

Rising energy prices - measures to alleviate the energy crisis

Policy analysis

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Introduction

The World entered 2022 with uncertainty under the hostile shadow of the COVID-19 pandemic. This uncertainty was further amplified by the unfolding political crisis that led to the Russian aggression against Ukraine. The consequences have negatively affected every corner of the globe, and its aftermath is being displayed most severely upon energy sufficiency and security. Other causes include extreme weather events as noted by Herbert Smith Freehills Consultancy: “The causes are a combination of post-pandemic recovery, extreme weather events, and fractious geopolitics, which have increased demand and compromised supply”¹.

The sudden surge in demand for energy brought into practice the economic law of supply and demand mechanisms that converted into rocketing energy prices. The domino effect followed suit, and increases in energy prices were reflected with price hikes in the entirety of goods and services, burdening the lives of all. The resulting economic circumstances require interventions. Most countries affected have taken various actions and introduced policies that help overcome this burden, especially with policies to ease the weight of gas and electricity bills.

The Republic of Kosovo, despite its limited budget and difficult general economic circumstances, has had to mobilize its monetary resources to intervene in electricity bill prices, at a time when many have been hit by a loss of income, also due to high unemployment and low wages. The energy crisis in the Republic of Kosovo also has another dimension. It lacks the electricity production capacity to meet an ever-increasing demand. Its lignite electricity production power plants are outdated and frequently experience technical failures. A large proportion of the urban population uses electricity for heating; hence the growing demand requires electricity imports and is at times as high as Euro 540 per MWh.²

The problems associated with the energy high prices are expected to affect us for foreseeable future, and if so, easing measures will have to continue. “The longer this situation persists, the more governments will be forced to target their support towards specific segments of society — a difficult triage, both economically and politically”³. The Republic of Kosovo, in line with other countries around the globe, and despite its economic scarring, will have to implement policies to prevent an economic crisis as electricity price hikes expected to continue next year and beyond.

¹ Herbert Smith Freehills, A very British energy crisis- keep calm and transition faster, available at: <https://www.herbertsmithfreehills.com/insight/a-very-british-energy-crisis-%E2%80%93-keep-calm-and-transition-faster#:~:text=As%20we%20set%20out%20in,increased%20demand%20and%20compromised%20supply>.

² Balkan Green Energy News, Electricity prices hit record high on SEEPEX- EUR 540 per MWh, available at: <https://balkangreenenergynews.com/electricity-prices-hit-record-high-on-seepex-eur-540-per-mwh/>

³ Bloomberg, Europe’s Governments Face a Reckoning as Energy Prices Surge, available at: <https://www.bloomberg.com/news/articles/2022-01-16/europe-s-energy-crisis-how-governments-are-trying-to-curb-soaring-bills>

Problem Statement

The effects of COVID-19 on the energy sector are diverse and vary across countries, industries, businesses, and households. Initially, the crisis caused a decline in energy demand due to lockdowns that forced certain industries and businesses to operate partly or cease their activity. Global and national travel restrictions led to a decrease in fuel demand. In general the energy demand, including electricity, fell considerably. As per IEA estimation, during 2020 global electricity demand fell by 5%, with 10% reductions in some regions.⁴ As demand fell, so did the supply.

As restrictions began to ease, the energy demand suddenly increased. The increase could not be matched by supply due to logistical issues, inappropriate fuel reserves, inactive fuel extraction platforms due to maintenance issues, etc. Slow gas extraction, arguably enacted to keep the gas prices high, contributed further to the crisis. Furthermore, the energy market was undergoing a transition from fossil fuel to more sustainable energy sources to meet climate commitments- that meant decommissioning of electricity power plants run on fossil fuels. According to Bloomberg Philanthropies, “162 of Europe’s 324 coal plants have closed or confirmed pre-2030 retirements, marking the halfway point in the campaign to retire all coal plants on the continent by 2030 at the latest”.⁵ This meant less energy in the market, resulting in further tribulation on the supply side.

This crisis has had economic impacts globally and will continue so for the foreseeable future. As a result of the invasion of Ukraine, countries have placed embargoes on Russian gas which will only exacerbate the energy prices crisis as Russia supplies the biggest share of gas to Europe, especially in Germany, one of the most industrialized nations and the largest consumer of energy in Europe. “Among the European countries, primary energy consumption was highest in Germany in 2020, at 12.11 exajoules”.⁶ It is expected that energy bills in Europe will increase by 30% in 2022.⁷

⁴ International Energy Agency (IEA), Global Energy Review 2020, available at: <https://www.iea.org/reports/global-energy-review-2020>

⁵Bloomberg Philanthropies, “50% of All Coal Plants in Europe Set to Close, Marking a Major Milestone in Phase Out of Coal in Europe by 2030” available at: <https://www.bloomberg.org/press/50-of-all-coal-plants-in-europe-set-to-close-marking-major-milestone-in-phase-out-of-coal-in-europe-by-2030/#:~:text=NEW%20YORK%2C%20NY%20%26%20BRUSSELS%20%E2%80%93,by%202030%20at%20the%20latest.>

⁶Statista, Primary energy consumption in selected countries in Europe in 2020*, available at: <https://www.statista.com/statistics/332520/primary-energy-consumption-in-selected-countries-in-europe/#:~:text=Among%20the%20European%20countries%2C%20primary,France%20and%20the%20United%20Kingdom>

⁷ Euler Hermes- now Allianz Trade, The (energy) price of war for European households, available at: https://www.eulerhermes.com/en_global/news-insights/economic-insights/energy-prices-household-income-squeeze.html

The Kosovo Context

Alongside other European nations, this crisis has certainly affected the Republic of Kosovo. Its repercussions were embodied more or less in all its affairs, with an accentuated display in electricity cost and supply. The Republic of Kosovo had problems with electricity insufficiency long before the energy crises but the insufficiency was supplemented by imports. Because of this heavy dependence on imports and the resulting turmoil in the international energy markets associated with unbridled electricity prices, the Republic of Kosovo found itself in one of the deepest energy crises in its post-war history. This situation deteriorated to the extent of the introduction of power cuts and a declaration of state emergency: “On 29 December 2021, the government declared a state of emergency several of restrictions (including power cuts) will be in force for 60 days”.⁸

Apart from problems associated with heavy dependence on imports, the Republic of Kosovo also faced other local issues that further amplified the difficulties in its energy sector. The sole supplier of electricity in the Republic of Kosovo arguably did not secure forward contracts for electricity imports, as in the case of Albania and/or Northern Macedonia. The sudden electricity price increase in the market placed Kosovo in a difficult position of either purchasing electricity at sky-high prices or to ration its electricity use by implementing power cuts.

