, this is mainly due to revision of biomass consumption data.

The government needs to work together with civil society and the private sector to develop a recovery plan that embraces renewable energy, sustainable business, green urban planning, and nature-based jobs and livelihoods. For Kosovo, this could be an opportunity to lay the foundations for a **green recovery** and to achieve the renewable targets. Hereafter, a must is a forward-looking green stimulus package that aligns with our national energy and climate plan that would deliver long-term economic, employment, and environmental benefits for Kosovo.

In regard to the *urgency of action and the socio-political environment* the COVID-19 pandemic is one of the most severe economic and energy shocks in modern history. Affordable, clean, and secure energy is a primer for economic growth and socio-economic development. Indeed, renewable energy and energy efficiency have already proved to be tools in increasing incomes, improving the quality of urban life and fighting poverty and unemployment. Past experience shows that policy responses to major disasters, such as the 2008 global financial crisis and the millennium drought in Australia tend to focus opportunities of post-COVID-19.

GoK has continued to implement the Economic Recovery Programme, which allocated EUR 365 million in funds to support businesses, create jobs and stimulate aggregate demand. The plan includes measures designed to facilitate loan access for businesses and farms, provide targeted tax relief and rental subsidies for firms, stimulate employment by subsidizing worker salaries, and incentivizing capital investments

Importantly, putting people at the center of green recovery plans can lay the foundations for sustainable well-being.⁴⁰ Social investments are also needed to avoid communities being left behind by the green transition, including targeted measures to strengthen social dialogue and protection. Public support for green policies may rise after the COVID-19 crisis.⁴¹ Thus, policymakers will be able to make the case that: (a) climate crises may look remote but can strike quickly (b) preparedness is essential and takes years and (c) the cost of preparing is dwarfed by the cost of not preparing.

⁴⁰ Allam, Z. (2020), "Vital COVID-19 Economic Stimulus Packages Pose a Challenge for Long-Term Environmental Sustainability." Surveying the Covid-19 Pandemic and its Implications: 97-105.

⁴¹ The International Monetary Fund (2020), Green Recovery, available at <https://www.imf.org/en/Topics/climate-change/green-recovery#Topic%201> (accessed in January 2021)

European recovery funds in transitioning towards circular and climate neutral economy stabilizing established industries, technologies, and practices rather than seizing the opportunity for structural reform and sustainability transformation.⁴² Both in Kosovo and globally, there have been strong calls from civil society, business, investors and financial institutions for a renewable recovery. These calls have been for stimulus measures that create jobs and stimulate the economy in the short term while putting Kosovo on the path to meet renewable targets and the world on a path to a safe climate in the medium to long term. Therefore, besides addressing the immediate health impacts, but it is also imperative to take strong political action to ensure the renewable sector is included as a high priority in the revised/expanded green recovery package.

6. Analysis of the opportunities and solutions

The recovery is an opportunity to “build back better”, combining an emphasis on restoring growth and creating jobs with the achievement of environmental goals and objectives. The green recovery is an opportunity to undertake wider reaching and fundamental restructuring of critical sectors and activities in order to support the transition to low-emission climate-resilient and resource-efficient economies in socially inclusive ways and to enhance the resilience of their economies. Hence, for Kosovo this is an opportunity for a major transition to a green economy based on conserving natural resources and tackling the major problems of climate change

Moreover, literature review suggest that despite the widespread economic suffering, the pandemic has increased public consciousness of the fragility of natural systems and their importance for human well-being. It is important to mention that green stimulus measures can generate income, create jobs, improve well-being for all and build resilience. In this case what governments can do, though, is mobilize private investment by channeling stimulus into dedicated public financing mechanisms. The IEA report "Green Stimulus after the 2008 crisis: Learning from successes and failures," published in June 2020, noted that "evidence suggests that the macroeconomic benefit of green stimulus programs ranged between 0.1% and 0.5% of GDP for around two years, depending on the size of the stimulus program".

Other opportunities that could become solutions ideally to be enforced in the near future are the increase in human resources for RES technologies, development in the electricity market, de-risking investment for RES, the development of a well-designed auction-based ideally a premium based RES sector, enabling market forces to dictate the price, rather being directed by the state.

