

# POLICY BRIEFS

## KOSOVO



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# RENEWABLE ENERGY JUST TO MEET THE STANDARDS

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## FOREWORD

Renewable energy is the main part of this paper. But initially, a complete overview of the energy sector in Kosovo is provided. We shall see visions of the Government of Kosovo related to energy in next 5 or 10 years. Through these visions and applicable laws, we shall analyze the importance given to energy produced from renewable and non-polluting sources.

All countries of the EU have committed by 2020, to have the renewable energy participate with 20 percent in the final electricity supply. For many developing countries, this goal does not represent a problem, because they already have renewable energy production in excess of 20 percent. In the region, Albania stands best in terms of clean energy production, as over 90 percent of its electricity is generated by hydropower plants.

Kosovo is the country with the most underground wealth. Consequently, its underground wealth has so far determined its energy system, as over 90 percent of the energy is produced by burning lignite. The production of energy by burning lignite, is considered as one of the environmentally most polluting ways that is used for energy production. Currently, Kosova A, Kosova B, coal extraction and ash repository are among the biggest environment polluters, in particular of the part surrounding Prishtina. Environmental pollution is not done just because of burning of coal, but also because of the age of the plants and the working process during extraction.

The current state of the environment in Kosovo, especially in the outskirts of Prishtina leaves much to be desired. Old power plants and vehicles have made the capital area to be among the most polluted in the region. The Government of Kosovo is responsible for stopping the damage to the environment and in particular of the air. Along these lines, we shall see in the paper what the vision of the Government is to give priority to investments in renewable energy. Increasing renewable energy production would help to reduce the need for energy produced from the burning of lignite.

Creation of favorable conditions for investment is necessary to attract foreign and local capital to invest in this sector. Firstly, investment in production of energy from renewable sources will have an impact on economic development, because there cannot be economic development only with public investment.

Secondly, the creation of better conditions for investment in this field means better air and preservation of health. And lastly, Kosovo has been tasked with increased production of energy from renewable sources, as part of the EU approximation process.

## KOSOVO ENERGY REVIEW

Kosovo has biggest estimated reserves of lignite in Europe, stretching across two large basins, named "Kosova" and "Dukagjini". Geological reserves of lignite are estimated to be about 12.5 billion tons.<sup>1</sup> In the long term, lignite will remain the main fuel for electricity production in Kosovo.

Energy production in Kosovo is based mainly on coal. It is estimated that about 95 percent of the energy produced in Kosovo is from power plants that burn coal to make electricity. The electricity sector in Kosovo is dominated by KEK, it consists of two lignite mines in Bardh and Mirash, two lignite power plants, 'Kosova A' and 'Kosova B', with a total effective capacity of about 1100 MW. The burning of lignite to generate electricity, and the age of the plants has made the production of electricity in Kosovo to have great consequences for the environment.

Currently there are only about 5 percent of the energy produced in Kosovo which comes from renewable energy sources. Ujmani Hydropower is currently the only one that contributes to the electricity supply. In function are also some small hydro power plants (Lumbardhi, Radac, Dikanci and Burimi) that do not produce more than 10 megawatts of electricity per hour.

Current power plants do not meet EU criteria to continue to work because of their age. Kosovo A power plant has already exceeded its normal life expectancy. The plant was put into operation in the 60's. On the basis of the obligations that Kosovo has undertaken as a signatory of Treaty Energy, power plant "Kosova A" must be closed no later than December 31, 2018. Whereas, "Kosova B" should be revitalized in order to meet EU criteria in terms of pollution and emissions.

Kosovo Energy Strategy was usually done to adapt with daily politics. Even, in some cases more important

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<sup>1</sup> Energy Strategy 2009-2018.

points were set in the strategy without any parliamentary or public debate. Thus, when discussing the project "New Kosovo", the Government placed in the New Kosova strategy package also the mines of the power plant "Kosova B"<sup>2</sup>. Similar practice has continued in subsequent years.

Last year, the Government of Kosovo had drawn up the draft Energy Strategy to discuss it with civil society and stakeholders. The draft energy strategy did not introduce any figure, but only some general guidelines were set.<sup>3</sup> Exactly this lack of data and clear vision was the main criticism of civil society. Lack of data was seen as a government strategy to leave room to change settings and their size during the project. Currently, the Government of Kosovo is in the process of drafting the Energy Strategy, which can be passed to the Assembly for a vote before August. The strategy of the new government has not yet been made public.