To make matters worse, as energy consumption increased during the winter of 2021, the B2 unit of the Kosovo B Power Plant suffered a technical failure that deprived Kosovo of potential 339 MWh capacity, which is approximately 35% of its actual production. “Kosovo’s energy use is driven by households, and much of that energy use is for wintertime heating” in absence of other available means.⁹

Overall, towards the end of December 2021, the situation developed into the following circumstances:

1. There was a lack of supply of electricity in the international market
2. Kosovo’s existing electricity production capacities were approximately 900MWh, whereas peak electricity consumption averaged 1,200MWh, a deficit of about 300MWh,
3. The failure of the B2 Unit of Kosovo B Power Plant “caused a reduction of energy production”,¹⁰ depriving the market of another 339 MWH
4. Kosovo normally used to import 10-15% of its energy, but that figure had risen to 40% during the crisis¹¹
5. The import prices of electricity reached up to Euro 540 per MWh
6. KESCO the sole public electricity supplier was importing electricity to fill this gap, at times paying 10 times the price it was charging its consumers.

⁸ The Vienna Institute for International Economic Studies, Kosovo Overview, available at: <https://wiiw.ac.at/kosovo-overview-ce-23.html>

⁹ International Trade Administration, Kosovo Country Commercial Guide, available at: <https://www.trade.gov/country-commercial-guides/kosovo-energy>

¹⁰ Kallxo.com, available at: <https://kallxo.com/lajm/artane-rizvanolli-renia-e-bllokut-b2-shkaktot-renie-te-prodhimit-te-energjise/>

¹¹ Reuters, available at: <https://www.reuters.com/markets/commodities/residents-fire-up-generators-kosovo-energy-crisis-escalates-2021-12-28/#:~:text=Kosovo%20produces%20most%20of%20its,40%25%20during%20the%20current%20crisis>

“The government of the Republic of Kosovo, intervened by allocating Euro 20 million to Kosovo Energy Corporation to overcome the energy crisis in the country”,¹² besides some Euro 12 million that had already been spent on electricity imports during November and December 2021. Simply, the situation was deteriorating to such an extent that the government had to intervene by injecting millions of Euros to ensure electricity sufficiency for households and commercial consumers. The Distribution System Operator (KEDS) and the Universal Electricity Service Provider (KESCO) placed an extraordinary review of electricity tariffs, to reflect the rising import prices.

In February 2022, the Kosovo Energy Regulatory Office (ERO) approved an inclining block tariff that “requires customers to pay higher prices with a higher level of usage”,¹³ especially for those that consume over the 800 MWh threshold. The new rates for electricity consumption over 800 kWh increased to 5.9 euro cents per kWh for the low night tariff and 12.52 euro cents per kWh for the high day tariff, against previous prices of 2.89 Eurocents for night tariff and 6.75 Eurocents per kWh for high tariff, respectively. Set aside the first 800 kWh of electricity consumed that remains at the same price level, any consumption above this threshold was set to trigger an increase of almost 100%.

This inclining block tariff “affects 22% of the consumers”¹⁴ based on KESCO’s statement to the media. Following this highlight, the Council for the Defence of Human Rights and Freedoms (CDHRF), Institution for Development Policy (INDEP), media, and political opposition, were accused of discrimination, selective subsidization, and government intervention tariffs setting. Due to the public outcry, the government of the Republic of Kosovo pledged Euro 100 million to ease the burden of its citizens for the period until 31 March 2023. “The Energy Regulatory Office approved Euro 179.56 million for KEDS and Euro 347 million for KESCO revenues. KESCO’s approved revenue was decreased to Euro 100 million, as this amount will be subsidized by the Government of Kosovo due to increase of energy prices in the international market”.¹⁵

As the price of electricity rises, up until April 2023, the effects will not be noticeable on the consumer’s electricity bill. This is due to the Euro 100 million subsidy by the government which offsets the electricity price rise at the source. As the price hike is being subsidized for the period March 31, 2022, to April 1, 2023, a question that begs an answer is what will happen thereafter?

1. Will the government of the Republic of Kosovo subsidize the actual price increase for another year?
2. Will there be other electricity price increases?
3. Will the ordinary Kosovar citizen be able to afford their electricity bill after March 2023?

Looking at the economic indicators of the Republic of Kosovo, a trained eye will certainly notice that price increases will inevitably cause hardship to Kosovar households, especially those that have no other means of heating. According to Kosovo Agency for Statistics (KAS):

¹² Kallco.com, available at: <https://kallxo.com/lajm/kriza-energjetike-qeveria-ndan-20-milione-euro-per-kek-un/>

¹³ Primer on Rate Design for Cost-Reflective Tariffs, National Association of Regulatory Utility Commissioners (NARUC), accessed March 29, 2022, <https://pubs.naruc.org/pub.cfm?id=7BFEF211-155D-0A36-31AA-F629ECB940DC>

¹⁴ Radio Evropa e Lire, available at: <https://www.evropaelire.org/a/tarifat-e-reja-te-rrymes-/31695175.html>,

¹⁵ Monitor, available at: <https://www.monitor.al/shtrenjtimi-i-rrymes-ne-kosove-zrre-me-vendim-para-20-shkurtit/>

1. The unemployment, as noted on Q1- 2021 is 25.8%, whereas gross income stood at Euro 466.00.¹⁶
2. As of December 2021, 25,895 families in Kosovo receive social welfare, and there are 82,042 registered job-seekers.¹⁷
3. Inflation rate for the period February 2021 - February 2022 is 7.5%.

