IMPLEMENTATION OF ENERGY EFFICIENCY AND RENEWABLE ENERGY POLICIES AND REQUIREMENTS WITHIN THE SAA, ERA AND ERPS

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ABREVIATIONS

ACER	Agency for the Cooperation of Energy Regulators
CNG	Compressed Natural Gas
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EnCT	Energy Community Treaty
EnCS	Energy Community Secretariat
ENTSO-E	European Network of Transmission System Operators for Electricity
ERA	Economic Reform Agenda
ERO	Energy Regulatory Office
ERP	Economic Reform Program
EPC	Energy Performance Certificate
EU	European Union
IRENA	International Renewable Energy Agency
GoK	Government of Kosovo
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
HPP	Hydro Power Plant
KEEA	Kosovo Energy Efficiency Agency
KEDS	Kosovo Electrical Distribution and Supply
KEC	Kosovo Energy Corporation
KES	Kosovo Energy Strategy
KESCO	Kosovo Electricity Supply Company
KOSTT	Kosovo Transmission System and Market Operator
LPG	Liquefied Natural Gas
MED	Ministry of Economic Development
MEE	Ministry of Economy and Environment
MEI	Ministry of European Integration
MESP	Ministry of Environment and Spatial Planning
MIRECK	Metal Industry and Renewable Energy Cluster of Kosovo

MCC	Millennium Challenge Corporation
MFK	Millennium Foundation Kosovo
NRD	National Registry Model - Database
NEEAP	National Energy Efficiency Action Plan
NECP	National Energy and Climate Plan
NPISAA	National Programme for Implementation of the Stabilization Association Agreement
NREAP	National Renewable Energy Action Plan
REEP	Regional Energy Efficiency Program
SAA	Stabilization and Association Agreement
TAIEX	Technical Assistance and Information Exchange instrument of the European Commission
TERMOKOS	Prishtina District Heating Company
TPP	Thermal Power Plants
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WBs	Western Balkans
WB	World Bank

1. Introduction

Long ago, coal united the European countries and helped advance Kosovo's inhabitants' livelihood. Today, coal is a dreadful downside keeping Kosovo from fulfilling the energy and environmental requirements to join the European Union (EU) in the future.

The Europe Declaration was signed on April 18, 1951. It led to the Treaty of Paris, forming the European Coal and Steel Community (ECSC). This occurred in the aftermath of World War II. It normalized Franco-German relations by placing the production of coal and steel under a joint organization, therefore paving the way to creating the European Union.

Eleven years later, in the land of *"the last people of Europe,"*[1] 'Kosovo A', the first power plant was built. It impacted the people's livelihood greatly by creating better living and working conditions, giving them space to make progress in their lives and catch up to their western counterparts.

However, in the last 20 years of 'westernizing' its towns and cities, Kosovo's greater use of coal-based energy is negatively impacting the health and well-being of its inhabitants, environment, and biodiversity. Like its neighboring countries, Kosovo has become a hotspot concerning air toxicity due to outdated coal-power plants, household usage of fossil fuels, and firewood burning. Its inhabitants are exposed to some of Europe's highest air toxicity absorptions: up to five times higher than the EU guideline levels.

While coal initially united the European nations, today, they all turn their backs on coal and collaborate to transform the 27-country block from a high to low carbon economy to increase prosperity and improve people's quality of life. Kosovo's stagnation regarding coal power plants will continue to differentiate its inhabitants from the European Union further. Kosovo must push forward its actions towards energy efficiency and renewable energy for the country to prosper.

In October 2015, the Republic of Kosovo and the European Union signed its first contractual agreement, the SAA. This agreement represents a new phase of political relations between Kosovo and the EU by officially setting specific mechanisms and timelines that will eventually align Kosovo with EU standards. It is essential to state that aside from serving as a framework for enhanced political dialogue, the SAA also serves as a loop for Kosovo to have a more intimate trade integration with the EU.

To successfully implement the SAA, in 2015, Kosovo drafted its main national policy document, the NPISSA. This programme aims to implement all reforms and adopt the EU acquis into national legislation in all its chapters. This programme is implemented alongside two other specific documents that monitor and depict the success rate of SAA fulfillments: the European Reform Agenda (ERA) and the Economic Reform Programme (ERP).

1. Durham, M. E. (Mary Edith). (1909) The Burden of the Balkans. London: Nelson.

ERA focuses on key economic reforms, strengthening the rule of law, and consolidating good governance, namely implementing priority reforms requiring attention at the highest political level. The latter includes reforms to boost competitiveness and improve inclusive growth and job creation. Simultaneously, the ERPs are submitted yearly by the potential EU candidates to the European Commission. They contain macroeconomic projections for the next three years.

Kosovo is one of the last candidates for EU integration, together with Bosnia and Herzegovina (status: potential candidates). In its efforts for reforms, Kosovo is also a contracting party of the Energy Community. Within this community, Kosovo has accepted to implement a fundamental adaptation of EU energy law, under which it aims to improve its actions in energy efficiency and a wider integration of renewables in its energy mix, amongst others.

This paper will provide an analysis of the National Programme for Implementation of the Stabilization and Association Agreement (NPISAA) and its interconnection with the ERA and ERP in the realm of progress in energy efficiency measures and renewable energy sources. Furthermore, this paper will provide information about the monitoring process, performance, and efficiency of Kosovo's fulfillment and provide concrete recommendations about what steps should be taken by the Government of Kosovo (GoK) to fulfill its part of the agreement with the EU.

2. Methodology

The research approach is a mix of theoretical review of reference policy documentation and interviews with stakeholders. Policy reviews were published documents from the authorities and different donors and organizations, such as: legislation, national strategies and plans, reports, research papers, etc.

The research methodology is deductive: data collection, analyses and review of findings, assessing outcomes and stating recommendations. Collected data using comparative analysis were processed as per interrelations with obligations and recommendations for overall energy efficiency (EE) and renewable energy sources (RES) development as set within NPISAA, ERA and ERP; reflecting measures and priorities deriving from national political importance and policy mechanisms of Kosovo-EU relations.

On the whole, the research was developed through 4 major steps: 1) List of all reference documentation; 2) Feedback from key stakeholders; 3) Analysis of all reference documentation (cumulative review of implementation rationale of Kosovo obligations on EE and RES measures within NPISAA, ERA, and ERP; review of national policy framework, strategies and plans, etc.) and 4) Summary (assessment of findings, identify implementation key issues and challenges and structure comprehensive recommendations).

The Paper has further studied the status and level of implementation of objectives and activities set by the three documents. The level of implementation reflects the current status mainly from legislative and implementation perspective of transposing EE and RES related EU acquis.

Interviewed are representatives from institutions such as: the Ministry of Economy and Environment (ex. MED and MESP), ex. Ministry of European Integration (MEI), Kosovo Energy Efficiency Agency (KEEA), Energy Regulatory Office (ERO), European Commission (EC), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, World Bank (WB), Kosovo Transmission System and Market Operator (KOSTT) and the private sector representatives like Metal Industry and Renewable Energy Cluster of Kosovo (MIRECK).

Most of the identified stakeholders were interviewed, although the interview process faced the COVID-19 pandemics lockdown restraints. Another limiting factor was the several government changes during 2020 and the rotation of several departments from one ministry to another, e.g. MESP was moved into the Ministry of Infrastructure and Environment and now into the Ministry of Economy and Environment.

3. Energy overview

Kosovo has undergone a significant and rapid construction boom in the last twenty years, catching the state in the making off-guard.

Political unrest, the lack of rule of law, and economic deprivation have created the perfect conditions to feed a surging demand for rural communities to resettle to urban areas, making construction the highest growing sector in Kosovo's economy.