## ENERGY VISION FOR KOSOVO

So far there have been several strategies for energy, in which the vision for the sector was explained. These strategies were almost never applied, since projects were often extended without being based on the strategy and so far none of the projects that have been initiated since 2006, were not implemented.<sup>4</sup>

Until recently, energy vision has been cemented, regarding the construction of new generating capacity, by focusing solely on energy produced by burning of coal. Initially, the Government Kosovo gave no importance to renewable energy. In 2009 Strategy, only one page was dedicated to Renewable Energy, from about 80 of them. The Government at that time had set a target that by 2016 about 7 percent of the energy produced will be from renewable energy sources<sup>5</sup>.

Much has changed after targets set by the EU for the signatories of the Treaty of Energy.

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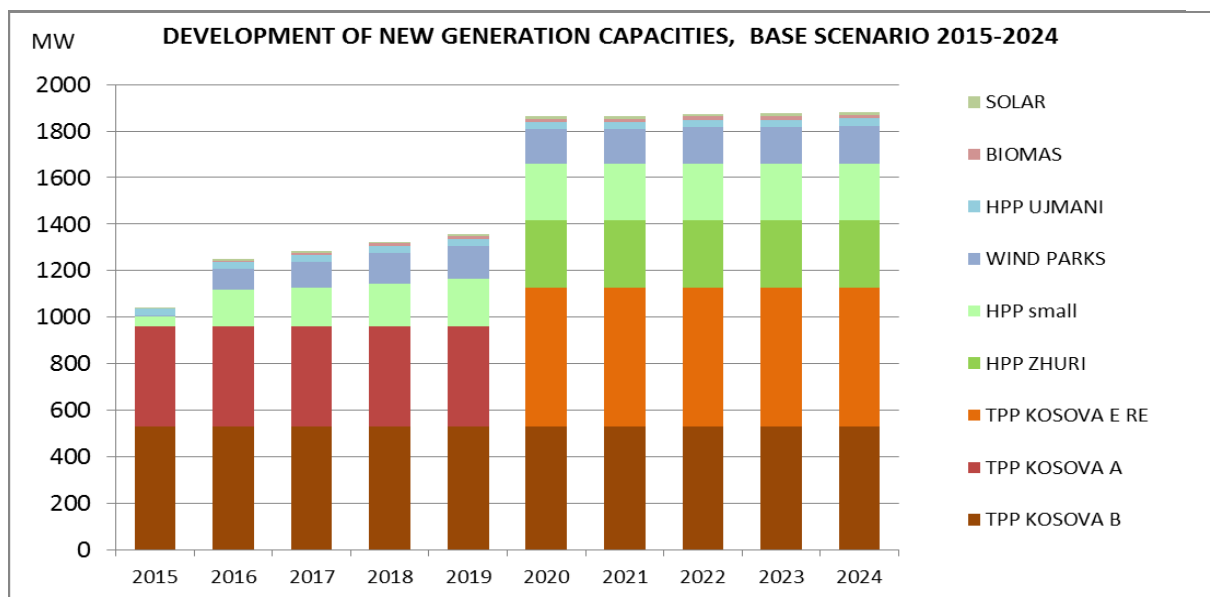
<sup>2</sup> *Ibid.*

<sup>3</sup> *Draft-strategy on Energy.*

<sup>4</sup> *In 2006 the idea for construction of coal power plant with capacity of 2100 megawatt was initiated. The same was not realized, but it has been changed and it is being tried to be brought in life this year but with the capacity of only 600 megawatt. In 2009 steps were made for construction of HPP in Zhur, but the same was not discussed in the public for 5 years now.*