Families receiving social welfare receive somewhere between Euros 60-180 per month depending on the size of the family. In February 2022, KAS recorded 174,898 retired persons. “Every citizen 65 years and older receive €90 from the basic pension. However, if the person contributed for at least 15 years to the old Yugoslav system, s/he will instead receive an amount between €182 and €265”.¹⁸ Meanwhile, the age-related pension increased to Euro 100.00 per calendar month, as a measure of the economic recovery package.

Many families depend on remittances from the large Kosovar diaspora and loans. As noted by EBRD, “Household consumption is upheld by a continuously growing inflow of remittances, which expanded by 23 percent year-on-year in the first eight months of 2021, and credit growth”.¹⁹ The rising prices crisis will affect the western European countries, where the majority of the Kosovar diaspora lives and works. This may diminish the Diaspora’s ability to maintain the high level of remittances into the Republic of Kosovo. A survey conducted by ASK in 2018 about Income and Living Conditions in Kosovo found that 61.3% of the households were heavily burdened financially to repay loans.²⁰

The problem is clear; the electricity prices have risen and may rise further. The said price increase coupled with high unemployment, low wages, and a weak social welfare state will further damage the well-being of Kosovar families. Prices across sectors are rising and “food-price inflation currently exceeds the increase in the overall price index, and is even more alarming given the significant decline in wage incomes during the pandemic, especially in low and middle-income countries”.²¹ The Republic of Kosovo is categorized as an upper-middle-income country.²²

¹⁶ Kosovo Agency of Statistics, Key Figures for Kosova, available at: <https://ask.rks-gov.net/en/kosovo-agency-of-statistics>

¹⁷ Kosovo Agency of Statistics, Quarterly Bulletin TM4 2021, available at: <https://ask.rks-gov.net/media/6697/buletini-tremujor-tm4-2021.pdf>

¹⁸ Kosovo: Pension Policy Challenges, available at: <https://documents1.worldbank.org/curated/en/995191593570161416/Kosovo-Pension-Policy-Challenges-in-2020.docx>

¹⁹ European Bank for Reconstruction and Development, Kosovo overview, available at: <https://www.ebrd.com/where-we-are/kosovo/overview.html>

²⁰ Kosovo Agency of Statistics, Survey- The financial burden of households to repay loans by the year, available at: https://askdata.rks-gov.net/pxweb/en/ASKdata/ASKdata_Anketa%20mbi%20t%20c%20ab%20Ardhurat%20dhe%20Kushtet%20e%20Jetes%20c%20abs/silc11.px/table/tableViewLayout1/

²¹ Social Europe, The price increases that matter to the poor, available at: <https://socialeurope.eu/the-price-increases-that-matter-for-the-poor>

²² The World Bank, Country Overview, available at: <https://www.worldbank.org/en/country/kosovo/overview#1>

Objectives

This paper develops an outlook on policies necessary to ensure that the recent energy crises do not affect consumer households in the Republic of Kosovo. It analyses the core reasons that led to the energy crisis, in the local and international context, and the measures undertaken by European Union (EU) countries and Western Balkan (WB) countries as a result of such crises. The overview of measures introduced by the EU and WB have been gathered and presented for informative and benchmarking purposes and to be projected into the best anti-energy crisis measures in the Kosovo context.

Particular attention is paid to policies necessary to protect vulnerable groups in the Republic of Kosovo and those out of central heating reach, identified in this paper as the “limited heating choice” consumer group. Apart from specific policies related to vulnerable groups, this paper aims to produce subsets of measures necessary to address general issues regarding the electricity crisis in Kosovo, in the short, medium, and long term.

Options

European Union and Western Balkan countries including Kosovo, have to date undertaken various measures to protect consumers and businesses from impacts posed by the energy price increase. They vary from country to country, but commonly revolve around measures such as reduced energy tax/VAT, retail and/or whole price regulation, transfer to vulnerable groups, and other- arguably short-term measures with immediate effect. The measures were fast-tracked for approval due to governmental authority upon fiscal policy, budget allocation, and to a certain extent control over energy prices.

As this paper’s main objective is to propose measures to shield the Kosovar consumer from electricity price increases, browsing measures applied by European Union and Western Balkans countries for this matter would help greatly to identify the entirety of measures for understanding, devising, and implementing feasible options in the Republic of Kosovo. It will provide also for comparative analysis of the options proposed against some of the most widely applied measures.

EU Country Measures

European Union countries as well as the United Kingdom and Norway, implemented various measures to shield consumers from the direct impact of rising energy prices. “All the measures have been discussed proposed or enacted since September 2021”²³. Each member state implemented their measures individually but responded similarly. Bruegel, the European think tank that specializes in economics, classified the measures undertaken by the said countries into six types (see table 1):

1. Reduced energy tax/ VAT, introduced by 11 countries
2. Retail price regulation, introduced by 8 countries
3. Wholesale price regulations, introduced by 5 countries
4. Transfers to vulnerable groups, introduced by 18 countries
5. Mandate to state-owned firms, introduced by 4 countries
6. Windfall profits tax/ regulation, introduced by 6 countries

Of the six types of measures introduced to protect consumers from rising energy prices, the most common policy adopted was transfer to vulnerable groups (18 countries), followed by reduced energy tax/VAT (11 countries), retail price regulation, and so on. These policies represent short-term measures and appear to have been included in the European Commissions’ “published ‘toolbox’ for national governments within the block to provide short-term relief to the most vulnerable consumers and to support European companies”²⁴, published on October 13, 2021. The ‘toolbox’ also represented the “medium-term measures for decarbonized and resilient energy system”²⁵, made up of measures calling to step up investment in renewable resources and energy efficiency, development of energy storage capacity, review of electricity market design, revise security of gas supply, etc.