The OECD’s Green Budgeting Framework⁴³, sets out the building blocks of a comprehensive green budgeting approach, strategic and fiscal planning, budgeting tools for evidence generation and policy coherence, accountability and transparency and an enabling budgetary governance framework. Green budgeting provides ways of using the tools of budgetary policy-making to help achieve environmental and climate goals. Therefore, the green budgeting tool of OECD is recommended to the GoK for use when drafting the expanded/revised version of the Economic Recovery.

⁴² B. Steffen, T. S. Schmidt, (2019), A quantitative analysis of 10 multilateral development banks’ investment in conventional and renewable power-generation technologies from 2006 to 2015. *Nat. Energy* 4, 75

⁴³ OECD (2020), OECD Green Budgeting Framework: Highlights, available at <http://www.oecd.org/environment/green-budgeting/OECD-Green-Budgeting-Framework-Highlights.pdf> (accessed in January 2021)

While accounting for only about 10% of the funding, the tax policies and grants provided under the act were instrumental in accelerating the deployment of photovoltaic (PV) solar and onshore wind, vital for the overall energy transition. This was one of the key lessons emerging from a review of the measures implemented in the aftermath of the 2008 global financial crisis.⁴⁴ The best solutions could include: Introducing specific financing measures and cost-effective incentives for renewable projects in upcoming stimulus packages by using proven support mechanisms, such as auctions, tax incentives that reduce investment risk in installing RES technologies and other targeted support schemes for small-scale projects.

Moreover, according to the OECD's initial country analysis of green recovery measures, indicates that a number of governments are using the post-COVID measures to accelerate actions that were already envisaged under existing environmental plans and proposals with the key example of accelerated efforts is an investment in renewable energy.⁴⁵ This is also a signal for the GoK to include renewable measure and to implement them under the revised/expanded Economic Recovery Program. Moreover, IRENA estimates that renewable energy could employ more than 40 million people by 2050 and that total energy sector employment can reach 100 million by 2050, up from around 58 million today, should the international community utilize its full renewable energy potential. Solar is a powerful job creator and an inherently rapid technology to deploy, as well as one of the cheapest forms of power generation today, with costs of solar PV having fallen by over 80% in the last decade.

In 2019 renewables accounted for 72% of all new capacity additions worldwide.⁴⁶ As such, investments in solar PV could play a central role in driving the Kosovo's economic recovery and energy transition. Focusing on renewable energy can prove to be a good investment at this time-creating jobs and improving the country's ability to rebound stronger, when opportunities open up growth in rooftop solar installations is a platform from which we can expand. For example, renewable energy, notably solar PV, employ more people per unit of investment and energy than a fossil-fuel generation.⁴⁷ Considering the high unemployment in Kosovo this should be a great opportunity to seize. Solar policies in Kosovo can be categorized into utility-scale solar plants (the tariff-incentive policy) and residential solar rooftops (the net metering policy). Recently, auctions (centralized, competitive procurement of renewables) have become increasingly widespread and have been instrumental in discovering renewable energy prices and containing policy costs in many countries, especially for solar PV and wind.⁴⁸ This policy solutions may encourage the increase of energy production from RES by the consumers themselves to invest in solar PV rooftops

⁴⁴ Agrawala, Dussaux & Monti (2020). What policies for greening the crisis response and economic recovery?

⁴⁵ OECD (2020), Making the Green Recovery work for jobs, income and growth, available at <https://www.oecd.org/coronavirus/policy-responses/making-the-green-recovery-work-for-jobs-income-and-growth-a505f3e7/> (accessed in January 2021)

⁴⁶ IRENA (2020), Renewable Power Generation Costs in 2019, available at https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Jun/IRENA_Power_Generation_Costs_2019.pdf (accessed in January 2021)

⁴⁷ IEA (2020), Sustainable Recovery, IEA, Paris, available at <https://www.iea.org/reports/sustainable-recovery> (accessed in January 2021)

⁴⁸ OECD (2020), Making the Green Recovery work for jobs, income and growth

Further, Kosovo needs a stricter regulating process of the Distribution System Operator and the enforcement of existing rules, especially concerning RES connectivity and balancing the grid, particularly in connecting prosumers.⁴⁹ Solutions include administratively set feed-in tariffs or premiums, renewable portfolio standards, quotas and tradeable green certificate schemes, net metering, tax rebates, and capital grants. In addition to governmental action, voluntary and corporate purchase programs for renewable energy are becoming an important part of the energy transition. As a result, a solution to increase the energy generation from sunlight from rooftop solar PV in households could be the stimulation of the citizens to invest some of the four (4) billion euros deposits in Kosovo's commercial banks.