<sup>5</sup> *Strategy on Energy of the Republic of Kosovo 2009-2018, pg. 76.*

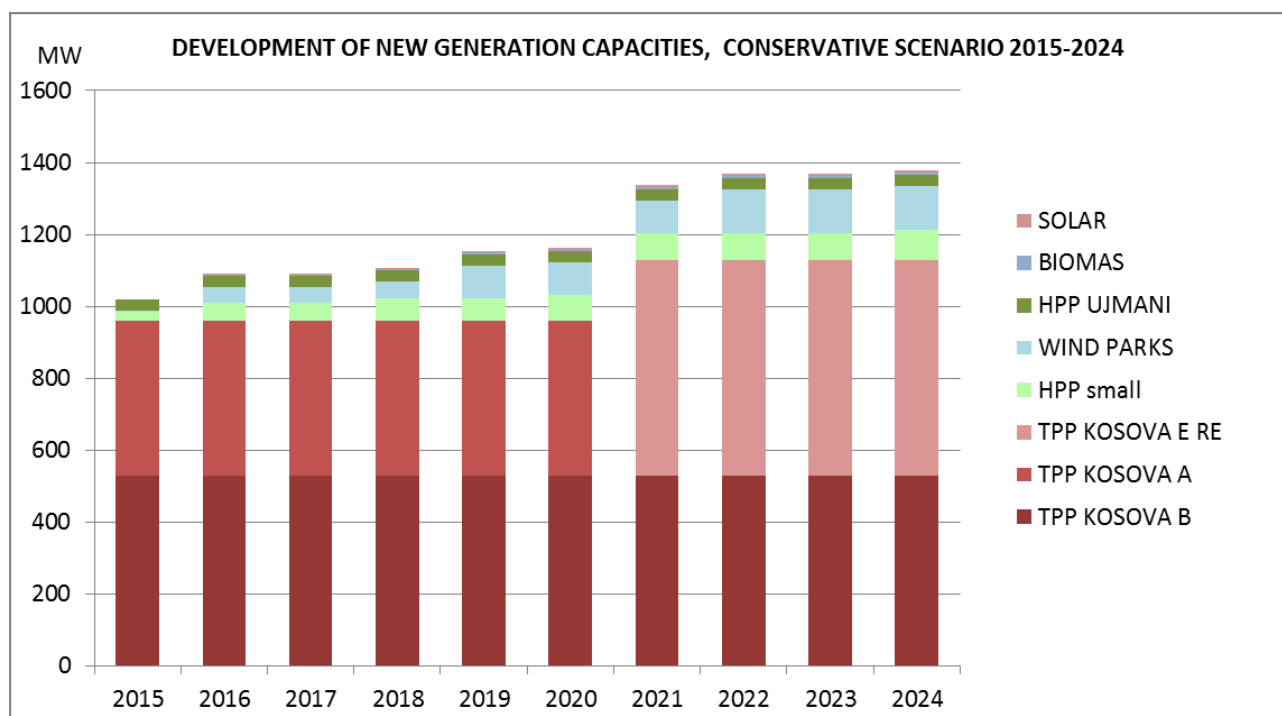
The Government of Kosovo has made plans, for the period of next 10 years, no longer to be importing electricity. A much greater importance is given to Renewable Energy, but again it is limited only to meet targets set by the Energy Community Secretariat in Vienna, respectively the European Commission. Since there is an absence of a new strategy and clear vision regarding energy, several documents adopted previously by the Government of Kosovo will be used, to provide some options on how much electricity production will be in 2024 and in which form it will be produced.



**Table 1-** Vision of the government with Zhuri. Source: Transmission Development Plan 2015-2024

The table compiled based on the Energy vision until 2014 foresees that until 2024, Kosovo will have has power capacity of 1800 MW. In fact, this scenario is very optimistic, because it has provided in itself that the energy produced from renewable energy sources will be about 800 megawatts. So far this vision is not working, because there are delays in investments in renewable energy and in particular there is a total halt

of the Zhur hydropower plant project.<sup>6</sup> Whereas the conservative scenario presented by the Kosovo institutions significantly reduces energy expected to be produced from renewable energy sources. Exactly, the Zhuri project was removed by the conservative vision.



**Table 2:** Scenario without Zhuri, Source: Transmission Development Plan 2015-2024

<sup>6</sup> Since 2010 no activity was held for the project of HPP in Zhur, based on the news published on the website of the Ministry of Economic Development.