²³ Bruegel, National policies to shield consumers from rising energy prices, available at: <https://www.bruegel.org/publications/datasets/national-policies-to-shield-consumers-from-rising-energy-prices/>

²⁴ Irish Examiner, EU to shield consumers from record-high energy prices, available at: <https://www.irishexaminer.com/business/economy/arid-40721925.html>

²⁵ European Commission, Press Release, https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5204

Table 1. Source: bruegel.org

Country	Reduced energy tax / VAT	Retail price regulation	Wholesale price regulation	Transfers to vulnerable groups	Mandate to State-owned firms	Windfall profits tax/regulation	Other
Austria				✓			
Belgium	✓	✓		✓			✓
Bulgaria		✓				✓	✓
Czech Republic	✓			✓			
Cyprus	✓				✓		
Denmark				✓			
Estonia	✓			✓			
France			✓	✓	✓	✓	✓
Germany	✓			✓		✓	✓
Greece				✓	✓		
Hungary		✓					
Ireland	✓			✓			✓
Italy	✓			✓		✓	
Latvia				✓			
Lithuania		✓		✓			✓
Luxemburg				✓			
Netherlands	✓						
Norway				✓			
Poland	✓	✓		✓			
Portugal	✓		✓		✓		
Romania		✓	✓	✓		✓	
Spain	✓	✓	✓	✓		✓	
Sweden				✓			
United Kingdom		✓	✓			✓	

Western Balkans Country Measures

Western Balkan countries, similar to EU countries, undertook measures to protect their respective citizens from adversity in the energy sector. The measures introduced and implemented by Western Balkan Countries are far fewer in comparison to those of EU countries. This is understandable given the far better economic standing of the EU compared to the WB. For this paper, it is important to look at WB measures too, due to overall homologies, mutual reliance and inter-dependencies in the energy sector, and a similar economic environment with that of the Republic of Kosovo.

Some highlights of the latest developments in the energy sector regarding the interactivity of Western Balkan country's energy sector are:

- The Republic of Kosovo imports most of its electricity from Serbia and Bosnia & Herzegovina.
- The Republic of Kosovo and Albania have established a common Energy Regulatory Bloc and a common Energy Exchange Market as measures that will develop the energy market in both countries.
- Macedonia is importing Kosovo coal, boosting the Kosovo Energy Corporation's (KEK) financial standings as the largest producer of electricity in Kosovo.²⁶
- The Kosovo Transmission System Operator (KTSO) has become independent from the Serbian Transmission System Operator. Before this development, "Kosovo is estimated to have lost up to Euro 12 million per year, as the collection of energy transmission tariffs passing through Kosovo, was done by the state of Serbia on behalf of Kosovo".²⁷ KTSO will now be able to collect some Euro 12 million per calendar year.

As per these latest developments, certain aspects in the energy sector have improved for Kosovo, especially the establishment of the common energy mechanisms with Albania, the independence of KTSO resulting in extra Euro 12 million in revenue and potential for lignite exports to Macedonia. It is important to understand interconnections and the state of affairs related to energy markets between WB countries as certain measures that need to be implemented can be justified based on those relations. This is especially relevant in the aspect of Albania and Kosovo's newly established mechanisms within the energy sector. Comparing measures already proposed by similar countries can prove fruitful.

²⁶Reuters, available at: <https://www.reuters.com/markets/commodities/north-macedonia-eyes-3-million-tons-kosovo-coal-2021-12-10/>

²⁷ Radio Evropa e Lire, available at: <https://www.evropaelire.org/a/kosova-kostt-blloku-shqiperi-/30566663.html>

The following represent measures introduced by the Western Balkan countries to address the energy crisis:

Albania declared a state of emergency on October 3, 2021. Shortly after the statement of emergency, it introduced a “three-point plan”²⁸ to mitigate the energy crisis. The plan was set to provide immediately Euro 100 million as a subsidy to the sole electricity supply company in Albania, to guarantee an uninterrupted supply of electricity for all and to protect households and small businesses against increases in electricity prices. A further Euro 100 million were said to be provided early in 2022.

Bosnia & Herzegovina is a net exporter of electricity. “The value of electrical energy exports of Bosnia & Herzegovina in 2021 has jumped by 66.9% compared with 2022, to 830 convertible marks (around Euro 424 million)”.²⁹ Possible electricity price rises in Bosnia & Herzegovina have been the subject of media reports, but to date the prices remain unchanged.

North Macedonia “approved measures in the summer of last year”³⁰ consisting of decreasing the VAT from 18% to 5% for electricity bills. MKD 10.6 billion or Euro 176 million (MKD v Euro rate as of March 30, 2022) was transferred to Macedonian Thermo Power Plants. North Macedonia increased the retirement pay and wages that were lower than average. The government have presented a 26 measure package worth Euro 400 million to maintain living standards for its citizens and protect the economy.

Montenegro does not plan to increase electricity prices during 2022, based on a statement by the head of EPCG.³¹ In 2021, assistance was provided through packages of measures to the economy and citizens; first in cash and then through subsidies for electricity in cooperation with Elektroprivreda and then through on-time assistance in December.³² Furthermore, the Montenegrin government has also subsidized 77.753 or 63.03% of the total number of pensioners with a one-off payment of Euro 50 per person.

Serbia capped electricity prices for industrial users and defence state-owned companies until June 2022.³³ Meanwhile, it has been announced that the prices for households will increase by 3.4%, starting February 1, 2022.³⁴

The variety of measures introduced by the Western Balkan countries is dominated by subsidies directly to the sole electricity suppliers and/or producers as in the case of Albania, North Macedonia, and Kosovo. Other measures consist of one off payments to vulnerable groups as in the case of

²⁸ Shqiptarja.com, available at: <https://shqiptarja.com/lajm/vendi-ne-emergjence-energetike-rama-prezanton-sot-planin-e-masave-per-perballimin-e-krizes-dhe-mbrojtjen-e-familjeve-e-biznesit-te-vogel-nga-rritja-e-cmimeve>

²⁹ Balkan Green Energy news, available at: <https://balkangreenenergynews.com/soaring-prices-push-up-bih-electricity-exports-to-all-time-high/>

³⁰ Government of the Republic of Northern Macedonia, available at: <https://vlada.mk/node/28088?ln=sq>

³¹ Radio i Televizija Crne Gore (RTCG), available at: <https://rtcg.me/vijesti/ekonomija/347293/ne-planiramo-poskupljenje-struje.html>

³² Government of Montenegro, available at: <https://www.gov.me/clanak/mfss-i-fond-pio-ce-pomoci-penzionerima-sa-388-miliona>