Kosovo has the opportunity to receive assistance from international funds and investors especially for the renewables. Solar resources are in line with or better than other European countries with large PV deployment, such as Germany. Concerning that the technical potential in Kosovo for utility-scale solar PV⁵⁰, is 3006 TJ. This results in a huge opportunity to scale the investments in small solar PV systems for the encouragement of the citizens of Kosovo. The private investors in RES (solar PV systems) can use the provided data regarding solar radiation in Kosovo.

According to a preliminary analysis conducted by the OECD Secretariat⁵¹, in August 2020, at least 30 OECD countries have included measures directed at supporting the transition to greener economies as part of their recovery programs or strategies. As a good example from OECD countries, GoK is also urged to include the green measures support to its revised/expanded recovery program. The priority should be on renewable sectors which as noted above offer early opportunities for job creation and economic recovery, and can lead to structural benefits in the form of highly efficient and resilient energy systems with lower associated GHG emissions. Such action will significantly enhance the resilience of Kosovo economy and society in the face of accelerating environmental challenges and energy transition.

6.1. Policy options for boosting renewable energy towards businesses

Governments' budget decisions are key to delivering economic recovery. The OECD's Green Budgeting Framework sets out the building blocks of a comprehensive green budgeting approach, strategic and fiscal planning, budgeting tools for evidence generation and policy coherence, accountability and transparency, and an enabling budgetary governance framework.⁵² In the wake of the Covid-19 crisis, policy tools that aim to reduce tax burdens may need to shift towards grants to increase the efficacy of support, as was done following the 2008 financial crisis.

⁴⁹ A prosumer is an individual who both consumes and produces electricity

⁵⁰ IRENA (2019), Market Analysis SEE, available at https://www.irena.org//media/Files/IRENA/Agency/Publication/2019/Dec/IRENA_Market_Analysis_SEE_2019.pdf (accessed in January 2021)

⁵¹ OECD (2020), Making the green recovery work for jobs, income and growth, available at https://read.oecd-ilibrary.org/view/?ref=136_136201-ctwt8p7qs5&title=Making-the-Green-Recovery-Work-for-Jobs-Income-and-Growth (accessed in January 2021)

⁵² OECD (2020), OECD Green Budgeting Framework: Highlights, available at <http://www.oecd.org/environment/green-budgeting/OECD-Green-Budgeting-Framework-Highlights.pdf> (accessed in January 2021)

Auction schemes are also gaining in popularity for utility-scale projects and now support more than half of all renewables deployment in the near term. These schemes help to harness competitive forces to drive down technology prices, control financial commitments, and reduce financing costs by minimizing price risks. Thus far, solar PV and wind power have shown a degree of immunity to the Covid-19 crisis, with renewables-based generation increasing by 3% in the first-quarter of 2020. The best-selected policy to boost renewable energy towards businesses is the use of Solar PV. For small-scale solar PV in businesses, incentivizing self-consumption and appropriately reflecting the value to the system are top policy priorities, as new opportunities arise from more digitalized power systems. Therefore, the GoK should support the ‘COVID-19 Economic Recovery Plan’ with the Green Finance, which introduces a new financial stimulus for the greener business practices and increase of generation of electricity in business rooftop Solar PV. In the next sections the best policy options for boosting renewable energy towards businesses are described.

6.1.1. Electricity market measures

The liberalization process contains some mix of increasing competition, reducing regulation and privatization of the industry replacing monopolies with open competition. Market opening in Kosovo has also been progressing already for several years. In 2017, all consumers became eligible, resulting in theoretical full market liberalization. In addition, Kosovo has made significant progress in the market coupling with Albania and ENTSO-E-integration. This success is a very important step for the backup of a RES phase-in and a reliable energy supply and systems security on the whole. In addition to its FIT policy, Kosovo has introduced Net Metering. Under this framework, the policy provides a bill credit for each kWh of surplus electricity injected into the grid, allowing the customer to carry that kWh over to subsequent billing cycles.

Despite this, there remain a number of barriers in Kosovo that seriously hamper the implementation of a free electricity market as are the ability to switch suppliers is still theoretical due to the lack in competition and the nine licensed suppliers haven’t yet start to offer the electricity to customers. Moreover, the functionality of ERO board as a market overseer is still a barrier because of non-elections of its board members after their mandate expires and then the ERO board cannot issue decisions. Thus, quick nomination of ERO board is needed to avoid jeopardizing the electricity market functionality. In the world today, the most common support mechanisms for renewable electricity were designed for small shares of renewable energy in the power system, without properly accounting for the interactions between variable technologies and power market design. Therefore, the increasing share of wind and solar PV in electricity generation, an appropriate market design is needed to reduce barriers. The introduction of auctions for RES, is considered the most important change in the renewable energy sector that needs to be completed.