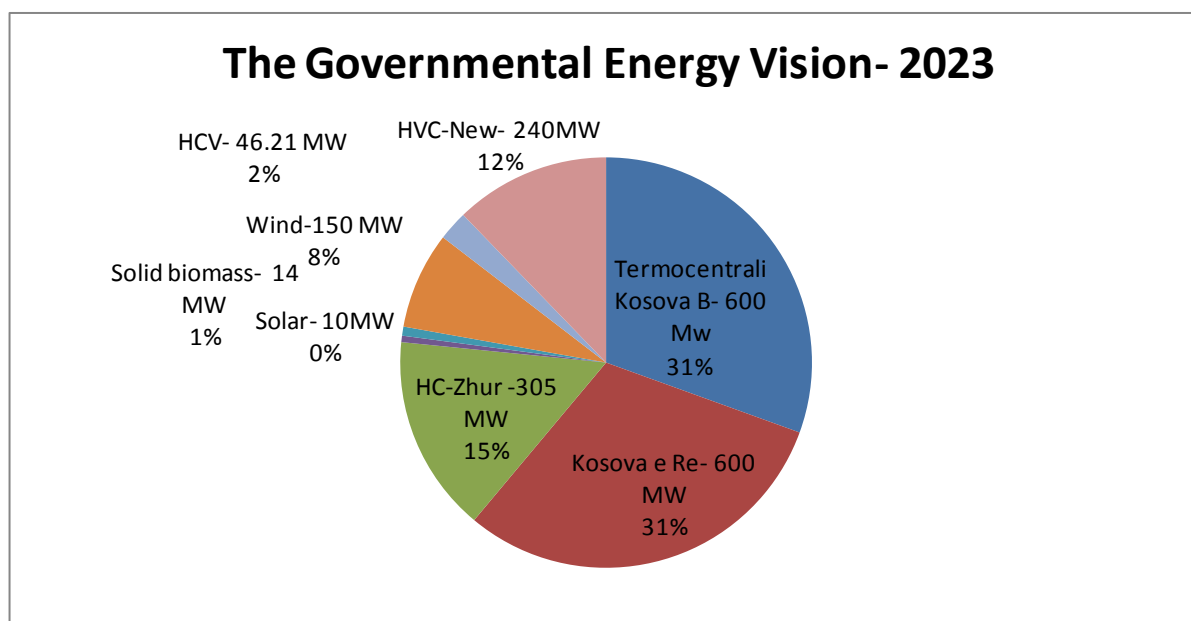
However, with the change of the Government and with the introduction of new requirements from the investors for Kosovo A power plant, the vision may already suffer major changes. So far the Government has not taken any decision as regards the idea to rebuild Kosova A7, to increase its capacity to 800 MW and to extend its life. Also, energy vision can also be affected by the Gas project, which is expected to pass through Albania and especially the Envedety company project, which has applied to the Government of Kosovo for a license for the production of synthetic oil from underground burning of coal.<sup>8</sup>

The main project in the energy sector remains the New Kosovo power plant (Kosovo C). Construction of this plant has been a priority since 2006, but it was canceled and amended several times so far. Project documents indicate that the new Kosovo plant is expected to be constructed near Obiliq and it is expected to have installed capacity of 600 MW.<sup>9</sup> However, the Kosovo government now targets by 2023, to build new generating capacities of 1200 megawatts.<sup>10</sup> So far not no explanation was given for such a drastic change in the vision of the Government

of Kosovo.

Government program still includes the Zhuri hydropower plant project, but the same is hardly feasible due to permits issued by the Government of Albania by which the same water is used for already initiated construction of hydropower plants on the side of Albania.

***Combined Energy Vision from the Governmental program and Administrative instruction for targets set for renewable energy production.<sup>11</sup>***



<sup>7</sup> Project proposal of the Bilfinger Company for the reconstruction of coal power plant Kosova A. In addition to extending its life, this company aims to increase its capacity to 815 megawatt. Investment on reconstruction is expected to be around 800 million euro.