In 2016, Government of Kosovo, identified 350,000 buildings, both in the private and public sectors, built without safety and environmental permits.[2] Since the GoK does not control or implement energy saving measures on the private sector buildings, these measures rely on the owners' mercy and will.

Kosovo's physical construction has been extremely rapid; however, the scheme of Europe's newest country has been slow and steady. The lack of building codes has allowed Kosovo's cities to become concrete jungles built with low-cost materials and lacking proper insulation, driving to an increase in energy demand. Concurrently, the lack of district heating systems and inefficient grid expedited the traditional use of burning lignite and firewood for heating and cooking in the household and private sectors.

Kosovo is facing the challenges of development energy efficiency and renewable sources. The GoK has been receiving assistance from donors such as the European Commission (EC), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH,World Bank (WB), European Bank for Reconstruction and Development (EBRD), United States Agency for International Development (USAID), Millennium Challenge Corporation (MCC), United Nations Development Programme (UNDP), etc., who invest and assist the country in legislation and investment in concrete projects such as public buildings.

However, Kosovo remains very energy intensive compared to the EU average, as Kosovo uses three to four times the amount of energy for the same amount of GDP output. This is the result of the lack of energy efficiency measures and other equipment that is energy efficient and low level of renewable energy source generated electrical and thermal energy.

2. USAID Kosovo (July, 2016). Success story "Building Constructed without Permits in Kosovo move Toward Legalization".

Kosovo is amongst the highest pollution sources in Europe as its electricity power generation relies nearly entirely on lignite incineration from two outdated thermal power plants (TPPs): 'Kosovo A' and 'Kosovo B'. The government scheduled the development of 'New Kosovo' power plant project; however, in 2018, its primary source of funding, the WB, decided to withdraw from the project, stating that energy costs from renewable sources are much cheaper than coal. In March 2020, Contour Global concluded that the development of 'New Kosovo' power plant is impossible and that they will not continue with its implementation. Contour Global's announcement that they will not build new coal projects came as a result of a profound shift in the approach of global political and financial actors who are increasingly moving away from coal projects and focusing on the future of energy systems, in energy efficiency and energy from renewable sources. Local non-governmental organizations who constantly opposed the project stated that "It is time for the GoK to join this new global trend and pave the way for the necessary transition of the energy market in Kosovo".[3]

While the GoK has tried to address the alarming concerns from its citizens and the European Union, its carbon based strategies have only delayed the process of dealing with this environmental and health hazard. Its policy encouragement in the investment in hydropower electricity generation is in general a risky investment with a meager economic return: it is significantly harming local communities and the environment.

A study made by Energy and Resources Group University of Berkeley, California claims that the approximate energy that Kosovo could generate from biomass resources is 6600 GWh/yr.[4] While neighboring countries (Albania, North Macedonia and Serbia) generate a portion of their electric power by using renewables, in Kosovo there is a lack of studies on the overall renewable energy sources potential in Kosovo.

In recent years, technology prices for solar and wind have dropped drastically making sustainable energy possible for countries like Kosovo where finances are scarce, but geological location is right.[5] Even though Kosovo has substantial wind reserves[6] and sound solar radiation[7], they are still underutilized.

Important governmental documents serving as roadmap for energy efficiency and renewable energy sources are the Energy Strategy, the National Energy Efficiency Action Plan (NEEAP) and the National Renewable Energy Action Plan (NREAP).[8] NEEAP 2010-2018[9] sets the goal of achieving an energy saving target of 9% from final energy by 2018.

3. Balkan Green Foundation (March 2020): https://www.balkangreenfoundation.org/en-us/press/180/kosovo-now-has-the-opportunity-to-build-a-sustainable-energy-future/
4. Kittner N, Dimco H, Azemi V, Tairyan E, Kammen D. Energy and Resources Group, University of Califor-nia, Berkeley. (2016). Sustainable Electricity Options for Kosovo.
5. According to International Renewable Energy Agency (IRENA), since 2010, the cost of new solar photovoltaic projects has fallen by 82%.
6. Wind atlases for Kosovo. Available online: https://globalwindatlas.info/area/Kosovo (accessed on August 2020).
7. Global Solar Atlas. Available online: https://globalsolaratlas.info/downloads/Kosovo (accessed on August 2020).
8. The strategies set up the general principles, activities, policies, and strategies within the country's energy sec-tor and aiming to increase energy efficiency and renewable energy sources.
9. Kosovo Energy Efficiency Agency (KEEA) has submitted final draft of 4th NEEAP in October 2019, cover-ing period 2019 – 2021. The 4th NEEAP includes measures for the transposition of Directive 2012/27/EU. Unfortunately, the adoption of the 4rth NEEAP is still pending.

Continuously, NREAP 2011-2020 sets a target of total 25% of renewable sources development in final consumption of energy divided in three sectors: (i) 25.64 % of renewables in gross final consumption of electricity; (ii) 10% of renewables in final consumption of energy in transport; and (iii) 45.65 % of RES in gross final consumption for heating and cooling.

However, Kosovo has only achieved half of the energy efficiency targets (of 9%) and has not achieved its renewable energy targets (22,9% of 25% achieved). It is essential to state that the 'high' percentage of renewable energy shares is due to the revision of biomass consumption[10] rather than investment in renewable energy.[11]

Kosovo is delaying its EU integration process by not moving towards a low-carbon energy system.[12] However, the impact of environmental degradation is more harmful than Kosovo's delay towards EU integration. According to the World Bank, roughly 800 people in Kosovo die each year directly from air toxicity.[13] Furthermore, bronchitis, heart disease, and lung cancer are the main illnesses Kosovo's people are repeatedly confronted with, which creates an immense strain in the already weak health care system and economy. Therefore, concrete steps must be taken by the GoK to eradicate air pollution through investments in renewable energy.

10. Energy Community Secretariat (2019). Annual Implementation Report 2019.
11. European Commission (2019). Kosovo Progress Report.
12. A journey it began by signing the Energy Community treaty: While Kosovo, as other WB countries, are in an energy development crossroads of setting new targets for EE and RES development, the EU has set more ambitious EE savings target (32,5%) and RES sharing targets (32%).
13. Word Bank (2019). Western Balkans Report – AQM in Kosovo. Report No: AUS0001229.

4. Kosovo Progress on SAA Implementation Process

The SAA's aim is laying out concrete a foundation for of gradual adoption of policy and economic reforms through three blocks: I) Political Criteria, II) Economic Criteria, and III) European Standards – Approximation of Kosovo's Legislation with the EU acquis.

Block II - Economic Criteria, is aligned with the ERPs. Block III - The EU acquis, includes policy reform adoption in the national legislation and implementing the approximated legislation. It is divided in 33 EU acquis chapters and one chapter on national legislation approximation with the EU acquis.

ERA focuses on implementation of priority reforms requiring attention at the highest political level. ERA priorities serve as a medium-term while the action plan serves as a short-term framework.

ERPs are prepared by governments to design and implement reforms in favor of growth, investment and employment. Its short-term activities ensure that the government work plans are consistent with the NPISSA and ERA activities.

4.1 National Programme for Implementation of SAA - (NPISSA)

Chapter number 15 of NPISSA is dedicated to the energy sector. Its energy-related obligations are laid out within SAA's Block Articles 74[14] and 114. While Article 74 promotes legislative approximation, Article 114 encourages the implementation of the EU acquis on energy efficiency, renewable energy sources, and the energy sector's environmental impact. Additionally, Article 114 stresses the importance of cooperation between Kosovo and the EnCS. Moreover, Block II (economic criteria) of the SAA emphasizes the importance of reducing energy consumption through specific efficiency measures under the ERP.