To this end, a combination of policy measures is needed to focus on creating an enabling environment for deployment, integrating renewables into consumers’ daily lives and systems at the same time, policies need to continuously adapt to changing market conditions, to achieve greater cost-competitiveness and improved integration of renewables into the system.

6.1.2. Fiscal incentives and custom exemptions

Concerning the custom exemption for the renewables in Kosovo⁵³, it should be included in the revised/expanded recovery package as a broad-based stimuli, such as a one year cut in the value-added tax (VAT) rate starting for renewables especially solar. As an example the Italian government has offered a tax deduction of 110% over 5 years for the realization of new PV residential plants.⁵⁴ The first such measure that could drastically affect the balance of the cost of the systems is the removal of VAT from the purchase and installation of PV systems in the country.

Thus, with the exemptions from VAT of solar cells and modules the shares solar PV in electricity generation will increase as a result, owing to their low variable costs, priority dispatch rules and long-term contracts – mostly through support policies such as Feed in tariffs, net metering as well as continuous capacity deployment. Currently, Kosovo's VAT is at 18%, with several exceptions to the application of VAT at import for importers and a sale for certain categories of industry. Hence, removal of the VAT tax would effectively create an 18% price drop in the overall initial installation cost of the small commercial customer Solar PV system.

6.1.3. Vocational education

The rapid deployment of renewable energy technologies can pose numerous challenges for energy-related stakeholders when local technicians lack the necessary skills to install and maintain systems. Knowing that in Kosovo the skilled labor in the renewables sector, the capacity building and development is lacking. Only a small number of well-qualified engineers, project planners and installation technicians have been available on the market. Moreover, small companies are lacking in expertise for suitable business models and appropriate financing options. Hence, quality vocational training is needed in order to ensure that renewable technicians adhere to protection and safety guidelines and utilize best practices in the design and installation of renewable energy systems.

6.2. Policy options for boosting renewable energy towards household

The rapid decrease in the cost of renewables, combined with improved design of support policies, has already reduced the impact on households' energy bills of renewables deployment world-wide.

According to the recent study published⁵⁵, the solar energy is by far the predominant viable renewable energy source in Kosovo and this has led to efforts to increase local energy supply and which can lead to the sustainable recovery financing for the installation of solar photovoltaic (PV) energy generation plants in households and business in Kosovo. Another study⁵⁶, states that of least-cost 100% renewable energy systems for 139 nations suggests some 28% of all-purpose annually-averaged end-use energy demand might be met by rooftop PV, comprising 1.8 billion 5-kW residential rooftop PV systems (14.9%) and 75 million 100-kW commercial/government rooftop systems (11.6%).

⁵³ INDEP (2020), A Case for VAT Reduction on Solar PV and distributed generation, available at https://indep.info/wp-content/uploads/2020/11/GIZ_EE_Papper-on-VAT_English.pdf (accessed in January 2021)

⁵⁴ D'Adamo, I., M. Gastaldi and P. Morone (2020), "The post COVID-19 green recovery in practice: Assessing the profitability of a policy proposal on residential photovoltaic plants." *Energy Policy* 147: 111910

⁵⁵ Lajqi Sh., Đurin B., Berisha Xh., and Plantak L., (2020), 'Analysis of the Potential for Renewable Utilization in Kosovo Power Sector', *Environments*, available at <https://www.mdpi.com/2076-3298/7/6/49/html> (accessed in January 2021)

⁵⁶ Jacobson, M. Z. et al., (2017), "100% Clean and Renewable Wind, Water, and Sunlight All-Sector Energy Roadmaps for 139 Countries of the World." *Joule* 1(1): 108-121.

Investing in solar energy reduces the risk of capacity outages and makes power generation more resilient to climate change impacts. Considering that installed capacity of distributed renewable generation, especially from rooftop solar photovoltaic (PV) power plants, has increased at a rapid pace thanks to a significant decline in the cost of solar power technology over the past few years. Finally, solar energy generation avoids emissions that are associated with alternative energy generation technologies.