³³ SeeNews, Serbia to cap power prices for industrial consumers until June 2022, available at: [https://seenews.com/news/serbia-to-cap-power-prices-for-industrial-consumers-until-june-2022-767612#:~:text=BELGRADE%20\(Serbia\)%2C%20December%2030,a%20surge%20in%20power%20prices](https://seenews.com/news/serbia-to-cap-power-prices-for-industrial-consumers-until-june-2022-767612#:~:text=BELGRADE%20(Serbia)%2C%20December%2030,a%20surge%20in%20power%20prices)

³⁴ BBC News in Serbian, available at: <https://www.bbc.com/serbian/lat/srbija-55800781>

Montenegro and an increase in pensions and wages in the case of North Macedonia. North Macedonia also decreased the VAT on electricity prices, a common measure amongst EU countries. Serbia froze electricity prices, whereas Bosnia & Herzegovina contrary to the rest, cashed in from electricity exports realized at top prices.

The Republic of Kosovo Measures

The Republic of Kosovo, as detailed in the problem statement section, has had its fair deal of difficulties arising from an energy crisis. Imports of necessary electricity at rocket high prices, and the failure of the B2 unit of the Kosovo B Power Plant placed Kosovo in a very vulnerable situation resulting in power cuts amid winter 2021. This vulnerability was amplified by increasing prices of commodities, low wages, and high unemployment, potentially endangering the well-being of its citizens and particularly those most vulnerable: the poor receiving social assistance, the pensioners, the unemployed, and those living on minimum wages.

The Republic of Kosovo intervened by subsidizing a part of the electricity bill for household electricity consumers at a price of Euro 100 million. It raised pensions slightly and the government increased the minimum wage with unions representing workers from all sectors. The electricity prices have risen by almost 100%, targeting those exceeding the electricity consumption threshold, set at 800 kWh. KESCO has noted that the inclining block tariff will affect 22% of consumers. Due to the absence of other means of heating during the winter period “75% of overall consumption in the country is expended for heating”.³⁵ Whilst the increase will not be felt at present, it will start to bite heavily on consumers’ budgets after March 31, 2023. Meanwhile, business tariffs have remained the same to safeguard their concern.

Based on lessons learned from measures introduced and/or implemented by EU countries, the WB countries, and the specific circumstances relating to the Republic of Kosovo, the optional measures aimed to shield Kosovar consumers from the future energy crisis consist of interventions of political, economic, social and technological nature. Based on the timeframes required to implement, they are categorized into immediate, medium, and long-term measures.

- 1. Immediate measures consist of actions that can be executed in an ad-hoc fashion, but with means planned and/or allocated before the event.**
- 2. Medium-term term measures revolve around activities related to investments in the energy sector with adequate energy mix as the only guarantee of energy security and sufficiency (5-10 years’ time frame).**
- 3. Long-term measures consist of activities regarding the alternative usage of coal and measures for when the thermo plant has been decommissioned.**

³⁵ Kosovo.energy, available at: <https://kosovo.energy/keds-rrreth-75-konsumit-te-energjise-po-perdoret-per-ngrohje/>

Immediate measures to protect consumers and businesses:

1. Provide emergency income support for energy-poor consumers, through:
 - 1.1. One-off payments in the months of winter
 - 1.2. Partial bill payments,
 - 1.3. Three months deferrals of bill payments, for the loaded months;
2. Put in place safeguards to avoid disconnections from the grid,
3. Provide temporary, targeted reductions in taxation rates for vulnerable households,
4. Provide aid to energy-intensive companies or industries,
5. Undertake a Cost of Service Study - this is a detailed analysis that assigns costs to each customer class based on class consumption attributes - as this may identify if a certain group of customers has been indirectly hit by increases,
6. Ensure the electricity supply company operates a financially diligent electricity purchase through forwarding contracts with reasonable prices,
7. Enforce power plants maintenance in regular intervals to avoid technical failures,
8. Stop subsidizing electricity bills for the Serb minority in the north of Kosovo, and divert such funds towards investment in renewables, efficiency, and subsidizing vulnerable groups,
9. Undertake campaigns to re-shape electricity consumption habits,
10. Allocation of additional funds for the Kosovar Energy Efficiency Fund (KEEF),
11. Removal of VAT on solar panels,³⁶
12. Removal of VAT for pellets,
13. Subsidy of solar panels and heat pumps for businesses and families with less income and more difficult economic conditions,
14. Large awareness campaigns for saving energy and self-production of energy,
15. Additional taxation on inefficient equipment.

Medium-term measures to protect consumers and businesses:

1. Increase investments in renewables by speeding up renewables auctions and permitting processes,
2. Step up district heating project for the eight municipalities in Kosovo, based on renewables and currently on a feasibility study stage,
3. Devise subsidy programs to boost home insulation and the usage of energy-efficient heating equipment, especially for those with no heating alternatives,
4. Explore the potential benefits of voluntary joint procurement of electricity imports by Albania & Kosovo and devise energy exchange programs that complement best in terms of seasonal supply and demand needs each,
5. Liberate the energy market, to enhance the consumers' role by empowering them to choose and change suppliers,
6. Incentivize businesses through tax relief to generate their electricity,
7. Carry audits to ensure proper investments into the distribution network to minimize network losses,

³⁶ INDEP, Parimet e Rimëkëmbjes së Gjëlber, available at: https://indep.info/wp-content/uploads/2022/01/BTD_INDEP_Punimi-2_ALB.pdf

8. The union of the energy market, starting first with Albania, and then with all other countries in the region.³⁷

Long-term measures to protect consumers and businesses:

The Republic of Kosovo should set up a think tank to look closely into possibilities for alternative ecological uses of coal following the phasing out of coal power plants. Hydrogen extraction from coal through the coal gasification process should be worth studying, in terms of economic feasibility for use in electricity and heating generation and as fuel for automotive, marine, air, or industrial use. Also, the construction of new generation capacities in order to diversify generation resources and increase production capacities in order to meet the demand of consumers for electricity should be the main goal for the future. Focusing on renewable resources as the future of the energy and clean sector should be the main target on which the Government of Kosovo should be supported.