The introductory part of NPISAA sets short-term measures and mid-term priorities. It also represents Kosovo's current situation, as well as its policy framework. The second part of NPISAA sets legislative and implementing standards through a matrix of short-term measures.

14. Approximation of Kosovo's Law to the Eu Acquis, Law Enforcement and Competition Rules.

The GoK has adopted five consecutive NPISAAs. For this paper, NPISAA 2017-2021 and 2020-2024 will be analyzed. They both promote energy savings, diversifying energy generation through renewable sources as well as environmental protection and mitigation.

4.1.1 NPISAA 2017-2021

Midterm priorities under the block III are: review of the Energy Strategy, implement energy targets in accordance with the NREAP and NEEAP, establishment of 'One-Stop-Shop' for renewable energy sources and implementation of energy performance in buildings (nearly zero-energy buildings, certificates of energy performance, issuing of energy performance certificates, inspection of heating systems, inspection of air conditioning systems, inspection of heating systems and air conditioning).

The majority of the required legislation has been adopted; however, the GoK has consecutively failed to enforce implementation. The implementation of infrastructural priorities directly impacting energy efficiency and energy poverty that is impacting the livelihoods of its inhabitants is partially or not implemented at all.

NPISAA does not treat energy efficiency and renewable energy sources as high priority. The "Sectorial Expenditure Framework"[15] consists of 19 priority objectives[16], under which only one tackles energy efficiency savings. More specifically, sub-priority 6.5, urges the prioritization of investments in energy efficiency and environmental protection. Other main priorities such as increasing security of electricity supply, investments in transmission and distribution capacities have hindered energy efficiency and renewable energy sources to be listed as a high priority.

It is worth mentioning that most of the planned legislative measures are repetitive in NPISAA documents of different years. The majority of implementing measures relate to drafting and adoption of national strategies and action plans. Due to the lack of inter-institutional coordination in priorities and effective monitoring mechanisms, the implementing measures are very few in terms of quantity and quality to have an impact on energy savings and renewable project development.

The following Table 1. NPISAA 2017-2020 Activity Matrix aims to assess the status and level of implementation of the NPISAA 2017-2020 energy efficiency and renewable energy sources related to short-term legislative and implementing measures.

15. Priorities for Financing under the Sectorial Expenditure Framework. "For period 2017 - 2020 19 priority objectives set for addressing medium-term and short – term state budgeting to ensure the fulfillment of specific objectives of the reforms in order to ensure the fulfillment of the SAA and other obligations of European inte-gration in the priority areas."
16. Costing and budgeting of mid-term priorities is aligned through chapter "Sectorial Expenditure Framework", a linkage between the national budget and priority sectors under the SAA/NPISAA and ERA.

Table 1. NPISAA 2017- 2020 Activity Matrix

Legislative Measures	LOI	Implementing Measures	LOI
1. Law on Energy Efficiency.	4	1. Energy Strategy 2017-2026, adopted.	4
1. Review of AI on renewable energy sources targets.	3	1.Energy Strategy Implementation Program for 2017-2019, adopted.	3
1.Review of AI on the promotion of the use of renewable energy sources.	4	1. NREAP 2011-2020, including measures to ensure achievement of the 25% target. *Adopted.	4
1.AI for One-Stop-Shop for renewable energy sources.	4		
1. Regulation for setting minimum energy performance in new buildings in residential buildings, buildings being renovated and buildings of all types other than residential ones.	3	1. Third NEEAP 2016-2018, adopted.	4
2. Regulation on energy performance certificates for new buildings and other buildings.	3	1. EE measures in 20 public buildings of central level.	4
3. Regulation on the methodology of minimal calculation of energy performance.	3	1. EE measures in public buildings of local level (Prishtina, Gjilan, Ferizaj and Gjakova).	4
4. Regulation on inspection system of heating and air conditioning equipment. *Only sub-legal acts are adapted; no implementation is enforced.	3	1. Number of authorizations for the construction of new RES capacities *Several authorizations for RES capacities have been issued.	4

LOI - Level of Implementation: 1 - Incomplete (The government did not address the reform or the government has taken only initial steps to implement the reform); **2 - In progress** (The government is implementing the reform with some initial results); **3 - Partially** complete (Implementation of the reform is advanced and supported by results); **4 - Complete** (The reform is fully implemented).

As seen from the table, all of the foreseen measures have been taken. Most of the measures planned one-step action (like adoption of sub-legal acts), and lack further implementation monitoring indicators. Even though, it may appear all "roses" on the table, many of the measures are not being implemented properly, fully or at all.

The main reform measures require adopting the Law on Energy Efficiency (1.1, see table 1.) and the Energy Strategy 2017-2026 (2.1.), meaning setting the legislative and strategic framework for energy efficiency and renewable development.

The GoK executed both measures but failed to enforce in situ implementation. The law on energy efficiency[17] was adopted in 2018, but it is inapplicable due to the lack of secondary legislation. For two years in a row, the GoK has failed to adopt the already drafted "Administrative Instructions"[18] deriving from the law on energy efficiency. It is arguable if the GoK will need to amend the law on energy efficiency, since it partially transposes latest EU Directives.[19]

The creation of a specific energy efficiency fund was required much earlier in the process. The law on energy efficiency sets legislative framework for Kosovo Energy Efficiency Fund (KEEF) establishment, creating mechanisms for financing energy efficiency measures. The operationalization of KEEF this year is assessed as a progress, yet the fund needs to start implementing measures on the private sector.

Although the Energy Strategy 2017-2026 (2.1) was adopted in January 2018 and the Energy Strategy Implementation Program 2018-2020 (2.2) was adopted in July 2018, both are not being implemented fully. Securing energy supply within both documents relies on the construction of 'New Kosovo' TPP and the rehabilitation of TPP 'Kosovo B'. The cancellation of the first and the prolongation of the second create a need for an updated energy strategy. Based on the new situation, the general energy context and the review of energy efficiency and renewable targets, the new strategy should be upgraded to reflect such developments among other priorities. Fortunately, the GoK has already started the process of updating the energy strategy for the 2021-2030 (time) period.[20]

NPISAA 2017-2021 requires adoption of NREAP 2011-2020 (2.3). NREAP sets the target of 25% from renewable energy sources at the lowest possible cost. In 2016, Kosovo achieved a 24,6% share (part of calculation is a firewood biomass share of 18,9% for household heating[21]) of renewable energy in gross final energy consumption, just in line with its 25% 2020 target. In 2017, the renewable energy share was 23,6%, lower than in 2016. "A much smaller factor is that smaller electricity production by the larger hydropower stations was reported, due to worsened hydrological conditions".[22]

17. Law no. 06/ L-079 on Energy Efficiency. Official Gazette, Kosovo.
18. Interview with Avni Sfishta, Team Lead, Kosovo Energy Efficiency Project, GIZ Kosovo.
19. European Commission (2019). Kosovo Progress Report.
20. Interview with Besiana Qorraj, representative within Department of Energy, Ministry of Econ-omy and Environment.
21. According to EU regulations, use of wood biomass for household heating is considered energy generated from RES.
22. Ministry of Economic Development. Renewable Energy Progress Report of The Republic of Koso-vo 2016-2017 (2018).

Kosovo committed to transpose the respective EU energy performance of buildings directive. Following the adoption of the law on energy performance of buildings[23] in 2016,[24] after two years in December 2018, the GoK finally adopted the three technical regulations deriving from the law (1.5., 1.6., 1,7., 1,8.).