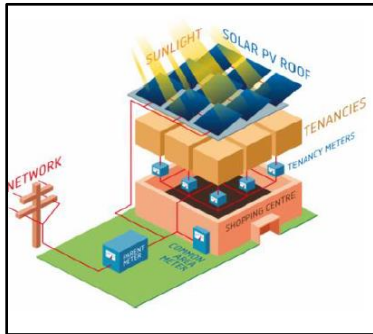


Figure 2. Solar PV-Small commercial customer **Figure 3.** Residential customer solar-PV

Due to its geographical position, the Republic of Kosovo has good potential for the production of electricity from the sun (the number of sunny days and solar radiation in Kosovo is high).⁵⁷ Thus, the potential of Kosovo to adopt PV installations⁵⁸, of less than 10 kWp in residential homes is substantial. As solar PV projects⁵⁹, (Figure 2 & 3) are often quicker to construct and deploy than mini-hydropower or wind projects and as the latest example of the promotion of PV residential plants from the Italian government has offered a tax deduction of 110% over five (5) years for the realization of new PV residential plants.

The country has adopted a net metering act for licensed energy distributors in Kosovo that allows households to benefit from the installation of PV systems by rolling back their meter for energy produced. Therefore, at this point it is reasonable for the GoK to provide subsidies and financial incentives for the installation of solar PV in rooftops in the expanded recovery plan. By doing this we hope to attract further investments of million EUR from the private sector especially the dormant four (4) billion⁶⁰ in the deposits in commercial banks. Further, this financial support for solar PV will bring down interest rates on loans for solar PV energy generation plants and develop the market for solar PV installation system in Kosovo. With this new subsidy for prosumers the number of projects generating power mostly from sunlight in households should rise substantially.

⁵⁷ Lajqi Sh., Đurin B., Berisha Xh., and Plantak L., (2020), 'Analysis of the Potential for Renewable Utilization in Kosovo Power Sector', *Environments*, available at <https://www.mdpi.com/2076-3298/7/6/49/html> (accessed in January 2021)

⁵⁸ INDEP (2020), A Case for VAT Reduction on Solar PV and distributed generation, available at https://indep.info/wp-content/uploads/2020/11/GIZ_EE_Papper-on-VAT_English.pdf (accessed in January 2021)

⁵⁹ Kittner N, Gheewala S H and Kammen D M (2016a), Energy return on investment (EROI) of mini-hydro and solar PV systems designed for a mini-grid *Renew. Energy* 99 410–9

⁶⁰ Central Bank of Kosovo (2020), Record level of deposits of 4 billion euros, available at <https://bqk-kos.org/nivel-rekord-i-depozitave-prcj-4-miliarde-euro-dhe-rimekembje-e-plote-e-kreditimit-te-sektorit-bankar/?lang=en> (accessed in January 2021)

6.2.1. Subsidies for prosumer investors

In order to encourage prosumer investments, a Net billing approach should be favored over Kosovo's current Net Metering policy. According to the analysis and the advantages net billing has, INDEP, recommends the use of net billing instead of net metering. The new paradigm for a reliable power system should be flexibility. Therefore, parallel to new RES capacities, investments should be focused on balancing infrastructure to make the RES viable (balancing reserve capacities/systems, storage). Offering concrete incentives to the wider integration of the prosumer schemes into the society, through the developing of a market prosumer scheme. Increase the use of solar PV for electricity production in the small farms - increase the use of solar energy for the production of hot water for the needs of the household and services sector.

The combination of decentralized energy sources and digitalization allowing customers to generate their own electricity, becoming "prosumers"⁶¹, both consumers and producers of electricity, or even "prosumagers" who also store their electricity⁶², opens new opportunities for fast diffusion of micro renewable energy solutions. In order to encourage investments from prosumers in residential rooftop PV systems in the revised/expanded recovery package should be included also the subsidies for prosumers. Conversely, net metering allows customers with distributed generation to sell energy (most frequently solar) back to the grid, thus reducing overall demand for electricity.

6.2.2. Enhancing the existing supporting scheme

Currently, Kosovo's supporting schemes for RES are feed-in tariffs and according to the ERO/Rule No. 10/2017⁶³, rule on support scheme for RES generator, the net energy metering. In order to enhance the current support schemes for RES, according to the best examples from OECD and EnCT countries the best policy solution is substitution of current feed-in tariff by the market based auction feed in - premiums. Whereas, for the current net energy metering, as experience in a growing number of countries around the world signals a move away from classic Net Metering and toward other self-consumption policies such as Net Billing (where a monetary credit) is allowed and can be carried over to offset future consumption. This will be described in detail in the next section.