<sup>8</sup> Koha Ditore, 30 April 2015

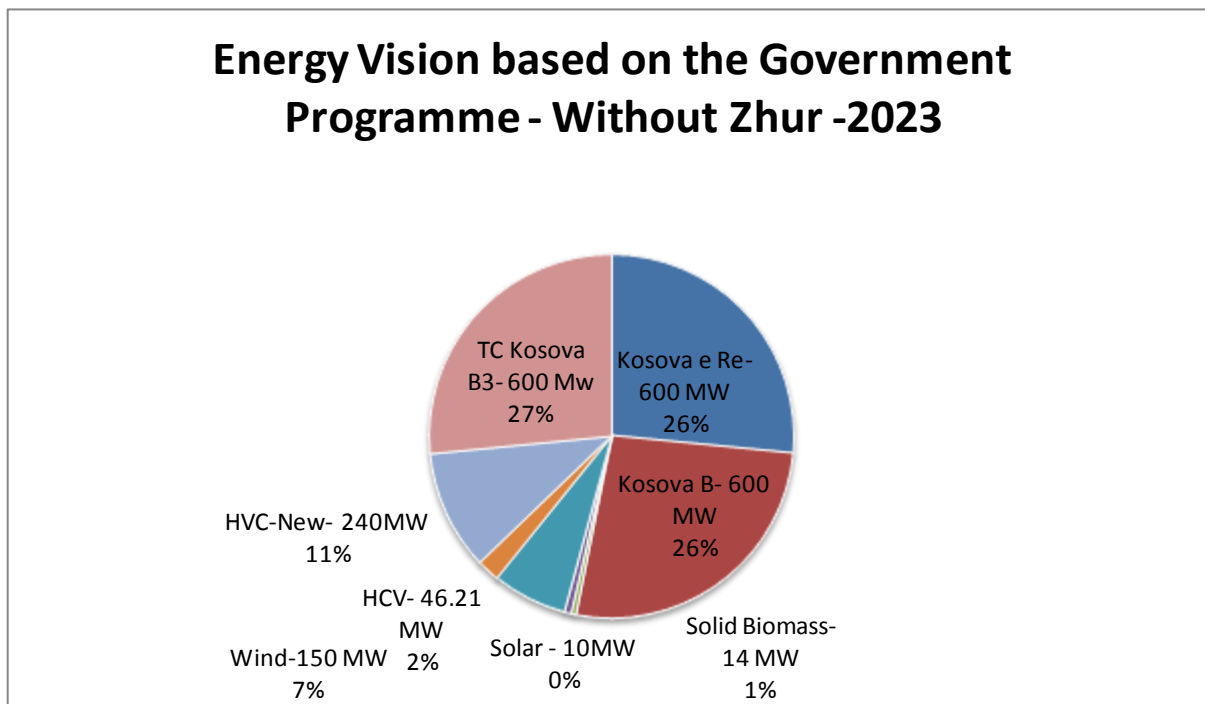
<sup>9</sup> See the project presentation on the website of the Ministry of Economic Development (<http://mzhe.rks-gov.net/?page=1,202>)

<sup>10</sup> Program of the Government 2015-2018

<sup>11</sup> Data for RES were taken from the Administrative Instruction for targets set for production of energy by RES. Whereas, data for coal power plants were taken from the Program of the Government

However, if we take in combination a conservative scenario, and not include the Zhuri hydropower plant, and include another new coal power plant, there is a big

duction capacities which are based on lignite amount to 1800 MW. This would mean that Kosovo will again obtain the majority of power supply from polluting sources such as coal.



difference, considering that many of the targets set for the production of renewable energy have not been realized and that there are delays in each of the pillars of energy production. The need for construction of new generating capacity has derived from the continued lack of electricity to cover the demand. Unstable supply of electricity has emerged as one of the main problems for businesses. Currently, the domestic production of electricity could go up to 110 megawatts, but considering the lack of stability of the production from Kosovo A, KEK usually operates only with two blocks of this unit and another one is left in reserve. Electricity demand exceeds domestic production in some parts of the year. This has caused for Kosovo to be directed towards the import of electricity. It is foreseen that there will be an increase of about 2.5 percent of energy demand in the next 7 years, which will result in the demand for electricity to be 1 thousand 500 megawatts in 2022.<sup>12</sup>

In addition, the energy vision of the Government for 2023 contains a major difference, as total energy pro-

#### POTENTIAL IN KOSOVO FOR PRODUCTION OF RENEWABLE ENERGY

There have been some studies on the potential in Kosovo for production of electricity from renewable energy sources such as: wind, water, sun or geothermal sources. There are different views in terms of renewable sources. Positions have become even more entrenched, considering that the debate for and against energy produced from coal has become a debate for and against renewable energy.

A part of civil society<sup>13</sup> opposes the New Kosovo project, providing alternatives for electricity production from renewable energy sources. On the other hand, the Government of Kosovo, providing arguments that the construction of new plant has no alternative, often came out with statements and studies by which it has

<sup>12</sup> Long term balance of the Energy in the Republic of Kosovo 2015-2024

<sup>13</sup> KOSID has presented some studies in which it ascertains that Kosovo has potential for producing renewable energy to substitute the current production of Kosovo A.

rejected and even more emphasized facts against renewable energy.