Even though Kosovo has successfully adopted the regulatory framework, its implementation is in stagnation. With the support of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbM, ex. MESP has successfully developed the national building typology for the res-idential sector and the National Registry Model-Database (NRD) for buildings. Unfortunately, even though the NRD is functional, not a single building is listed with an Energy Performance Certificate (EPC) within the database. The same regulation sets the legal framework for the licensing of energy auditors and assessors. There are no certified energy auditors and energy assessors in Kosovo[25]; thus, no EPCs are being issued. Consequently, the adopted legislation is not being implemented in full. Fortunately, MEE is currently in the middle of licensing process of 40-200 energy auditors and energy assessors.[26]

Additionally, Kosovo Energy Efficiency Agency (KEEA), as recommended by the European Commission (EC)[27] and EnCS, should functionalize the monitoring and verification platform. A complete functionalization and use of the ISBEM[28] software on the calculation of energy performance in buildings is still ongoing, as reported by KEEA.[29]

NPISAA 2017-2021 tackles the issues of 'One-Stop-Shop' for renewable energy sources (1.4.). After adoption of the regulation on 'One-Stop-Shop'[30], from 2018 an inter-institutional group is set to streamline and simplify the existing permitting and licensing procedures. However, ERO has been recommended by the EnCS to improve the *"Transparency and non-discrimination among renewable energy producers".*[31] Furthermore, the lack of efficient supervisory mechanisms has allowed some providers not to fully comply with contract conditions, leading to environmental and social issues. ERO has to set up a more straightforward and transparent 'One-Stop-Shop' procedure for issuing licenses.

Additionally, NPISAA requires continuous development of renewable energy source projects. However, the GoK should be carefully developing new hydropower plants and conducting concrete environmental impact assessments for each new project. ERO has failed on ensuring environmental standards in several renewable source projects. There is currently a state of play decision, where no new license for hydro power plants is being issued by ERO.

23. Law No. 05/L-101 on Energy Performance of Buildings. Official Gazette, Kosovo.
24. Ex. Ministry of Environment and Spatial Planning (MESP) supported by the Regional Energy Efficiency Programme (REEP).
25. Interview with Mrs. Arben Ajazi. Department of spatial planning, housing and construction, Ministry of Economy and Environment.
26. Interview with Mrs. Arsim Kuliqi, Chief Executive Officer of Kosovo Energy Efficiency Agency, Ministry of European Integration, Kosovo.
27. European Commission (2020). Kosovo Progress Report.
28. iSBEM is a free-cost proprietary software interface to the Simplified Building Energy Model (SBEM) which is designed for the purpose of indicating compliance with UK building regulations part L2a and L2b in England as regards carbon emissions from non-domestic buildings.
29.Interview with Mrs. Arsim Kuliqi, Chief Executive Officer of Kosovo Energy Efficiency Agency, Ministry of European Integration, Kosovo.
30. Regulation No. 05/2018 On One-Stop-Shop for Renewable Energy Sources. Official Gazette, Kosovo.
31. Energy Community Secretariat (2019). Annual Implementation Report.

Instead of taking an ad-hoc decision, the GoK should adopt a new sustainable strategy of developing renewable energy sources based on sources that Kosovo already possesses like solar radiation and wind.

4.1.2. NPISAA 2020-2024

Even in the new NPISAA, energy efficiency and renewable sources are not considered as a priority. The objectives set within the document are not ambitious at all and do not present concrete steps that would help to solve the problems that Kosovo faces in these sectors. Also, the effort that Kosovo has given regarding energy efficiency and renewable sources are minimal. This can be observed by the fact that most of the set objectives are expected to be fulfilled by donors and private investors. Putting the energy efficiency and renewable energy sources agenda in the hands of external partners creates uncertainty due to changes that might occur during the course.

Therefore, Kosovo must develop a series of objectives in NPISAA that not only put energy efficiency and renewable energy as a high priority, but also create a favorable environment that would boost their development within the public and private sectors.

Mid-term priorities of NPISAA 2020-2024 are: review of the 10-year Energy Strategy, adoption of National Energy and Climate Plan (NECP) 2021-2030, decommissioning of non-active TPP 'Kosovo A' parts, implementation of energy efficiency measures in households through Reliable Energy Landscape Project (RELP), and energetic infrastructure investments to reduce energy losses by the distribution system operator.

Related to renewables development, NPISAA 2020-2024 envisages the membership of ERO in ACER (Agency for the Cooperation of Energy Regulators), adoption of the concept-document on renewables targets and conduct cost-benefit analysis for improvement of central heating districts.

Once more, the need to adopt a new energy strategy is assessed as a high-priority for setting the overall structure of energy-generating future in Kosovo, within which new targets for energy efficiency and renewable are expected to be set. NPISAA 2020-2024 stresses the need of har-monization between the new renewable sources share targets with EU 2030 targets. Ministry of Energy and Environment (MEE), supported by the EC is in a process of conducting evaluation study of Kosovo energy efficiency and renewable source potentials, a study expected to be fi-nalized by the end of 2020.[32] In the meantime, the Energy Strategy 2017-2026 envisages 29.47% renewable energy shares (on voluntary basis), much more than NREAP 2011-2020 targets, a target the GoK also failed to achieve.

District heating systems appear as a priority within the NPISAA 2017-2021. Until now, the GoK achieved only to expand and improve the district heating systems in Prishtina and Gjakova. However, development of district heating systems in other cities systems is planned only through cost-benefit analysis. The action plan is missing concrete and rapid measures for building central heating throughout bigger Kosovo cities, considering the high number of households burning coal and wood for heating.[33]

32. Interview with Lendita Gashi, Energy and Transport, European Commission Liaison Office in Kosovo.
33. KAS for the first time has published "Energy Consumption in Households" for the year of 2015. As per type of heat resource about 70.35% of households use wood, 18.18% use electricity, 7.10% use coal, 4.02% use central or district heating, and 0.35% use other alternatives.
34. NECPs were introduced by the Regulation on the governance of the energy union and climate ac-tion (EU)2018/1999, agreed as part of the Clean energy for all Europeans package, adopted in 2019.

District heating development could highly impact both energy savings in households and increase thermal energy co-generation and have a positive environmental impact in Kosovo.

NPISAA 2017-2021 envisaged energy savings measures only in a very small number of public buildings. NPISAA 2020-2022 envisaged increase of energy savings through taking measures in 1.200 homes and in 10 multi-storey buildings, a project to be implemented by Reliable Energy Landscape Project (RELP) - Millennium Foundation Kosovo (MFK). These measures will be implemented for the first time in the private sector buildings. Once more, major investments on energy savings are reliable on donors' implementation and financing.

The GoK is in the process of preparing the Draft NECP[34] 2021-2030. Both the updated energy strategy and NECP have to be in harmony as they tackle the same improvement areas. Drafting of this document is still on the first phase, while the drafting process was prolonged due to COVID-19 pandemic.[35]

Short-term measures anticipated to be finished by the end of 2020 cover: adopting sub-legal acts deriving from law on energy efficiency (purchase products with high level of energy performance, minimum criteria for energy audits and templates for annual progress reports of NEEAP), adaptation of NEEAP 2019-2021 and disbursed KEEF.

Consequently, the GoK must adopt these sub-legal acts as soon as possible, because it will help in boosting and promoting the purchase of efficient products and services and start of energy auditing.

NPISAA 2020-2024 has failed to address the real obstacles that exist in energy saving and renewable source development. Concrete priorities should have been set in the direction of: 'One-Stop-Shop', development of energy audit services and energy auditors, favorable market scheme based for renewables and functionalization of monitoring and verification platform. The solution of these measures not only would improve drastically the energy saving and renewable source sector, moreover, it would help to create a favorable framework to invest and develop these sectors.

Undoubtedly, the GoK needs to invest in the enhancement and improvement of the electrical grid is crucial to boost Kosovo's energy sector development. However, apart from priorities in energetic infrastructure, the government must also put as a high priority the creation of an infrastructure that facilitates the implementation of projects that are oriented toward sustainable and renewable sources.