6.2.2.1. Net billing instead of net metering and increasing the allowed capacity

Net metering and net billing are electricity policies that enable grid-connected customer-generators (homes or businesses that own a PV or other generation technology connected to the grid) to offset some or all their electricity consumption and get paid for excess energy injected into the grid. Net billing is a market-based compensation mechanism, as prosumer compensation is based on the actual market value of the kilowatt-hours (kWh) consumed or injected into the grid. In Table 2 below is shown the current limit of 100 kW for prosumers in Kosovo which should be revised.

⁶¹ Leal-Arcas, R., F. Lesniewska and F. Proedrou (2018), *Prosumers as New Energy Actors*, Cham, Springer International Publishing.

⁶² Ajanovic, A., A. Hiesl & R. Haas (2020), "On the role of storage for electricity in smart energy systems." *Energy* 200: 117473.

⁶³ Energy Regulatory Office (2017), Rule on support scheme for RES generator, available at http://ero-ks.org/2017/Rregullat/Rule%20on%20Support%20Scheme_2017.pdf (accessed in January 2021)

Table 2. Prosumers - RES generating facilities upper limit.

Countries	Albania	Armenia	Georgia	Kosovo	Montenegro
Upper limit	500 kW	150 kW	100 kW	100 kW	50 kW

Source: INDEP analysis

Thus, it is important to increase the allowed capacity in Kosovo too and the best example to consider is that of Albania where the limit is 500 kW and is based on the consumption patterns of the prosumers. Amending this limit for Kosovo would contribute to an increase in investment, especially by consumers paying higher tariffs, resulting in more decentralized production. Nonetheless, Net metering schemes (and self-consumption in general) face other barriers in the region, such as large share of non-energy costs and low retail energy prices that provide a limited incentive for self-consumption.

Hence, Net billing is an alternative mechanism addressing the limitations of net metering schemes and feeding tariff compensation mechanisms, which are largely applicable to prosumers. This reduces the effectiveness of the scheme in terms of promoting system-friendly self-consumption, as the consumer is not pushed to consume as the energy from the solar system is immediately available.⁶⁴ Figure 4 below depicts the flow of electricity payments and electricity flow in a net billing scheme, which illustrates that two meters are needed.

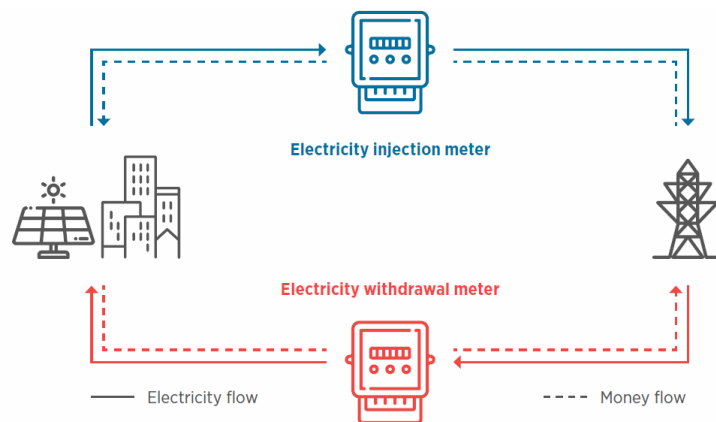


Figure 4. Schematic electricity flows and payments in a net billing scheme, Source: IRENA⁶⁵

Net billing schemes incentivize prosumers, to interact with the grid in a way that maximizes the benefit of self-consumption and distributed generation the most for the system. Benefits increase system flexibility by engaging prosumers, incentivizing: self-consumption and injecting electricity in the grid when prices are high. By withdrawing electricity from the grid when prices are low.

⁶⁴ IRENA/IEA/REN21, (2018), Renewable Energy Policies in a Time of Transition

⁶⁵ IRENA (2019), Innovation landscape brief: Net billing schemes, International Renewable Energy Agency, Abu Dhabi.

Table 3. Methods for determining the compensation tariff for excess electricity injected under net billing schemes.