Bylaws that were adopted by the Ministry of Economic Development show that the maximum that Kosovo can achieve by 2020 is to produce about 765 megawatts of electricity from renewable energy sources.<sup>14</sup> The energy produced by the sun (photovoltaic) is planned to

by 2025 produce up to 1200 megawatts.<sup>16</sup> Currently, the Government of Kosovo intends to encourage investment in renewable energy only to meet EU Directives. As a signatory of the Energy Community, Kosovo is required to meet EU Directives. Among the Directives that Kosovo must meet as a signatory of the treaty is the Directive 2004/EG, 2006/32/EG and the recent directive 2012/27/EU.<sup>17</sup> Implementation of 20-20-

RES Electricity Capacity (MW)								
RES-EE [MW]	2013	2014	2015	2016	2017	2018	2019	2020
Photovoltaic		3	4	6	7	8	9	10
Solid biomass		2	4	6	8	10	12	14
Wind	1.35	31.35	70	90	110	130	140	150
Existing small hydro power plants	46.21	46.21	46.21	46.21	46.21	46.21	46.21	46.21
New small hydro power plants		60	140	150	160	180	200	240
HPP Zhur					305	305	305	305
Total capacity	47.56	142.56	264.21	298.21	636.21	679.21	712.21	765.21

start with 3 MW in 2014, to be followed by 4 or 6 in the subsequent two years. However, currently 4 megawatts from the sun are not produced, as only this year the Energy Regulatory Office approved the incentive fees for this type of energy. By 2020, the Government expects that the capacity of the energy produced by the sun will be 10 megawatts. Production from solid biomass is foreseen at 14 megawatts, while from the wind, planned are around 150 megawatt.

Various studies that were not done by the state institutions in Kosovo claim that capacity of energy generated from wind can go up to 288 megawatts.<sup>15</sup> Government of Kosovo has planned new capacities of HPP to reach 240 megawatts, whereas currently there are about 46.21 MW capacity of HPP that are in function. This forecast includes the Zhur HPP with capacity of 305 megawatts.

*Source: Administrative Instruction Nr.01-2013 for targets of renewable energy sources*

Generally it is said that renewable sources in Kosovo are limited and as such cannot guarantee a stable supply of electricity. This is a common excuse to oppose the concentration on the production of renewable energy. At least one study by a US university found that only from renewable energy sources Kosovo can

2018 policy is the common denominator of all these directives.

#### CURRENT PROJECTS FOR PRODUCTION OF RENEWABLE ENERGY

Energy Regulatory Office publishes bi-annually all applications for Authorization and admittance in the support scheme for benefiting incentive fees. So far, ERO has issued 6 final authorizations, of them: 3 for hydro-power, 2 for wind generators and 1 for photovoltaic panels. Only one of them is in operation and the same has not been able to gain the incentive fee, because it has not installed a new generator but a used one.<sup>19</sup> Operating is also the generator with photovoltaic panels in Klina, with a capacity of 102 Kw. Whereas, of businesses that have received Authorization, Hydro power plant in Deçan is under construction, which is expected to have a capacity of 24 MW, i.e., 1 unit of about 9 MW which is expected to be operational this year and 2 other units that are expected to enter into operation

<sup>16</sup> See: Daniel M. Kammen, Maryam Mozafari and Daniel Prull, "Sustainable Energy Options for Kosovo" [http://www.kosid.org/file/repository/Kammen\\_RAEL\\_Sustainable\\_Energy\\_Options\\_for\\_Kosovo\\_20\\_May\\_2012.pdf](http://www.kosid.org/file/repository/Kammen_RAEL_Sustainable_Energy_Options_for_Kosovo_20_May_2012.pdf)

<sup>17</sup> EC Directive on Efficient Energy (2012/27/EU), Guidelines for robust implementation,

<http://eedguidebook.energycoalition.eu/images/PDF/EED.pdf>

<sup>18</sup> This policy foresees that until 2020, each state will have at least 20% of the total consumption from renewable energy, 20% to be saved from efficiency, and this will result in 20% decrease of pollution / CO2 emissions.

<sup>19</sup> Due to disagreements with ERO, Wind Power Company has refused to provide a generator for production of electricity for several years.

<sup>14</sup> Administrative Instruction Nr.01-2013, For targets of renewable energy sources pg: 6

<sup>15</sup> Study performed by "Evroenergie" company.

next year.<sup>20</sup> Under construction is also the Dragash Hydro power plant with capacity of approximately 6MW (2 units), Hydro power plant in Lepenc, Municipality of Shtërpe, with a capacity of 4.6 MW, and Hydro power plant in Shala e Bajgores (Dolac) with capacity of 4.2 MW. These Hydro power plants are expected to start producing electricity in 2016. In total, capacities that are under construction are about 40 megawatts. ERO has received 37 applications for obtaining preliminary authorization for the construction of new generating capacities from renewable energy sources. In total, these applications aim to build installed capacity of 462.83 MW. (See Annex 1).