35. Interview with Avni Sfishta, Team Lead, Kosovo Energy Efficiency Project, GIZ Kosovo.

5. European Reform Agenda

European Reform Agenda (ERA) is structured based on three areas: I) good governance and the rule of law, II) competitiveness and investment climate, and III) education and employment. Its two pillars serve as a medium-term policy framework and a short-term implementation framework that describes actions, indicators, deadlines and responsible entities for each focus.

The Competitiveness and Investment Climate pillar contains seven priorities and 78 actions. The ones related to EE and RES are emphasized under priorities no. 2.5, and no.2.7 (see table 2). The GoK prepares regular reports on ERA implementation. The last report, prepared by ex. MEI covers the implementation period of 2016-2018 as per the action plan.[36] The Report states that from 13 actions, 10 are fully implemented and 3 are in progress. Up to date, the additional 3 actions have also been successfully implemented. This paper assessed the ERA action plan via a tabular overview of status of implementation and level of implementation of each activity/indicator (see Table 2. ERA implementation matrix).

Activities under Priority no. 2.5.

Activity no. **2.5.5.** *Publication of energy statistics shortened and annual energy efficiency statistics produced in line with international standards under priority no.* **2.5** *Developing a number of sectorial key statistics to policy making in the area of national energy statistics* has been implemented. The Kosovo Agency of Statistics (KAS) has made significant progress in providing energy statistics. Since 2014, it has harmonized its energy statistics publications with Eurostat's requirements. Concerning energy efficiency statistics, KAS started their publication in 2018 for the referring period 2011-2016 on the household and industry sectors. The publication of the services and transport sectors will be available in 2020.

Activities under Priority no. 2.7.

Priority no. **2.7.** *Enhancing energy security and adopting a comprehensive energy strategy for the period 2017-2026* are related to TPP 'Kosovo B' ownership, deadline for TPP 'Kosovo A' decommissioning, update NREAP, and assessment of financing mechanism for EE in public and private sector.

No. 2.7.1. *Adoption of the energy strategy 2016-2025.* As stated on the previous section, in 2018, after a two-year delay the Energy Strategy 2017-2026 was adopted, creating a multi-tier effect of delaying implementing measures. The rationale behind a new energy strategy, as explained in the previous section, lies on the up to date energy state of Kosovo.

Regarding activity **no.a.1.** Decision TPP 'Kosovo B' modalities has been successfully implemented in 2017. Consequently, TPP 'Kosovo B' will be under public ownership (at least 51% of shares) for the next 10 years, which creates a sustainable investment status for the GoK.

36. Final Report on Implementation of the European Reform Agenda ERA 2016 – 2018. Prishtina, 2018. http://mei-ks.net/repository/docs/raporti_mbi_zbatimin_e_era_1_11_2016-_30_11_2018_final_eng.PDF

Table 2. ERA implementation matrix

No.	Priorities	Action and Indicators	Status of Implementations Yes/No	LOI 4,3,2,1
2.5	**Developing a number of sectoral key statistics to policy making in the area of national energy statistics**	**2.5.5.** Publication of energy statistics shortened and annual energy efficiency statistics produced in line with international standards.	Yes	4
2.7	**Enhancing energy security and adopting a comprehensive energy strategy for the period 2017-2026** a) Decide on the ownership modalities for Kosovo B and on the new investments in power generation, and decommissioning of Kosovo A b) Adopt an updated Action Plan on renewables c) Assessment of the best modalities for the establishment of the mechanism for the financing of energy efficiency and d) Environmental measures in the public and residential sectors, and promote the full use of the existing initiatives like the Regional Efficiency Programme	1. Adopt a comprehensive energy strategy for the period 2016-2025	Yes	4
		a.1. Decision on the ownership modalities of Kosovo B	Yes	3
		a.2. New Investments in Power generation (all sources)	Yes	2
		a.3. Deadline for the decommissioning of Kosovo A to be fixed.	No	2
		b.1. Second report on the progress of implementation of NREAP	Yes	3
		b.2. Adoption of the updated NREAP, including appropriate measures to ensure Kosovo is reaching the 25% renewable energy targets in 2020	Yes	4
		c.1. TAIEX mission to assess modalities of a financing mechanism for energy efficiency and environment measures	Yes	4
		c.2. Assessment and decision taken on the modalities of a financing mechanism to support investments in energy efficiency and environment	Yes	3
		c.3. Adoption of the NEEAP 2016-2018.	Yes	4
		c.4. Adoption of the law on Energy Performance of Buildings.	Yes	4
		d.1. Adoption of the secondary legislation transposing the Directive 2010/31/EU **d.1.a.** Regulation on setting the minimum energy performance in new residential buildings, buildings under renovation and other types of housing buildings **d.1.b.** Regulation on the energy performance certificate for new buildings and other buildings **d.1.c.** Regulation on inspection of heating system and air conditioning equipment	Yes	4

No.a.2. New Investments in Power generation (all sources), meaning securing investments on electricity generation from diverse sources. Kosovo has significant potential to integrate RES into its energy generation system. While some investments within the power transmission system occurred, no significant investments in power generation were secured. IPA 2014 programme & IPA 2018 programme focus more on financial support of environmental rehabilitation of both TPPs. Up to date, the installed electricity generation capacity from renewable sources is 154 MW,[37] i.e. only 10.7%[38] of the total generation capacity.

The GoK in various strategies and plans included the hydro power plant of Zhur with 295 MW installed power. Despite repeated planning, it remained an "old" project within strategies. It never got a chance to be developed due to unrealistic calculated hydro power, major environmental concerns and political disputes (river diversion) with Albania. Civil society has requested that the old project of HPP Zhur be removed from all plans and strategy papers because that project, besides having major problems in itself both in terms of economic feasibility and political rationality, the amount of electricity generated as well does not justify the investment.[39]

No.a.3. Deadline for the decommissioning of TPP 'Kosovo A', has been an unsolved issue for Kosovo government for years. 'Kosovo A' decommissioning has been prolonged, even though Kosovo government committed to comply with its decommissioning in its relations with the EU. The set deadline 2017 was set based on the logic of 'the sooner Kosovo develops new generation capacities, the sooner it will be able to decommission TPP 'Kosovo A'. Therefore, since Kosovo government did not develop additional generation capacities, the decommissioning of the TPP 'Kosovo A was postponed once more. The new set deadline for decommissioning of the TPP 'Kosovo A 'is end-year 2023 (Energy Strategy 2017-2026).

The second report on the progress of implementation of the NREAP as required by **b.1.**, was prepared in the beginning of 2017. **b.2.** Adoption of the updated NREAP, including appropriate measures to ensure Kosovo is reaching the 25% renewable energy targets in 2020. After a two-year delay, the GoK in 2020 achieved to adopt updated version of NREAP 2018-2020. While NREAP 2011-2020 aimed at higher share (29.47%) of renewable sources on voluntary basis, the updated version of NREAP lowers achievement expectations down to the mandatory target of 25% of renewable source shares. Unfortunately, as stated previously, the GoK did not achieve any of the targets.

c.1. TAIEX's mission to assess modalities of a financing mechanism for energy efficiency and environment measures carried out in 2017. One of the recommendations was for the GoK to switch from the "Feed-in tariff" to a more competitive supporting scheme. A support scheme based on premiums paid on top of the electricity price rather than administrative feed-in tariffs, remains to be introduced. As reported from ERO, the MEE is supported by EBRD to develop competitive supporting scheme most suitable for Kosovo.[40]

37. Source from Department of Energy, Ministry of Economy and Environment. Acquired on July, 2020.
38. Biomass used for heating is not calculated, due to the interest to represent only the installed generation capacity from RES in proportion to the total installed generation capacity in Kosovo. Source of data on installed capacity: Renewable Energy Sources, Efficiency and Cogeneration Division.
39. Balkan Green Foundation, Institute for Development Policy (March 2019), "Hydropower plants in Kosovo, The power and their real potential".
40. Interview with Fidan Isufi, Tariff Structure Analyst at Energy Regulatory Office. Kosovo

c.3. The NEEAP 2016-2018 adopted in 2017, sets an energy efficiency target at 9%. Unfortunately, by 2019, a target progress of 4.1% (92 ktoe)[41] EE savings of final consumption energy was registered. The final draft NEEAP 2019-2021 is pending. Consequently, with adoption of NEEAP 2019–2021, GoK has committed itself for the next period to start increasing the number of Nearly Zero Energy Buildings in public buildings by 2021. As such, this commitment represents a huge milestone towards energy savings; however such commitment requires much more technical and financial capacity which the GoK lacks.