Method	Description		Example
Time-of-use tariffs	Static	Tariffs determined in advance and based on historical power system balance.	Mexico Finland
	Dynamic	Tariffs determined in real time and based on actual power system balance or linked to wholesale market electricity prices.	
Location-varying tariffs	Tariffs based on grid congestion at different nodes, including among other environmental factors.		New York USA
Tariffs based on the avoided cost of electricity	Tariffs based on the marginal cost of electricity procurement that was avoided by retailers/system operators because of the injection of one unit of renewable electricity into the grid		Arizona (United States)

Source: IRENA⁶⁶

As can be shown in Table 3 above the Net billing schemes are used also in e.g. Finland, Mexico, and the USA (NY and AZ). According to the analysis from the Table 3; advantages the net billing has, and the stimulation to encourage self-consumption from solar PV systems, the INDEP, recommends the use of net billing scheme and method (Location-varying tariffs) for the injection of renewable electricity from prosumers.

6.2.3. Awareness and information

There are a huge awareness and information darkness about the RES opportunities for self-consumer in Kosovo. The GoK should ensure that consumers are well informed about rights and responsibilities, including impact on the network; empower consumers to take an active role as prosumers and engage with the power system. Solar energy may not be an “essential” need, but feelings of safety and security certainly are. People want control and predictability. Cost savings to homeowners who go solar is increasing, also having the diversification of solar power brings to the customer a much-needed sense of comfort. If solar power satisfied you, you want to recommend it to others now more than ever (our referrals are way up) as an active participant in your community. Further, we urge to use the benefits of ‘one-stop shop’ for RES. Thus, the awareness campaigns should be undertaken for the benefits of possessing a smart meter for Solar PV, to encourage pilot programs demonstrating the benefits of net billing mechanisms for consumers.

⁶⁶ IRENA (2019), Innovation landscape brief: Net billing schemes, International Renewable Energy Agency, Abu Dhabi.

7. Conclusions

With the coronavirus (COVID-19) grappling the world and forcing global economic engines to a standstill, numerous sectors are impacted as well as the renewable energy sector. Government support is initial and key power for promoting and developing the field of renewable energies in Kosovo. As a response, Kosovo as many world countries should provide an incentive through the Green recovery plan, for directed and organized willingness to make progress in the field of clean energy transition. Our findings provide insights into a number of lessons (use of fiscal incentives e.g. PV solar tax-exempt), invest in solar PV the dormant private capital in banks, awareness-raising, and de-risking of solar projects, etc.). These policies can lower financial risk and encourage the private sector (households and businesses) in the adoption of solar PV by creating a more supportive investment outlook. However, in the current recovery plan the renewable promotion and investments are not targeted they should be set as a high priority measure in a revised/expanded recovery package.

A revised/expanded green recovery package driven by renewables can tackle other challenges for Kosovo as air pollution, climate change and meet the obligatory RES targets by curbing greenhouse gas emissions, thus reducing vulnerability to life-threatening diseases. Additionally, the green recovery plan needs to be aligned with long-term national and global objectives on energy resilience and sustainable development. The GoK has to ensure a serious shift towards a green and sustainable future through the design and plan of the revised/expanded Economic Package including the green stimulus mechanisms. These investments in renewables will significantly impact its inhabitants' economy and well-being. The earlier the promotion and investments for RES (solar and wind) are introduced, the more investments can be made and local RES companies and producers of technology are encouraged. Last but not least, a renewables-driven recovery will contribute to more equitable and inclusive growth by improving and diversifying access to energy. While the required upfront investments are high, investing in renewables can help Kosovo to lower its cost of electricity service, reduce carbon emissions, and create new jobs. Unquestionably, RES prioritization and promotion in Kosovo must continue (to a much greater extent). Thus, the GoK must strongly commit to a Green Recovery and allocate funding in the green recovery, facilitating more private sector investments in renewable energy, especially for the solar PV installation systems for households and businesses. Which will not only bring Kosovo in line with EU policies and regulations but will also allow the country's sustainable development and a future that is socially and environmentally friendly.

Consequently, the GoK needs to appreciate more the need for a comprehensive approach to renewables with respect to both energy and climate change, resulting in future measure inclusion on the revised/expanded green recovery package. An economic green recovery package with specific priorities and criteria focused on sustainable development is critical when facing with the pandemic. While addressing the pandemics, the revised/expanded green recovery package should not neglect the trends in the world and the EU, and should promote and support the recovery of environmentally friendly economic sectors while protecting the environment. The recommendations in this paper should serve the GoK on how to include renewable energy in the recovery package and to boost investment in renewable energy both in the business and residential sector. In the final analysis, INDEP firmly believes that any recovery after COVID-19 can only be Green and that the GoK should commit to accelerating its investments in renewable energies (especially Solar-PV systems) to boost the economy, employment recovery, and advance towards energy transition.