### PROCEDURES FOR CONSTRUCTION OF NEW GENERATING CAPACITY

Regulation on application for Authorization provides some limits. Initially, ERO has the right within 60 days to require from the applicant to provide additional documentation about the project. After the request for additional documentation, the investor has 15 days to provide the evidence required by the ERO; however, this deadline may be also postponed. When the application is complete, ERO must return a response within 90 days. This deadline can also be prolonged for additional 30 days. In total, from the date of application until a final decision of the ERO a period of 7 months can pass.<sup>21</sup> But, this does not imply that a

green light for the start of construction may be obtained during this period.

Based on the ERO Regulation, this institution may issue a final Authorization and preliminary Authorization. The first means that construction could begin immediately, while the preliminary authorization requires fulfillment of some conditions. This phase entails fulfillment of the toughest conditions by an investor, which relate to dealing with many institutions. In this stage the investor is faced with the bureaucracy as the main obstacle in terms of investment in new capacity building renewable sources. At this stage, the investor is required to provide, inter alia: agreement for connection to the grid, building permit, water permit if power plant is constructed and the final project for implementation.

From the preliminary authorization to receiving final authorization a procedure of 20 months may pass, including four additional months where ERO may delay the decision. From obtaining authorization, investor has two years to build the new generating capacity.<sup>22</sup> However, ERO has left open the possibility for the construction period to be prolonged from two to four years. In the whole process of issuing preliminary authorization, ERO has the discretion to give priority to businesses that have managed to be included in the Support Scheme 23 for the production of electricity from RES, namely those that have received incentive fee.

### LIMITING THE INVESTMENT IN THE RENEWABLE ENERGY

Kosovo institutions have limited the investments in construction of new capacities of clean energy. Ministry of Economic Development and Energy Regulatory Office have assigned a target for energy that should come from renewable energy. Target set by these institutions is also a limit beyond which the RES cannot enjoy incentive fees. Initially, MED set the target how much should be produced from renewable energy for Kosovo to implement the obligations arising from EU directives. This was done through an administrative instruction. Based on this instruction, ERO has drafted rules for the support scheme. These rules stipulate all the procedures for a business to be included in the support scheme, namely the support of energy production from renewable energy sources. Inclusion in the support scheme implies that the business enjoys incentive fees, which are set in advance by ERO. The following graph was taken from the original Decision of the ERO for incentive fees.<sup>24</sup>

<sup>20</sup> Interview with Afrim Ajvazi, Head of Department for Legal Affairs and Licensing in ERO.

<sup>21</sup> Rule of Authorization Procedure for construction of new generating capacities, articles:11, 12 and 13.

<sup>22</sup> *Ibid*, pg. 16, article 16.

<sup>23</sup> Rule on the support scheme was adopted in December 2014..

<sup>24</sup> The ZRE decision (V\_673\_2014), dated 23 December 2014 setting the tariff incentives



Incentive fees are significantly higher than the fees received by KEK for the energy currently produced in thermos power plants. But incentive fees for the

included in the support scheme; for some others ERO has yet to take a decision.

Capacity of Electricity from RES (MW)								
RES-E [MW]	2013	2014	2015	2016	2017	2018	2019	2020
Photovoltaic energy		3	4	6	7	8	9	10
Solid biomass		2	4	6	8	10	12	14
Wind	1.35	31.35	70	90	110	130	140	150
New small hydro power plants		60	140	150	160	180	200	240
<b>Total capacity</b>	<b>1.35</b>	<b>96.35</b>	<b>218</b>	<b>252</b>	<b>285</b>	<b>328</b>	<b>361</b>	<b>414</b>

Table 1: New capacities by RES consumption targets

production of energy from renewable sources are also higher than the price of electricity imports. However, the import price is variable and depends solely on the offer that is on the market, which is determined by weather conditions and the level of production in the region. Thus, operators that are not included in the support scheme are subjected to free market or should have the price as the energy produced by KEK or exported for the best price.