41. European Commission (2019). Kosovo Progress Report.

Unfortunately, the GoK contrary to its neighboring countries, still did not achieve to start promotion of initiatives like the Regional Energy Efficiency Programme (REEP).

The review of implementation of ERA resulted that out of 15 activities/indicators, only two **(a.2. and a.3.)** are not being implemented. ERA activities/indicators have been implemented at 86.6%. As per the level of implementation, the priority results to be 65% complete 20% partially complete and 13.5% in progress.

Looking at implementation numbers, one can get the feeling that ERA has been successfully implemented and that it had a tremendous impact in the "era" of reforms for increasing energy efficiency and diversifying renewable energy sources. Going beyond the numbers, this paper has reviewed each activity output separately, and has reviewed the outcomes of ERA as a whole.

Unfortunately, ERA as a whole reform document did not have a major impact in increasing energy efficiency and diversifying renewable energy sources reforms. Thus, the GoK failed to implement two of the most important planned activities, related to securing energy supply and decommissioning TPP 'Kosovo A'.

The biggest challenge with ERA not having a huge positive impact is that most of set priorities are outdated in the new "stage" of energy that the GoK finds itself. For example: Indicator **c.4.** when assessed on reports is being evaluated as implemented. Although the GoK did successfully finish the TAIEX mission, it failed to implement the most important recommendation by the experts' mission to switch from feed-in tariffs to other support scheme to support renewable generators'. Having a complicated and prolonged licensing procedure,[42] short duration of feed-in tariffs and no auctions, Kosovo cannot compete with its neighboring countries in attracting big investors for renewable source generation. Therefore, indicator output may be positive but the outcome fails to be positive.

Second challenge of ERA is that the set priorities and respective activities/indicators have a huge difference in the importance and potential of impact, yet they are evaluated as same. Additionally, indicators are not specified in order to have a huge positive outcome, but just a positive output. Therefore, the GoK, while setting new priorities, should evaluate priorities also by the level of impact and specify indicators in a more efficient way.

42. n ERO, there are applications waiting for license for more than two year.

6. European Reform Programmes

The ERPs perform a vital function in the EU candidate countries' budgetary strategies by containing medium-term macroeconomic projections for the next three years. Each reform measure envisages the: I) activities to be implemented each year, II) cost estimates and budget, and III) expected outcomes.

The Government of Kosovo drafted and approved five ERPs. ERP 2018-2020, ERP 2019-2021, and ERP 2020-2022 have been analyzed for this paper. Each is comprised of twenty structural reform measures, two dedicated to the Energy sector, three altogether.

Energy efficiency and renewable energy sources are part of the ERPs activities, but the Kosovo government has failed to complete all of them on time. Besides, many of the activities scheduled are too small of a gesture compared to Kosovo's energy sector problem. If the GoK continues with the same pace of rehabilitating its own buildings, approximately 20-30 buildings per year, it will need at least 30 to finish all buildings.[43]

Unreliable electricity supply is affecting the nation's economic growth by distorting business activity. For Kosovo to stabilize its electricity supply and enhance competition, it must unleash its potential for renewable generation capacities, change market rules for renewable investments, and design tariffs that reflect the actual cost of energy.[44]

Investments in renewable energy sources could turn Kosovo from an unreliable and toxic society, to a place for sustainable living and business: after all, a healthy society means a productive society.[45]

Please see the table of implementation matrix of all activities planned by ERP 2018- 2020, ERO 2019-2021 and ERP 2020-2022.

43. "GoK owns approximately 1000 buildings throughout Kosovo." Interview with Mrs. Arsim Kuliqi, Chief Executive Officer of Kosovo Energy Efficiency Agency, Ministry of European Integration, Kosovo.
44. Since 2017, the yearly economic policy dialogues have advised Kosovo to create a framework that explicitly supports the ener-gy sector.
45. This fact sheet focuses on employment in the renewable energy and energy efficiency sectors in the United States and world-wide. According to the 2019 U.S. Energy Employment Report (USEER), 611,000 people worked in zero-emission technology industries, including renewables and nuclear in the United States. The International Renewable Energy Agency (IRENA) recorded even higher renewable energy employment in the United States at 855,000 direct and indirect jobs in 2018. Jobs in energy efficiency experienced significant growth—the sector now employs more than 3 million people in the United States. IRENA reports that, globally, the renewable energy sector employed 11 million people in 2018, 700,000 more than in 2017.) citation from link: https://www.eesi.org/papers/view/fact-sheet-jobs-in-renewable-energy-energy-efficiency-and-resilience-2019

Table 3. ERPs implementation Matrix.

ERP activities timeline					
Reform Measures	**2018- 2020**		**2019- 2020**		**2020- 2022**
	Activities	**LOI**	**Activiies**	**LOI**	**Planned activitis**
	2018		**2019**		**2020**
(ERP 2018-2020 & ERP 2019 - 2021 & ERP 2020-2022) **#1 Reducing energy consumption through energy efficiency measures.**	1) Approval of the Law on energy efficiency 2) Modalities of the financing mechanism to support investments in energy efficiency within the law; 3) Implementation of energy efficiency measures in 60 public buildings; 4) Feasibility study for district heating systems for Drenas, Obiliq, Prizren, Peja, Ferizaj, Gjilan, Mitrovica and Zvecan; 5) Expansion of the Co-generation Network for the Municipality of Prishtina; 6) Construction of central heating plant in Gjakova with biomass energy source (EC).	4 4 4 1 2 1	1) Implement EE measures in 50 public buildings and commence implementation in 30 other public buildings 2) Implement EE measures in households in 600 houses, 5 multi-storey buildings and installing heat consumption meters and thermostatic valves for about 3000 households in Prishtina (RELP) 3) Grants allocation for Efficiency Measures for Women's Businesses (RELP) 4) Construction of district heating in Gjakova with biomass energy sources (EC). 5) Functionalizing the KEEF. 6) Implement investment plan for strengthening, network expansion and medium voltage projects to reduce technical and commercial losses.	3 2 2 3 3 4	1) Implement EE measures in 50 public buildings 2) Implement EE measures in 1200 houses, and 10 multi-story buildings (RELP) 3) Install meters for measuring heat consumption and thermostatic valves in 4500 households in Prishtina 4) Grants allocation for EE measures for women's businesses (RELP) 5) Implement capital investment plans to strengthen and reduce technical and commercial losses 6) Implement EE measures in 12 public buildings in 4 municipalities.
	2019		**2020**		**2021**
	1) Implement EE measures in 61 public building; 2) Development of the technical design for the implementation of the district heating systems for Drenas, Kastriot, Prizren, Peja, Ferizaj, Gjilan, Mitrovica and Zvecan.	4 1	1) Implementation of EE measures in about 25 public buildings (MED/ KAEE). 2) Implement EE measures in households) in 1200 homes, 10 multi-storey buildings and installing heat consumption meters and thermostatic valves for about 4500 households in Prishtina (MFK); 3) Grants allocation for Efficiency Measures for Women's Businesses (MFK); 4) Establishment of the Board of directors and adoption of both IR packages for the EE fund. 5) Implementation of investment plan for strengthening, network expansion and medium voltage projects to reduce technical and commercial losses (KESCO).	4 2 4 4	1) Implement EE measures in 15 public buildings 2) Implement EE measures in households within RELP in 1200 homes, and in 10 multi-storey buildings and installing meters for measuring heat consumption and thermostatic valves for about 4500 households in Prishtina 3) Grants allocation for EE measures for Women Businesses within RELP (MFK); 4) Implement capital investment plan for strengthening, network and reduce technical and commercial losses.