8. Recommendations

Drawing on the lessons from this paper, the following are the INDEP recommendations for the government of Kosovo to include **green stimulus measures** as a part of the revised/expanded green economy recovery plan.

I. Kosovo Government has an opportunity to “green” recovery package, to speed up structural change towards the low-carbon transition and to meet its RES targets.

In the revised/expanded recovery package the GoK should prioritize green investments mainly in RES (solar PV systems) that have strong economic and social benefits and have the potential to create jobs, reduce emissions, rather than prioritize fossil fuel investments. The measure in the plan should clearly define the investments in solar PV projects and fiscal policies for their quick deployment. Ensure full inclusion of stakeholders at the local and national level in the design and implementation of the COVID-19 green recovery package. Introducing specific financing measures and cost-effective incentives for renewable projects (small scale solar PV system installations) in the recovery package by using proven support mechanisms, tax incentives, etc.

II. The government should abolish the VAT on the purchase and installation of PV systems in Kosovo.

In order to achieve the wider goal of decarbonization and to fully fund the low-carbon transition, public resources committed to green measures must be used strategically to mobilize capital from private sources. The first such measure, which could have a substantial effect on the balance of costs of the systems, is the removal for a year of the VAT tax would effectively create an 18% price drop in the overall initial installation cost of the small solar PV.

III. Net billing over net metering as a market-based compensation mechanism for RES as well increased allowed capacity

As the first step, the Government should ensure the adoption of a net billing policy and then enforce and implement it. Then, to ensure the integration scheme for business and residential photovoltaic generation within net billing context. Should encourage pilot programs demonstrating the benefits of net billing mechanisms for consumers and the system, and disseminate the results publicly. Amending this limit for Kosovo would contribute to an increase in investment, especially by consumers paying higher tariffs, resulting in more decentralized production. It is of utmost importance to increase the allowed capacity in Kosovo from the current 100 kW to 500 kW.

IV. Financial support - subsidies for the prosumers of small scale solar PV

GoK has to include in the revised/expanded green recovery plan a measure to subsidize prosumers for renewable installation. This financial support as subsidies for prosumers, should attract further investments of million EUR from the private sector especially the dormant four (4) billion in the citizen's deposits in commercial banks in Kosovo.

V. *Capitalize the dormant private deposits in banks to invest in solar PV and subsidies for prosumers*

In order to achieve the wider goal of decarbonization and to fully fund the low-carbon transition, public resources committed to green measures must be used strategically to mobilize capital from private sources. The level of private deposits in Kosovo's commercial banks has already exceeded the value of four (4) billion euros - the highest historical value since the establishment of the banking system in Kosovo. This dormant capital can be stimulated for investments in Solar - PV specifically solar rooftops in households and businesses. This investments should help citizens to become more resilient to future negative shocks.

VI. *The GoK should use OECD's Green Budgeting Framework tool*

The OECD Green budgeting tool sets out the building blocks of a comprehensive green budgeting approach, strategic and fiscal planning, budgeting tools for evidence generation and policy coherence, accountability and transparency and an enabling budgetary governance framework. Green budgeting provides ways of using the tools of budgetary policy-making to help achieve environmental and climate goals. Therefore, the green budgeting tool of OECD is highly recommended to the GoK for use when drafting the expanded/revised version of the Economic Recovery.

VII. *The government should conduct awareness-raising campaigns for the benefits of using RES small generators especially Solar PV in rooftops*

There is a huge awareness and information darkness about the RES opportunities for self-consumer in Kosovo. Thus, the GoK should ensure that consumers are well informed about rights and responsibilities as well as about the energy electricity cost savings to homeowners who go solar, including impact on the network; promoting system-friendly self-consumption, empower consumers to take an active role as prosumers and engage with the power system.

VIII. *Monitoring and evaluating the green recovery measures*

Monitoring the impact of recovery, green stimulus measures and environmental outcomes through measurable, comparable and timely indicators are key to ensuring that the green recovery is well-targeted and effective in its execution. Environmental standards should not be relaxed and GoK should undertake ex-post-assessments to understand the economic and environmental impacts of different green stimulus measures.

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