³⁷ INDEP, Bashkimi energjetik Kosovë – Shqipëri, available at: https://indep.info/wp-content/uploads/2021/11/INDEP_Bashkimi-energjetik-Kosove-Shqiperi.pdf

Analysis of Options

Analysis of short-term measures

- 1. Provision of emergency support for energy-poor consumers** through one-off payments in the winter months, allowing partial bill payments, or allowing deferrals for winter months could be targeted at those most vulnerable, especially consumers on social welfare. Currently, there are 26,000 households on social welfare as per ASK data. Such support would ensure that energy-poor consumers do not compromise by depriving themselves of food, clothing, and other necessities on the account of paying electricity bills. The Kosovo government can easily identify registers of such households and provide targeted support. One of the payments for the winter months should reach pensioners, at least those living on basic age-related pensions, as in the case of Montenegro.
- 2. Put in place safeguards to avoid disconnections from the grid** especially during winter months for vulnerable consumers. This measure should apply also to people living in new high-rise buildings with no central heating. Buildings that structurally inhibit residents to use other means of heating, i.e. wood or gas burning, should be identified and categorized as i.e. **“limited heating choice”** consumer group and therefore be safeguarded from disconnections during winter months.
- 3. Provide temporary targeted reductions in taxation rates for vulnerable households** for certain periods or winter months. This is a straightforward measure to administer with the government lowering VAT for electricity, whereas vulnerable household registers can be obtained from the Ministry of Social Welfare. This measure can be used in combination with measures one and two, or as a substitute for this matter.
- 4. Provide aid to energy-intensive companies or industries** to preserve employment and economic development per se. The electricity tariff for business has not increased, however, the next tariff review applies an increase in business tariffs, certain aid measures should be considered. Targeted reductions in taxation in exchange for developing own generation (also a medium-term measure) by businesses, could provide for an excellent mechanism for increasing renewable sources, provide for energy self-sufficiency in business, and hence a prosperous future.
- 5. Undertake a Cost of Service Study.** This is a detailed analysis that assigns costs to each customer class based on class consumption attributes. This will ensure non-discriminatory tariffs are applied across consumer groups and avoid subsidizing one group at the expense of another. This measure can rectify the “defects” arguably noted in the last tariff review in the Republic of Kosovo, related to the 800 kWh threshold methodology, a decision that tends to affect most consumer groups that have no other choices of household heating. The ERO has the capabilities to undertake such a study, with in-house expertise or a contracted consultant, or a combination. The Kosovo Parliament and/or relevant commissions overseeing the ERO affairs should propose such a study as a matter of urgency.

6. ***Ensure the electricity Supply Company operates a financially diligent electricity purchase through forwarding contracts with reasonable prices*** as a means of ensuring price stability in the Kosovar energy sector. Securing electricity import forward contracts, based on well-studied future energy developments and sound financial acumen, can help overcome risks associated with price fluctuations in this worrying energy market. KEDS should have all means to undertake such contractual arrangements whilst ERO should ensure KEDS remains committed to engaging in all activities beneficial to electricity supply security, sufficiency, and affordability.
7. ***Enforce power plant maintenance in regular intervals to avoid technical failures*** which greatly dent electricity production capabilities of the Republic of Kosovo, especially during winter time when demand outstrips domestic supply for approximately 300 MWh. The necessary power plant maintenance during the summer season will decrease failure incidences in power plants and save repercussions similar to that of December 2021, which deprived Kosovo of the desperately needed 339 MWh.
8. ***Stop subsidizing electricity bills for the Serb minority in the north of Kosovo and divert such funds towards investment in renewables, efficiency, and subsidizing vulnerable groups*** by creating a political landscape that encourages the Serb minority into paying their electricity bills. The government should step up its activities i.e. technical dialogue, concerted pressure by third parties such as EU representatives and alike, to reach an agreement that would enable electricity providers to obtain payments from that region of Kosovo. “The cost of the energy spent in the Serb-majority municipalities in the north is around 12 million euros per year”³⁸ and until recently, classified as network loss for the tariff setting. The resulting extra Euro 12 million could be used to subsidize measures whether immediate or medium-term, including vulnerable households of the Serb minority.
9. ***Undertake campaigns to re-shape electricity consumption habits*** on the premise that the electricity can be saved by changing our behaviour towards usage, our choices of electrical devices in terms of their energy efficiency attributes, home insulation willingness, and renewable energy production by households, such as photovoltaic panels. Naturally, initiatives of these sorts require substantial financial means; however, green loans can be acquired to assist with this. TEB Bank “enable individual clients to finance individual loans to carry out investments/renovations in their houses/apartments, by fulfilling the criteria set by the EBRD, which are supported by a grant from the European Commission of 15 to 20% of the loan value for each client”³⁹.
10. ***Allocation of additional funds for the Kosovar Energy Efficiency Fund (KEEF)*** will contribute in order to increase the number of projects in which this institution contributes, contributing to the reduction of electricity consumption and the increase of energy efficiency measures. Such a measure will ease the energy crisis and import dependence that Kosovo has.

³⁸ Balkan Insight, Kosovo Pledges to Solve Electricity Problem in Serb North, available at: <https://balkaninsight.com/2021/05/06/kosovo-pledges-to-solve-electricity-billing-problem-in-serb-north/>

³⁹ TEB Bank, Green Loans, available at: <https://www.teb-kos.com/en/index.php/fushata/kredia-e-gjelber>