ERP activities timeline					
Reform Measures	**2018- 2020**		**2019- 2020**		**2020- 2022**
	Activities	**LOI**	**Activiies**	**LOI**	**Planned activitis**
	2020		**2021**		**2022**
	1) Energy Implementation of energy efficiency measures in 52 public buildings 2) Implementation of district heating systems for Drenas, Kastriot, Prizren, Peja, Ferizaj, Gjilan, Mitrovica and Zvecan.	4 1	1) Implement EE measures in households in 1200 homes, and in 10 multi-storey buildings and installing heat consumption metering and thermostatic valves for about 4500 households in Prishtina (MFK). 2) Grants allocation for Efficiency Measures for Women's Businesses (MFK). 3) Implementation of investment plan for strengthening, network expansion and medium voltage projects to reduce technical and commercial losses (KESCO).	2 3 3	1) Implement capital investment plan for strengthening, network expansion and reduce technical and commercial losses (KEDS). 2) Completion of the feasibility study and cost-benefit analysis for the construction of central heating districts.
	2018		**2019**		**2020**
(ERP 2018-2020 & ERP 2019- 2021) **#2 Further development of energy generation capacities** **(ERP 2020-2022)** **#2 Increasing diversity of energy sources**	1) Development of TPP Kosova e Re project. 2) Implementation of three projects of solar power plants with a total capacity of 9 MW. 3) Implementation of five small hydro-power projects with a total installed capacity of 22.1 MW, private investment.	4 1	1) Commencement of construction of TPP Kosova e Re 2) Implementation of fourteen new projects of small HPPs with total installed capacity of 61.8 MW 3) Implementation of two new wind energy projects with a total installed capacity of 32.4 MW 4) Implementation of two solar Energy projects with total capacity of 3MW and 0.4MW total.	4 2 4 4	1) Amending secondary legislation on support for renewable projects by applying competitive bidding/auctions. 2) Reform of regulatory framework supporting electric power generation by self-consumption generators. 3) Implement four new projects from small hydro power plants with total installed capacity of 15.60 MW. 4) Implement three new wind energy projects with total installed capacity of 105 MW. 5)Implementation of two new photovoltaic panel projects with a capacity of 3.4 MW. 6) 200 professional internships for women in energy sector. 7) Preparation of the technical documentation for development of a master plan for natural gas distribution and supply.

ERP activities timeline					
Reform Measures	**2018- 2020**		**2019- 2020**		**2020- 2022**
	Activities	**LOI**	**Activiies**	**LOI**	**Planned activitis**
	2019		**2020**		**2021**
(ERP 2018-2020 & ERP 2019- 2021) #2 Further development of energy generation capacities **(ERP 2020-2022) #2 Increasing diversity of energy sources**	1) Development of TPP Kosova e Re project. 2) Implementation of 14 new small hydropower plants projects with total installed capacity of 61.8 MW, private investment. 3) Implementation of two new wind energy projects with a total installed capacity of 32.4 MW, private investment.	2 3 4	1) Continuation of physical construction of the TPP Kosova e Re. 2) Implement 14 new projects from small HPPs with total installed capacity of 37.86 MW. 3) Implementation 3 new wind energy projects with total installed capacity of 105 MW. 4) Drafting of the NECP.	1 3 4 2	1) Draft the Gas Master Plan for distribution and supply of natural gas. 2) Implement eight new projects (SHPP) with installed capacity of 30.58MW. 3) Implement one new wind energy project with installed capacity of 11MW. 4) Implement three photovol-taic panel pro-jects with a capacity of 10 MW.
	2020		**2021**		**2022**
	1) Continuation of the con-struction of "Kosova e Re" Power Plant; 2) Implementation of fourteen new projects from small hydro power plants with total installed capacity of 37.86 MW, private investment; 3) Implementation of three new wind energy projects with total installed capacity of 105 MW, private invest-ments.	1 3 3	1) Continuation of physical construction of the TPP Kosova e Re.	1	1) Implement three new projects from small hydro power plants with a total installed capacity of 11.3 MW 2) Implement three new photovoltaic panel projects with a capacity of 10 MW

LOI - Level of Implementation. 1 - Incomplete (The government did not address the reform or the government has taken only initial steps to imple-ment the reform); **2 - In progress** (The government is implementing the reform with some initial results); **3 - Partially complete** (Implementation of the reform is advanced and supported by results); **4 - Complete** (The reform is fully implemented).

Measure Number One:
Reducing Energy Consumption Through Energy Efficiency Measures

Measure Number One: Reducing Energy Consumption Through energy efficiency measures is part of ERP 2018-2020 & ERP 2019-2021 & ERP 2020-2022.

In 2014, the GoK drafted the Law for Energy Efficiency Measures, while in 2018, the Law was approved. The Law does not specify institutional responsibility and has failed to adopt the sub-legal acts - blocking energy efficiency measures' implementation and clashing the Law with EU directives.

The 2019 and 2020 energy efficiency activities planned for the household sector are dependent on external funding because the government did not allocate budgetary sources. This is very concerning since financing from outside resources makes accountability unclear. For example, the MFK committed to implement energy efficiency measures in 1.200 homes, ten multi-storey buildings, and install heating consumption meters in 4.500 households in Prishtina; however, none of them have been implemented thus far. The MFK and TERMOKOS have signed a memorandum of understanding, the commission has not yet taken place, and the project's completion is foreseen for September 2021. This project is still awaiting implementation.

In 2019 the KEEF was functionalized, and it became operational in 2020. The purpose of the KEEF is to provide financial resources for municipalities to implement energy efficiency measures in thirty buildings per year (or twenty years to implement energy efficiency measures in all of Kosovo's state-owned buildings). This fund is progressive, but it has failed to incorporate energy's biggest consumer: the private sector. By failing to subsidize funding for energy efficiency measures in the private sector, Kosovo increases its losses in the long run, both in the energy and business sectors.

Lack of proper planning is blocking the implementation of many energy efficiency measures. In 2019, eight municipalities were supposed to receive district heating but failed execution since the feasibility study was planned for 2020, making it impossible to execute the first without realizing the last.

The GoK must be more delicate when planning its activities to ensure that they follow a proper timeline: Laws without sub-legal acts are useless and only show the young state's instability.

Measure Number Two:
Further Development of Energy Generation Capacities

Measure Number Two: Further Development of Energy Generation Capacities is part of ERP 2018-2020 & ERP 2019- 2021.