From the original graphic taken by ERO 25, it appears that the total production of renewable energy that can be in operation in 2020 is about 414 megawatts in-

V. Feed-in tariffs set for Renewable Energy Sources are as in the following table:

Level of feed-in tariffs applicable for RES	
Primary Renewable Energy Source	(€/MWh)
Photovoltaic energy	136.4
Solid biomass	71.3
Wind	85.0
New small hydro power plants	63.3

Table 2: Feed-in tariffs applicable for the electricity generated from renewable energy sources and admitted in the Support Scheme

stalled. ERO will consider the targets met, when it issues Decisions on Preliminary Authorization and Final Authorization in the capacity according to Administrative Instruction no. 01/2013 for RES targets by 2020.<sup>26</sup> This is the limitation imposed by Kosovo institutions, as other capacities that can be built will not benefit from the incentive fee. Applications that are under review by ERO exceed the limitation that is set by ERO and the Ministry of Economic Development. Only some of the applications that are submitted to ERO are

<sup>25</sup> Ibid

<sup>26</sup> Support scheme rules, Article 4, paragraph I 7.

## Conclusion and RECOMMENDATIONS

Provision of electricity supply has become the backbone of any state, being considered as a matter of national security. Energy, today, is one of the main and most controversial topics of discussion even within the EU Foreign Policy and most developed countries in the world. Kosovo has still has not laid the foundations of the energy in the future. "Kosova B" should be revitalized to extend its life until 2030 or 2040 depending on the investments to be made. Kosovo A should be closed (or rebuilt if decided so by the Assembly of Kosovo and the Government), whereas the New Kosovo has not yet taken shape.

Many studies have said that Kosovo currently cannot replace the electricity generated from coal with clean energy, due to the high cost and lack of resources (such as water, wind and sun). However, concentrating only on energy produced from coal is also not the solution. Kosovo needs to maximize its investment in renewable energy, because we are currently the only country in the region where over 90 per cent of the energy is produced from the burning of lignite.

The current rules that are set by the Ministry of Economic Development and Energy Regulatory Office restrict investments in the construction of new generating capacity from Renewable Sources. The inability to take advantage of incentive fees for many businesses will be the same as refusal to invest in Kosovo, because with the current tariffs, investment at this stage is not economically favorable.

Discussions where it is claimed that current prices of electricity production from the burning of coal are cheaper, do not take into consideration externalities. But, this may not be the situation in 2025 or 2030 because the technology of energy production from renewable energy sources is advancing and can be cheaper. In the absence of transparency the difference of the price of a megawatt produced by hydropower and a megawatt that will be produced from the new coal power plant in 2022, is still not known.

- The Government of Kosovo should set targets it aims to reach beyond 2020; there should not be limitations only to the conditions set by the EU. The targets set by the Government should go at least until 2024 or even 2030. By

having a long-term vision, the Government of Kosovo will provide more opportunities for businesses to invest in RES.

- Limitations that are placed on the production of renewable energy should be removed. This is done by extending the vision of the Government until 2030.
- Introducing all capacities planned for construction by 2030 to support the scheme. Increasing the proportion of electricity produced from renewable energy sources that could benefit more incentive fees and that will have more investment in renewable sources.
- Creating one-stop shop for energy produced from renewable energy sources so that investors do not feel obliged to go to many institutions to obtain all necessary licenses and permits to initiate an investment for renewable energy production.
- Under the New Strategy, the Renewable Energy should have a well-deserved space where all studies and strategies that are made for certain sectors should be included.
- There should be greater transparency as to the price of electricity in 2024. Such transparency will enable to see whether it is more favorable to give priority to renewable energy.

**About the author**

Visar Prebreza has an undergraduate degree in Political Science, and is in the final stage of Master studies in direction "Business Management and Economics". Since 2007 he has worked as a journalist. Initially in Kosovo Sot, and since 2010 he is a journalist within the daily newspaper Koha Ditore. For all the years he has been a journalist of the economy and especially in the energy sector. Prebreza has won several awards for his reporting's and research. Winner of the price – Best article on Economy for 2012, awarded by Association of Professional Journalists of Kosovo and UNDP. Winner of the second price for the report for Energy Efficiency. Winner of the price "Vangjush Gambeta" in Albania, for the best article in Economy for 2014. Winner of the price "RiPress" awarded from Riinvest Institute for the best article from the field of Economy in 2015. He has participated in many conferences and public hearings for economy sector, specially in energy issues. Among others, he has participated in the biggest Congress for journalist in Europe, in "European Newspaper Congress 2012" in Viena, 68 May, 2012.

**The views expressed in this paper are the personal views of the author and do not necessarily represent the views of the Konrad Adenauer Foundation.**

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