- 11. Removal of VAT on solar panels** would make the application of this technology more favorable and would economically facilitate the installation of solar panels by consumers for self-consumption. The removal of the Value Added Tax, which is 18% for these devices, will stimulate investors to invest in new projects in Kosovo. Such a policy helps the energy transition, opens new jobs, and enables the acceleration of the decarbonization process.
- 12. Removal of VAT for pellets.** Pellets are used for residential heating in pellet stoves and pellet boilers, and for the generation of heat, steam, and electricity in the service industry, manufacturing, and power generation. Favoring pellets for heating and subsidizing them would reduce the demand for electricity for heating and at the same time greenhouse gas emissions would be reduced.
- 13. Subsidy of solar panels and heat pumps for businesses and families with less income and more difficult economic conditions.** Businesses and families in need are a category that must be subsidized by the government. By subsidizing businesses, it is possible to release the prices of items, increase the workforce, and more security of supply for them. Subsidizing families in need, knowing that most of them do not have good house insulation and the ability to pay for electricity, would be a preventive measure against excessive consumption and the increase in production capacity. The funds allocated for subsidizing electricity bills would contribute more if they are invested in increasing energy efficiency measures and increasing self-generating consumers.
- 14. Large awareness campaigns for saving energy and self-production of energy.** Awareness campaigns and clear information enable a better understanding of efficient technology and energy-saving measures. Therefore, the right information of the citizens through large awareness campaigns contributes toward saving energy and achieving strategic objectives.
- 15. Additional taxation on inefficient equipment.** By taxing inefficient equipment extra, products are favored which use less energy to perform the same work. In this case, efficient products become more economically competitive in the market.

Millennium Challenge Corporation (MCC)⁴⁰, Kosovo Energy Efficiency Fund (KEEF)⁴¹, and other relevant organizations provide substantial funds for energy efficiency projects related to insulation in the public sector. The Government of Kosovo should engage in a dialog with both to extend their energy efficiency funding to households, especially vulnerable energy consumers. Kosovo Agency for Energy Efficiency (KAEE), an executive institution under the Ministry of Economic Development of the Republic of Kosovo, can navigate this heightened mobility in energy efficiency investment toward household consumers.

⁴⁰ Millennium Challenge Corporation in Kosovo site, available at <https://www.mcc.gov/where-we-work/country/kosovo>

⁴¹ Kosovo Energy Efficiency Fund site, available at: <https://fkee-rks.net/en/>

Analysis of medium-term measures

- 1. Step up investments in renewables by speeding up renewables auctions and permitting processes;** to capture this feasible momentum highlighted the importance of energy security, the need for further capacities, and resources available for this matter. The ERO and other relevant organizations should devise and undertake processes and procedures to enable speedy renewable auctions. ERO should be given all necessary support by the relevant Kosovo Institutions, and financial and legal support necessary to implement required changes and/or improvements whether of legal, procedural, or staff training nature. It is necessary to use the opportunity to capitalize on a recent increase in interest for investment in renewables.
- 2. Step up a district heating project for the eight municipalities in Kosovo, based on renewables and currently in a feasibility study stage,** a critical ingredient in the energy mix, which will offload the demand for electricity for heating. The feasibility study is funded by the EU, whereas “the outcome is expected to contribute to the decarbonization and economic development of Kosovo, as cleaner sources of energy will be explored, in line with the Economic and Investment Plan for the Western Balkans and the EU Green Agenda”.⁴² The Republic of Kosovo Government should remain alert and cooperate closely with European Investment Bank (EIB) and European Bank for Research and Development (EBRD), as potential fund providers for this project, to ensure and address any local challenges preventing project progress.
- 3. Devise subsidy programs to boost home insulation and usage of energy-efficient heating equipment, especially for those with no heating alternatives,** ensuring that a potentially discriminated consumer group by recent electricity tariff increases is offered a way out from the “limited heating choice” category of consumers.
- 4. Explore the potential benefits of voluntary joint procurement of electricity imports by Albania & Kosovo and devise energy exchange programs that best complements seasonal supply and the demand needs of each country** as a means of securing lower import prices for larger contracts. On the other hand, both countries should utilize the complementary nature of their energy sectors. Albania’s electricity generation from its hydropower plants in the winter season often exceeds its demand, whereas, during summer, it is a net importer of electricity due to its tourism season. Kosovo, on the other hand, has an abundance of electricity during summertime and a lack of it during winter time, a deficit caused by the usage of electricity for household heating. Albania can obtain the extra energy it needs during the tourist season from Kosovo and Kosovo can retrieve that energy from Albania during winter times.
- 5. Liberate the energy market to enhance the consumer’s role by empowering them to choose and change suppliers** as a measure to progressively entice competition in the market and reap the benefits of inherently improved efficiencies in the market which may lead to competitive prices and better services. The KEDS’s sole electricity Supply Company status, which arguably prevents the electricity market liberalization in the Republic of Kosovo, should

⁴² Balkan Green Energy News, available at: <https://balkangreenenergynews.com/eight-municipalities-of-kosovo-to-introduce-district-heating/>

be reassessed to find win-win solutions that will pave the way for electricity market liberalization.

6. ***Incentivize businesses through tax relief to generate renewable electricity*** by devising long-term schemes of tax relief for investment in the renewable generation of electricity. The schemes should enable businesses to obtain relief from taxes such as VAT, import duties and excise, and other relevant taxes, to the extent of making such investment desirable and economically feasible. The benefits of such extra capacity of electricity generated by such schemes can be traced to the improvement of the overall Kosovo electricity supply and hence decrease of government spending in its interventions arising from insufficiency.
7. ***Carry audits to ensure proper investments into the distribution network to minimize network losses that*** appear to be high as per the last ERO reports. According to The Electricity and Thermal Energy Annual Balance 2022,⁴³ the allowed losses for the electricity distribution network are planned to be 945.3 GWh or 16.04% of the overall demand on the distribution network. Proper investments in the distribution network will reduce losses and hence reduce consumer bills.
8. ***The union of the energy market, starting first with Albania, and then with all other countries in the region.*** The integration of energy markets is also useful for increasing grid efficiency, increasing the security of supply, and reducing the need for energy generation. All these components are advanced with the achievement of the union in the energy field between Kosovo and Albania. Among other things, such components create a compatible market with much higher standards, standards that are closer to European ones.