Despite numerous criticisms towards the GoK, construction of 'New Kosovo' TPP remained main activity for the years 2018 and 2019, but not for 2020. In times when the whole world is trying to cut down CO2 emissions, the GoK moves on with a project based on burning coal. Fortunately, Contour Global and the WB have dropped the project. Criticism came from both - the EU and civil society and citizens, recognizing 'New Kosovo' TPP as environmentally and financially risky. According to EC 2020 Kosovo Report *"Several aspects of the project, including its potential impact on public finances, electricity prices for consumers, biodiversity, climate change and the environment, as well as its compatibility with state aid rules, have raised questions".*[46] Some scientific studies have criticized 'New Kosovo' TPP for its negative impact on water usage and on settlements above mining areas.[47] According to civil society, *"the entire process was characterized by blatant irregularities, frequent changes, lack of transparency and consultations with the public".*[48]

Regarding renewable energy sources, all of the activities are private investments dependent on the feed-in tariffs scheme. Progress has ensued in solar and wind projects: during 2018-2020, more than 10 MW of photovoltaic have started the process, while another 20 MW are awaiting implementation. Kitka wind project, with a capacity of 32.4 MW started the operation in 2018, while the project in Bajgora, with 105 MW capacity is under construction and expected to begin operating by 2021.

However, many other projects are waiting for license from ERO, and since the "Feed-in tariff" supporting scheme is limited for new renewable source generators, many other projects failed to be implemented in the very beginning.

46. European Commission (2020). Kosovo Progress Report.
47. Lappe-Osthegea, T.; Andreasb, J. (2017). Energy justice and the legacy of conflict: Assessing the Kosovo C thermal power plant project. Energy Policy 2017
48. GAP Institute (2018). The Impact of TPP "Kosova e Re" in Electricity Tariffs.

Measure Number Two (ERP 2020-2022)
Increasing Diversity of Energy Sources

Measure Number Two: Increasing Diversity of Energy Sources is only part of ERP 2020-2022.

ERP 2020-2022 and NPISAA 2020-2024 include energy diversification including natural gas. The gas master-plan for the distribution and supply of natural gas shows that the GoK plans to use gasification as a mid-term infrastructure project and transition from coal to RES. The ERO and MED, now MEE, supported by MCC Compact Project, are working on establishing a legal and infrastructural framework for the development of a distribution network for gasification suitable for compressed natural gas (CNG) and liquefied natural gas (LPG). The MCC Compact project is supporting the GoK in: (i) preparing a technical prefeasibility study to facilitate selection of specific capacity and technology types of gas infrastructure; and (ii) developing a gas sector institutional roadmap.[49]

The GoK must shift its old paradigm of coal and hydropower plants and recognize its potential to stabilise its energy sector and economy by investing in renewable energy sources specifically wind and solar. Prioritizing energy efficiency and renewable energy sources commitments, Kosovo will be investing in innovation and sustainable economic development, which will facilitate the EU integration process.

49. Implementation Agreement Between the Millennium Challenge Corporation and the Government of the Re-public of Kosovo Acting Through the Office of the Prime Minister for the Development and Facilitation of Implementation of a Millennium Challenge Compact. Dated October 18, 2019

7. Conclusions

This paper concludes that all documents recognize Kosovo's unsustainable energy system. Each document holds tolerable measures and activities that aim to improve the energy system by addressing the energy efficiency and renewable energy sources. However, these documents' measures and actions are repetitive due to the GoK's inability of fulfilling its commitments. Failure to adopt the energy efficiency law's sub-legal acts is an example of such systematic implementation incapability. Even when the legislation is in harmony with the EU acquis, Kosovo still has shortcomings to curb energy consumption.

Lack of comprehensive and sustainable energy strategy based on renewable sources and strong energy savings measures makes the GoK reliable on unsustainable sources for generating electricity. It was planned for the GoK to begin the process of abandoning old coal-based generators that have a negative environmental impact by securing energy supply on renewable sources. The GoK almost achieved the renewable share targets of 25%, but since most of the shares are based on firewood, this can be considered as a fake success.

Kosovo is fragile for easy-thought solutions; thus, investments in new coal power plants, hydropower plants, and biomass (firewood) usage are risky alternatives with long-lasting consequences. Exploiting natural resources will lead to a malignant future. After all, environmental protection is the basis for enduring stability.

All NPISAAs and ERAs measures relate to adoption of national strategies and action plans, lacking set monitoring mechanisms for their implementation. Additionally, both documents have very few concrete activities that can impact energy savings and renewable project development. Thus, a lack of effective monitoring mechanism and of inter-institutional coordination in priorities are major challenges of drafting and implementation of different NPISAAs and ERA.

NPISAAs and ERA do not address the real obstacles in renewable source development. Challenges like a lack of straightforward 'One-Stop-Shop' process and a lack of market-based support scheme for renewables makes their development low and non-transparent. Additionally, the GoK cannot compete with its neighboring countries in attracting big investors for renewable source generation. The biggest challenge with ERA not having a huge positive impact is that most of set priorities are outdated in the new "stage" of energy that the GoK finds itself in.

All ERPs put most of the measures and activities in the hands of external partners, creating risks and dependency both on policy and financial aspect. The degree of uncertainty is high due to changes that might occur during the course of external donors, financing institutions and investors priorities.

While the EU integration prospects should not be the primary motivation for the GoK to shift its energy system, it is through honouring the contractual agreements with the EU that will enable Kosovo to be able to progress itself to a higher standard of living.

8. Recommendations

The GoK shall implement its commitments under the ERA and the ERP. Furthermore, it should also adopt practices and use mechanisms that will improve inter-institutional cooperation. Its priorities have to be in-line with the EU acquis documents and related national strategies. The GoK must allocate funding and adequate human capacities for the implementation of priorities.

As an aspiring EU country, Kosovo must promote sustainable energy generation and renewable energy sources. To do so, Kosovo must conduct an in-depth analysis of its potential pathways towards a greener future, build a more robust legislative and infrastructural framework, and seriously invest in alternatives to polluting sources. Unfortunately, failing to allocate proper funding to implement measures will only stagnate Kosovo's process into the EU.

By creating mechanisms of implementation, monitoring and enforcement of laws that are in line with EU acquis, the GoK will ensure that it is serious about shifting towards a sustainable future.

As such, the GoK should take innovative and sustainable approaches when planning out the energy strategy program to achieve its renewable targets. Its renewable targets must take into account the environmental impact and guarantee a sustainable outcome by not investing in polluting sources.

By investing in cost-effective sources, the government's investment in renewables will significantly impact its inhabitants' economy and well-being. Measures in the ERP involve implementing different RES projects, which are certainly welcome. However, considering the declining costs of renewable energy, Kosovo could advance much further in its RES targets by adopting competitive selection processes for its renewable energy support. It is worth pointing out that the Energy Community is expected to adopt new renewable energy targets for 2030, in line with the EU's targets and this will require substantial additional efforts from Kosovo.

For Kosovo to meet its EU targets, it must shift its energy strategy to incorporate concrete measures to integrate renewables into all sectors (electricity, heating, cooling, transport, and water) and not just the electricity sector. The integration of renewable sources into different sectors contributes to energy de-carbonization and generates employment. Nevertheless, its current system of feed-in tariffs needs revision.

Kosovo shall further invest in the first fuel of energy - energy efficiency. The Law on energy efficiency and the EE Fund as a supporting mechanism should improve the situation. Thus, Kosovo needs to adopt energy efficiency incentives in the private and household sectors.

Kosovo must develop a series of objectives in NPISAA that put energy efficiency and renewable energy as a high priority. It must also create a favorable environment that would boost their development within the public and private sectors. The ERP and ERA identify reform priorities, but reforms and timely designs need substantial efforts.

Shifting its energy sector towards renewable energy and energy efficiency, Kosovo can become a leading example in the region regarding long-term stability. Not only will it decrease its air pollution levels, but it will open new doors for prosperity in its economy and speed up its process to join the EU.

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