⁴³ Energy Regulatory Office, Electricity and Thermal Energy Annual Balance for 2022 Report, Prishtina, 2022, , available at: https://www.ero-ks.org/zrre/sites/default/files/Publikimet/Bilancet/Electricity%20and%20Thermal%20Energy%20Annual%20Balance%202022_1.pdf

Analysis of long-term measures

The Republic of Kosovo possesses the world's fifth-largest proven reserves of lignite estimated at 12.44 Mt, according to Kosovo's Independent Commission for Mines and Minerals (ICMM).⁴⁴ Depleting these reserves will not be possible due to lignite exit strategies envisaged in line with carbon neutrality commitments of the 'Sofia Declaration' which are expected to be achieved by 2050. Under this scenario, Kosovo will not be able to exhaust its lignite reserves. Therefore, it makes economic sense to look at alternatives for benefiting from this valuable resource. Under these circumstances, hydrogen extraction from coal through the coal gasification process should be worth studying, in terms of economic feasibility for use in electricity and heating generation and as fuel for automotive, marine, air, or industrial use. Economic benefits in undertaking hydrogen extraction from coal have been demonstrated by Japan's Kawasaki venture in the Australian state of Victoria. "A Japanese-Australian venture has begun producing hydrogen from brown coal in a 500 million Australian dollars (\$390m) pilot project that aims to show liquefied hydrogen can be produced commercially and exported safely overseas".⁴⁵

Special considerations for the "Limited Heating Choice" consumer group

Apart from vulnerable groups, particular attention should be committed to the "limited heating choice" consumer group. As noted earlier in this paper, these are consumers that live in large buildings, which lack central heating provided by Termokos. They mostly depend on individual means of heating fed on electricity and in some cases, common central heating for the whole building that is powered by electricity. Prishtina and Gjakova, are the only two cities in the Republic of Kosovo that possess central heating utilities, however, their capacities do not satisfy the demand. Termokos supplies heat from the cogeneration facility to some 16,000 residents in Prishtina. "Its capacity is 140 MWTH, whereas operational capacity is estimated to be 137.48 MWTH".⁴⁶ "Currently only about 23% of heating demand in Prishtina is connected to Termokos".⁴⁷ Overall and despite other projects announced for an expansion of heating capacity such as "Solar 4 Kosovo" by Termokos, this will not address problems that may arise in the short term, as this project may not complete within the next 5-10 years.

Provided that heat demand in Prishtina cannot be satisfied, relevant authorities have recommended one of or a combination of the following measures:

1. One off payments for the purchase of energy-efficient means of heating for buildings with a smaller number of households, i.e. 1-20, especially those that lack space to install central heating mechanisms,

⁴⁴ The Independent Commission for Mines and Minerals, Mineral Deposits, available at: <https://kosovo-mining.org/mineral-resources/mineral-deposits/?lang=en>

⁴⁵ Aljazeera, available at: <https://www.aljazeera.com/economy/2021/3/12/dirty-coal-to-hydrogen-trial-aims-for-clean-energy-solution>

⁴⁶ Bilanci Afatgjate i Energjise Termike 2017-2026, page 6, available at: http://ero-ks.org/2016/Vendimet/V_874_2016_Bilanci_afatgjat%C3%AB_i_Energjise_Termike_NQ_Termokos.pdf

⁴⁷ Instrument for Pre-Accession Assistance (IPA II) 2014-2020, page 3, available at: https://ec.europa.eu/neighbourhood-enlargement/system/files/2016-12/ipa2015_ks_06_district_heating.pdf

2. Advise and support retaining green loans for home insulation and energy-efficient electrical appliances,
3. Advise and support for choices of central heating for buildings with a large number of households i.e. 20 and above households, such as:
 - a. Geothermic Pumps,
 - b. Conversion of electricity fed Central Heating to Wood Pellets,

Option 3 should also consider financial support from the government to cover study costs, subsidy for the cost of pellets, and conversion costs of central heating equipment from electricity fed to pellet fed or geothermal.

Such support will inevitably decrease overall electricity consumption during winter times; it will translate into fewer electricity imports, less pollution, and a less accentuated increase in electricity bills.

Conclusions

The Republic of Kosovo, as a country that depends on the import of electricity, is affected by the energy crisis. The increase in import prices and the limited amount of generating sources of electricity have caused crises all over the world. The energy crisis was followed by reductions in electricity, power plant block problems and skyrocketing import prices. The earlier crisis should present a lesson and speed up preventive and mitigating measures against other possible crises in the future. However, since the passing of the cold months until now, the Government of Kosovo has not taken preventive measures which would contribute to the relief of the crisis that is expected to occur in the coming winter.

European and neighboring Balkan states have already taken measures after the last crisis. Such a thing was done in addition to the need to reduce consumption and increase production capacity so that other problems that may occur in the future can be faced much more easily. The measures of these countries are focused on energy efficiency, knowing that the importance of increasing such measures is important not only to face the crisis but also to achieve larger objectives such as decarbonization and energy transition.

The Republic of Kosovo should focus on immediate measures and actions and policies that give immediate effects on the energy sector. Knowing that the winter months are the period in which the citizens of our country increase their demand for electricity, it is necessary to take immediate measures to reduce the problems that the crisis has brought the last time. At the same time, crises should be used to establish energy sustainability and not only to prevent or overcome them, therefore the beginning of easier and faster measures and then the advancement with measures that require more time to be fulfilled should be the goal of the Government of Kosovo.

VAT on solar equipment is an obstacle for citizens and the investments they intend to make in this technology. As devices that contribute not only to the generation of electricity but to the mitigation of environmental pollution and the achievement of the decarbonization process, they are equalized and taxed the same as inefficient devices and other technologies that emit large amounts of greenhouse gases. VAT is an additional obstacle that is addressed to citizens in addition to their intention to invest in this technology.

The subsidization of electricity bills by the Government of Kosovo has been a measure to achieve social peace and is not far-sighted. This is due to the fact that those funds were spent within a short period and therefore did not affect the reduction of electricity consumption. Consequently, such a measure does not provide effects for the coming years and the Government does not have the possibility to provide such an amount of the budget for subsidizing electricity tariffs every year. Therefore, the measures offered in this work are measures that are categorized in time periods and which provide stability and relief for the future of the energy sector.

A significant amount of electricity is lost in Kosovo due to poor insulation, inadequate windows, and other inefficient measures with which Kosovar houses are equipped. Energy efficiency is very important in the fact that it prevents unnecessary expenses of electricity while maintaining the same

level of comfort. While policies and measures so far do not coincide with such practices that lead to a more secure energy future.

